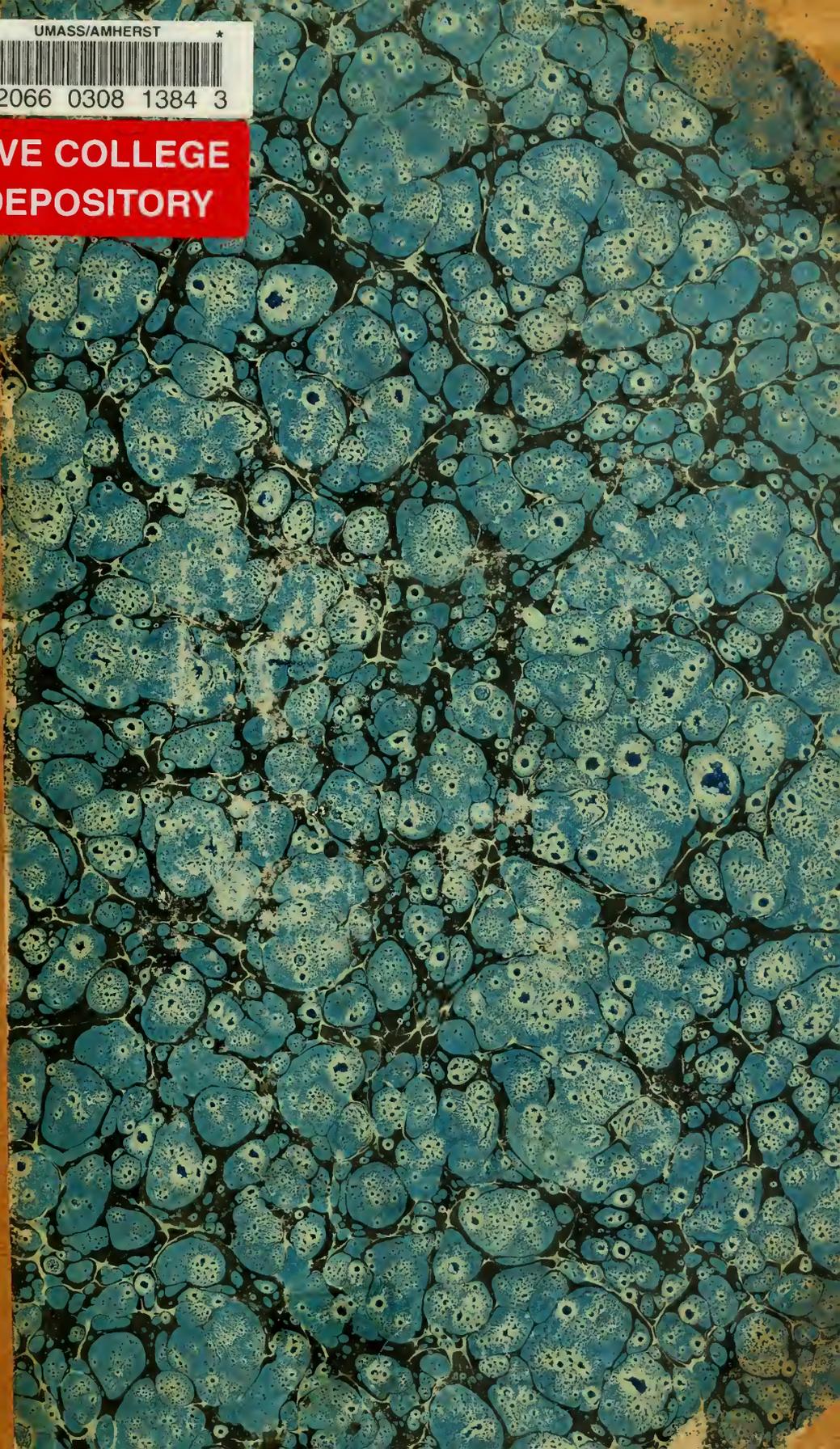


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GENESEE FARMER:

A MONTHLY JOURNAL DEVOTED TO

AGRICULTURE & HORTICULTURE,

DOMESTIC AND RURAL ECONOMY.

ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF

FARM BUILDINGS, IMPLEMENTS, DOMESTIC ANIMALS,

FRUITS, FLOWERS, SHRUBS, &c.

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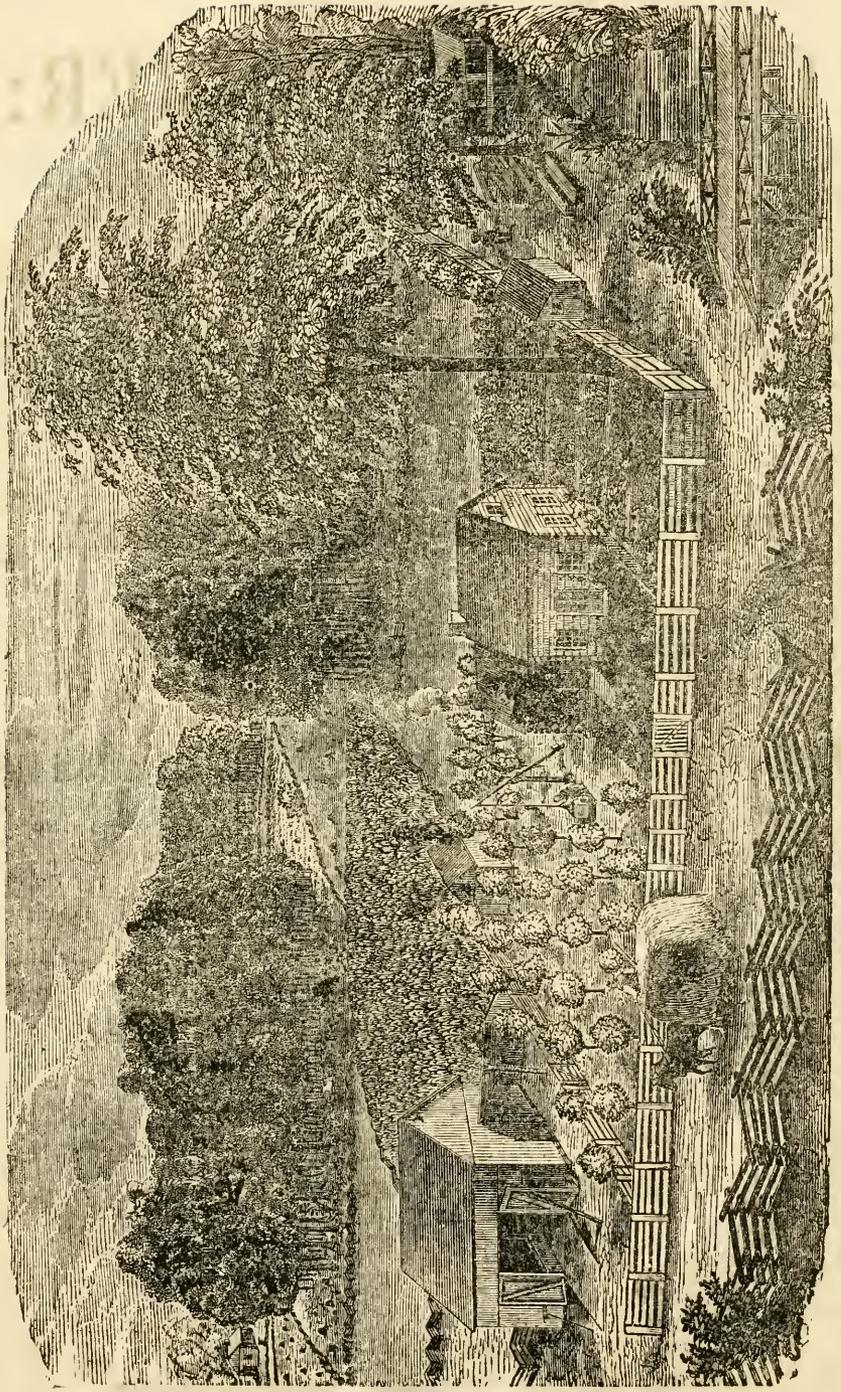
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INDEX TO VOLUME XVIII.

<p>Agricultural Fairs, benefit of, 153, 181, 214 — journals, French, 53 — papers, and the duty of farmers to write for them, 48 — influence of, 86, 119, 180 — a farmer's opinion of, 246 — reading, 47, 75 — Society, Fair of the Royal, 267 — N. Y. State, Fair of the, 333 — Winter Meeting, 97 — United States, 34, 66, 322 Agriculture, a few thoughts on, 309 — a glance at Virginia, 241 — facts in, 17 — have we made any progress in, during the present year, 361 — in Virginia, 340 — in Western N. Y., as described by an intelligent Scotch farmer, 342 — its advantages, 20 — Ohio State Board of, 35 Ammonia in green-houses, 251 Amusements, Western, 225 Anecdote, Bakewell's, 279 Angle worms, to kill, 323 Animals in winter, 374 — look to your, 25 — rules in fattening, 369 — teaching, 247 Apple, pink-fleshed, 131 — the Ortle, 318 — tree borer and bark-louse, 160 — caterpillar, 162, 255 — worm, a new, 61 — trees, 139 — dwarf, 133, 139 — re-grafting old, 58, 75 Apples, baked, sweet, 16 — cultivation of, 155 — lime barrels for preserving, 221 — peaches, plum and other fruit, drying, 89 Arbor Vite, American, 161, 187 Artichokes as a field crop, 16 — cultivation of, 117 Asparagus and rhubarb, 95</p>	<p>Butter from prairie hay, 301 — laying down for winter, 341 — making, 86, 177, 210 — in Massachusetts, 263 — profits of, 65 — ten rules to be observed in, 110, 138 — New York premium, 281 — preserving, 301 Cabbage fly, lettuce for, 111 — for stock, 195 Cabbages, manure for, 381 Calves, drink for, 178 — lice on, 131 — on the management of, 305, 306 — rearing, 182, 369 — wintering, 367 Carrots, 107 — cultivation of, 111, 133 — don't thin, 183 — harvesting, 206 — on the same ground every year, 195 — premium crop of, 235 Cattle, be kind to thy, 182 — cost of raising, 13 — cure for warts on, 67 — Devon vs. Durham, 116 — disease in Ohio, 245 — in the feet of, 50 — Durham, for California, 133 — hoven in, 38, 118 — quarter-ill in, 54 — Show, Smithfield Club, 51 — the British breeds of, 329 Cedar, white, 201 Celeraic, or turnip-rooted celery, 104 Chalk burning, 37 Cheese factory, a great, 130 — making, 151, 177 — in a small dairy, 142 — to destroy mites in, 373 Chess and cockle, 275 — does wheat turn to, 290, 302 — will rye turn to, 333 Chinese sugar cane, 17, 37, 75, 108 — experiments with, 48, 140, 341 — in Canada, 374 — molasses from, 227 Churning in winter, 365 Cineraria, the, 29 City or country residence most desirable, 91 Clover and grass, cutting and curing for fodder, 203 — for soiling purposes, 73 — raising in Massachusetts, 118 — seed, 12 — sowing, 73 — sod, manuring, for potatoes, corn, &c., 276 Clubs, farmers', 289 Cook, learn to, 281 Corn crop, a boy's, 281 — cultivation of, 82, 114, 117, 139 — in Indiana, 184 — in Kentucky, 118 — in Maine, 119 — deep plowing for, 179 — fall plowing for, 179 — for fodder, 270 — good culture of, 369 — green, an excellent way to prepare for winter use, 256 — hoeing, in dry weather, 176 — late planted, 206 — management of for feeding cattle, 340 — planter, foot, 133 — plowing land for, 145 — seed, 16, 61 — selecting, 184 — sound, 245, 276 — the season for, 270 — too much seed, 339 — topping vs. cutting up, 139 Cottages, designs for, 66 Cow, a good, 133 Cows and butter making, 19</p>	<p>Cows, feeding, 131 — for butter, 131 Country house, English, 346 Crops in Seneca county, 338 — rotation of, 171 Crow scarers, 171 Cucumber vines, to protect from bugs, 323 Curculio, lime and sulphur for the, 323 — remedy for the, 352 — the plum, 218, 286 Currant bush worm, 162, 191 Currants, cultivation of, 161 Curves, a simple instrument for laying out, 60 Dahlia, my first, 163, 171 Duhlias, 30 Dairy, a good, 14 Dead furrows and headlands, 16 December, hints for, 374 Devon bull Puritan, 54 Draining ponds, excavate in flat fields, 206 — without tiles, 278 Drouth, on the best means of escaping injury from, 308 Dioscorea Batatas, the, 291 Dwarf trees of China, 221 Earth or angle worm, 16 Edge tools, sharpening, 18 Egg plant, cultivating the, 254 Ergot, cause of foul in the feet, 77 Essays for the Genesee Farmer, 308 — prize, 323 Eugenia Ugni, 30 Evergreens, six hardy, 186 — transplanting early in autumn, 288 Ewes and lambs, 132, 139 Exhibition, Provincial, of C. W., 334 Experience, another chapter from, 50 Fact, an interesting, 66 Facts, a few for the Genesee Farmer, 77 Farm accounts, 213 — laborer, cheap, 368 Farmers, brief remarks addressed to, 20 — Clubs, 22 — Debating Societies, 367 — gardens, management of, 156 — how much education, and what kind, do they need?, 311 — why do so few write for agricultural papers?, 312 — wives should be educated, 314 Farm house, 256 — design for, 216 — a brick, 248 — hints on building a, 181 — houses in Michigan, 115 — life, how can farmers render it attractive to their sons, 309 — how to make it attractive, 83, 89 — keep an account with your, 23 — stock, scarcity of, 239 Farming a science, 215 — going up, 277 — high profits of, 139 — operations, advantages of forethought in, 152, 177, 274 — advantages of system in, 153, 212 — ten essentials to good, 263 — tools, how to keep clean and bright, 275 — why considered a degrading vocation, 310 Fat, composition of, 53 Fence, cheap, 340 — on board, 68 — on heavy ground, 180 Fences, 74 — building, 101 — a few words about, 214 Fencing a farm, best method, 85 Figs, drying, 197 Flat fields, excavate draining ponds in, 206 Flowers, cultivation of, 153, 193, 254 — forest, 193 — for spring growing, 125</p>
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------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- winter, for rooms, 31
 Fly on cherries, 28
 Fodder, scarcity of, at the West, 277
 Fowl in the feet, 77, 109
 Fowls, barn-yard, on the management of, 306
 — improve your stock of, 343
 Fruit culture desirable, 27
 — drying, 132, 224
 — gathering and ripening, 288
 — Growers' Soc. of Western N. Y., 36
 — — meeting of, 92, 315
 — growing in Oregon, 127
 — is the culture of, on a more extended scale, desirable, 87
 — old varieties of, wearing out, 224
 — thinning of, 29
 — trees, is it desirable to plant, in the highways, 313, 376
 — — rabbits, &c., 187
 — — tar on, 61
 — varieties of, for the West, 352
 Fruits, preserving, without sugar, 218
 Fuel for summer, 74
 Fuschia, the monstrous, 30
- Garden, a farmer's, 171
 — an Ohio farmer's, 163
 — in my new, — No. 1, 223
 — — No. 2, 232
 — — No. 3, 285
 — — No. 4, 349
 — my new, 123
 — is it proper for ladies to assist in the, 314
 — seed should be sown in drills, 123
 — seeds, sowing, 124
 — the, 31
 Gardens, compost for, 376
 — why do farmers generally neglect their, 88, 187, 190
 Gardening at the North Pole, 255
 — ladies should do their own, 256
 Garget, cure for the, 165
 Genesee Farmer, the, (poetry), 381
 Goat, ewe Cashmere, 25
 Goosberry, grafting, 191
 Goosberry mildew, cure for, 28
 Grapes, cold, 96, 133
 Grapes, culture of, in the open air, 284, 350
 Grass, 270
 — timothy, blessings of a, 265
 — — sowing, 367
 Green-houses, glass for, 30
 Guano and concentrated manures, 110
 — in England, 132
 — phosphates in, 130
- Hail storms in England, 323
 Hay, corn-stalks, &c., cutting, 150
 Headlands, productiveness of, 50
 Head-ropes for cattle, 51
 Hedges, 134
 — orange, 66, 127
 — sweet briar, 109
 Hens, how can they be made to forsake their lazy habits, 312
 Herd Book, Devon, 194
 Hint, a good, 67
 Homestead, the, 226
 Hoing, objects of, 242
 Hog cholera, cure for, 132
 Hogs, feeding, 65
 Horse, Arabian, pedigree of, 21
 Horse charr, the, 225
 — diseases of the, 372
 — distemper, 68, 78
 — Flying Morgan, 120
 — General Gifford, Jr., 304
 — Justin Morgan, 23
 — power, American, in England, 259
 — Richardson on the, 15
 — wild, how to bind, 249
 Hoses, blood, 75
 — bots or belly-ache in, 78
 — colic in, 78
 — condition powders for, 53
 — dipping, 49, 75
 — French, 18
 — management of, 80
 — outfit for gulls on, 374
 — or pipe in farm labor, 150
 — — equipment for bruises on, 78
 — — pipe in, 119
 — — spruces on, 78
 — — sulphat in, 43
 — — table for, 119
 — — water management of, 364
 Horticultural Exhibitions, women on committees at, 259
- Horticultural operations for January, 28
 — — February, 59
 — — March, 95
 — — April, 124
 — — May, 159
 — — June, 188
 — — July, 221
 — — August, 251
 — — September, 283
 — — October, 319
 — — November, 349
 — — December, 376
 Horticulture in Oregon, 192
 Horticulturists, questions for, 60, 75
 Hot-beds, 382
 — management of, 124
 House, farm, 121
 Hoven in cattle, 226
- Influence, home, 225
 — the wife's, 225
 Inquiries and Answers, 37, 67, 101, 133, 166, 196, 229, 260, 292, 324, 356, 381
 Items suggested by the December No., 35
 — January No., 43
 — February No., 75
 — March No., 109
 — April No., 138
 — May No., 171
 — June No., 205
 — July No., 238
 — August No., 269
 — September No., 305
 — October No., 335
 — November No., 365
- Kane, Dr., death of, 109
- Labor, price of in England and America, 130
 Lady equestrianism, 142, 156, 157, 245
 Land, best method of seeding it to timothy and herd's grass, 305
 — how nature imparts fertility to, 236
 — the tiller of his own, 25
 Lands, working in the fall, 259
 Landscape gardening, specimen of American, 28
 Letters from the South-west, 139
 Lice on anything, to kill, 165
 Lima beans, 75
 — a plea for, 76
 Lime on beans, 93
 Linden, European, 79
 Location, as it affects temperature and vegetation, 282
 Locust seed, sowing, 133
 — tree, yellow, 27
 — trees from seed, 15
- Machine, how it may be easier for it to work than to do nothing, 279
 Mad itch in cattle, 101
 Mangel wurzel, cultivation of, 113
 — sowing in the fall, 195
- Manure, applying and leaving upon the surface, 243
 — artificial, frauds in, 74, 109
 — barn-yard, 9, 43
 — management of, 147, 171, 181
 — drawing out, 73
 — heaps, inauriatic acid in, 130
 — leached ashes as a, 149, 171
 — lime as a, 87, 131, 212
 — other than barn-yard, most economical mode of obtaining, 172
 — Peruvian guano as a, 184
 — plowing in green corn for, 303
 — salt as a, 150
 — shade as a, 43
 — still and still slop, 47
 — swamp muck as a, 181
 — question, the, 301
 — unleached ashes as a, 149, 183
 — value of, for potatoes, 183
 Manures, concentrated and guano, 110
 — liquid, 130
 — special, 221
 Marl, history of, as a fertilizer, 79
 Marsh and its products, 45, 75
 May-beetle, the, 239
 Meadows, clean, 247
 Meat, consumption of, 65
 — how much corn or hay is required to produce a pound of, 271
 — to make it fresh and sweet, 54
 Melons, growing, 162
 Mice and fruit trees, 30
 — to prevent girdling by, 28
- Milking, should ladies do the, 96, 109, 208, 276
 — who should do the, 164
 Millet, cultivation of, 183
 Monroe County Farmers' Club, 36
 Mosses, 251
 Mowing machines, economy of, 227
 Mulching, 219
 Mushroom culture, 249
- National wealth, 333
 Newspaper statistics, fallacy of, 205
 Notes for the month, by S. W., 17, 53, 75, 109, 139, 171, 206, 238, 270, 299, 336, 396
 — from Indiana, 230
 — — Minnesota, 278
- Oats, cultivation of, 107, 138, 145
 Onions, cultivation of, 84, 182, 320
 — hen measure for, 195
 — raising, 49
 — to raise large, 192
 Orchard grass, 123
 Orchards, improving old apple, 26
 — location of, 96
 — planting, 377
 Ornamental tree, the horse chestnut as a, 220
 Osage orange seed, 331
 Owls, spare the, 192
 — to catch, 101
- Pain, cheap, 195
 Parsley, to dry, for winter use, 378
 Parsneps as a field crop, 171
 — sowing in the fall, 116
 Patent Office Report, 43
 Peas, Japan, 20, 140, 260
 Peach, cultivation of the, 154, 162
 — trees, gum in, 382
 — the result of care in setting out, 377
 Peaches, 27
 — raising in Massachusetts, 351
 Pear roots, length of—Correction, 347
 — rust, and cracking of the, 61
 Pears, dwarf, cultivation of, 121
 — grafting on white thorn, 287
 — select, on quince stocks, 57
 Peas, best soil for, 128
 — cultivation of, 31, 154, 163, 184
 — forwarding early, 95
 — should be sown early, 161
 — to kill bugs in, 117
 Petunias, a list of good, 192
 Pigeons, domestic, 337
 Pigs, Chester White, 131
 — Plasty, convenient, 270
 Planting early, 140
 — prepare for, next spring, 347
 — summer and autumn, 253
 Plants, protecting, from cold, 375
 — starting, early, 192
 Plaster for clover, 109
 — Correction, 76
 — sowing, 74
 Plowing, 74
 — and harrowing land, 73
 — deep, 180
 — fall and spring, 16, 43
 — to kill Canada thistles, 131
 — for spring wheat, 47
 — objects of, 115
 — subsoil, 153, 171
 — without headlands, 184
 Plums, American, 352
 — and the curculio, 171
 — cultivation of, 155, 162
 Poll evil, 183
 Potato disease, 67
 — rot, 222
 — substitute for the, 21
 Potatoes, 75, 169, 270
 — cultivation of, 46, 79, 83, 114, 183
 — — in Iowa, 114
 — — in Ohio, 178
 — — in Washington Territory, 131
 — — without hand-hoe, 47
 — digging and preserving, 278
 — large and small, 15
 — yield of, 21
 — mulching, with straw, 15
 — on clover sod, 46
 — planting, in the fall, 99, 195
 — sprouting, 195
 Poultry, feed for, 44
 — house, Browne's, 208
 Prairie farm, management of, 84, 141, 179
 — hay and white butter, 239

Prairies, breaking up,	16, 276, 302	Soil, advantages of stirring the, 153, 173, 195	Vegetables, hardy garden,	95
Premiums for short essays,	35, 75, 355	— analyses, practical utility of,	— transplanting,	123
Pries, high,	17	— carbonic acid in the,	Violet and its varieties, the,	29
Progress, a mark of,	54	— how can we most economically in-	Water, hard,	133
Pumpkins,	304	crease the fertility of the,	Wax,	259
Puritan, Devon bull,	54	— quality of,	Weather and crops in Indiana,	100
Raspberry beds,	95	— study the mechanical qualities of the,	— of 1857,	368
Raspberries, ever-bearing,	32	Sorghum,	— fuel,	53
— three good,	348	South-down ram, great price for a,	Western amusements,	225
Rat-trap,	100	Sowing and reaping, (poetry),	lands, buying,	116, 139
Rats and mice,	15, 43	Spiræa Callosa,	N. Y. Fruit Growers' Ass'n, annual	55
— to destroy,	66	Spring work, hints on,	meeting of,	55
— mice and other vermin, to destroy, 53,	100	Stable, a cheap and commodious,	Wheat, barley and oats, great fecun-	22
— to get rid of,	101	Steers, good two-year old,	dity of,	260
Receipts, original domestic, 63, 128, 228,	257	— lean, impolity of selling off,	— crop in Indiana,	270, 278
— 189, 321, 353, 379	379	— on the management of young,	— drilling in,	118
Red spider in green-houses,	67	Stock, care of, in winter,	— eating off, in spring,	118
Rennet, to prepare,	365	— great sale of imported,	— Egyptian,	260
Residence in the country or city,	256	— lean, impolity of selling off,	— experiments in sowing different va-	52
Rhubarb,	95	— on the management of young,	rieties,	275
Roads, reflections on poor,	272	— and working oxen,	— growing in Western N. Y.,	41, 75
Root crops, cultivation of,	143	Strawberry plant, its insects,	— shall we have to aban-	76
Rose-bugs, sulphur to kill,	192, 222, 290	— plants, set out this month,	— in Michigan,	132
Roses, a small collection of first-rate,	32	Strawberries,	— laying out lands for,	132
Rotation, a proposed,	172	— annual notes on,	— midge, average injury from,	116
— best system of,	150	— cultivation of,	— destroyed by a rain storm,	132
Rural Annual, the value of the,	376	— notes on,	— seed, to clean ches8 out of,	104
— New Yorker,	194, 258	Striped bug, charcoal a cure for the,	— sowing, after barley,	165
Ruta bagas and turnips, cultivation of,	169	Sugar cane, planting, instead of seed,	— harrowing and rolling,	73
Rye, cultivation of,	145	— Chinese, chrystalized sugar from	— spring,	118
Sawing wood, machine for,	68	the,	— cultivation of,	107, 144
Season comparative backwardness of	287	Sulphur to kill rose-bugs,	— in Kentucky,	165
the,	287	Summer and autumn planting,	— to clean cockle out of,	247
Seed, soaking,	65	Swamp muck as a fertilizer,	— prevent smut in,	120
Seeding, thick and thin,	323	Sweeney, cure for,	— Turkish Flint,	15
Shade trees,	252	Swine, management of,	— what shall we raise in place of,	249
— six good,	233	Tariff, reduction of,	— winter,	169
Sheep, a profitable flock of,	14, 75	Taste and thrift in Iowa,	— cultivation of,	\$1, 233, 243, 303
— cost of raising and keeping, and pro-	14	Thoughts suggested by the May No.,	Willow, the,	352
— ducing wool,	14	Tobacco, on the cultivation and man-	Windows, bay,	100
— good, the most profitable,	390	agement of,	Winter, the,	110
— keeping, on good land,	244	Tomato vines or small shrubbery, racks	— evenings, how shall we spend them?	321
— management of,	80, 113, 119, 120	for,	— in Iowa,	100
— and breeding of,	374	for, among corn,	Wire-worms, buckwheat to kill,	278
— profits of,	368	Tomatoes among corn,	Woman, influence of,	33
— racks for feeding,	19, 50, 51, 139	Tools, take care of, fodder, &c.,	Woodland, management of,	147
— Saxony,	139	Tree, big, of California,	Wool, that twenty-three pound fleece,	270
— scab in, remedy for,	12	Trees, packing,	Yellow dock,	271
— watering in winter,	365	— planting, on prairies,		
— wool grows in winter,	114, 139	— pruning,		
Short horn bull Master Butterfly,	131	Turnips,		
Shrubs, leguminous,	32	— among corn,		
Skunk,	230	— and carrots,		
Small fruits, cultivation of,	155	— cultivation of,		
		Tarnip fly,		
		Underdraining,		
		— clay land,		

INDEX TO ILLUSTRATIONS.

DOMESTIC ANIMALS.		Polish top-knot cock and hen,	244	MISCELLANEOUS.	
Bull, Short-horn, "Don,"	217	White Bantam cock and hen,	345	Apple, the Orley,	319
— Devon, "Puritan,"	64	FARM AND OTHER BUILDINGS.		Barley, seven different varieties,	105, 106
Cow, Short horn, "Adelaide,"	185	Cottage residence of W. H. Aspinwall,	28	Curculio, appearance of a plum when	218
Goat, Female Cashmere,	25	Farm houses, wood,	216	— stung by the,	218
Heads of the Alderney cattle,	330	— house, brick,	248	— four cuts representing the different	218
— Ayrshire cattle,	329	Hayes' farm, Devonshire,	346	transformations of the,	218
— Galloway cattle,	323	Plan of a pig-sty,	270	Drill-rake,	123
— Hereford cattle,	331	Poultry-house, Browne's, with plans	280, 291	Group of domestic pigeons,	338
— Long-horn cattle,	330	— and cross section,	280, 291	Instrument for laying out curves,	60
— North Devon cattle,	331	Stable, cheap and convenient,	207	Moth of the cut-worm,	252
— Short-horn cattle,	330	PLANTS AND TREES.		Rack for feeding sheep,	368
— West Highland cattle,	329	Arbor Vite, American,	187	Raspberries, Brinkle's Orange,	348
Horse, Arabian, outline of head,	21	— Siberian,	187	— Pastoff,	348
— Morgan, "Gen. Gifford, Jr."	304	Big tree of California,	62	— Hudson River Antwerp,	348
— "Flying Morgan,"	120	Cineraria, the,	29	Red spider, natural size and magnified,	67
— "Paul Clifford,"	24	Dwarf pear tree,	57	Ruta bagas, three different kinds,	169
POULTRY.		Eugenia Ugni,	30	Settlement in the wilderness, com-	370
Black Bantam cock and hen,	345	Horse chestnut, scarlet-flowered,	220	— mencing a,	370
Dominique cock,	344	Laburnum, the,	32	— first summer at the,	371
Dorking cock and hen,	344	Linden, European,	94	— subsequent improvements	2
Game cock and hen,	345	Spiræa Callosa,	283	at the,	2
Silver-pencilled Hamburg cock and hen,	345			Tomato rack, and vine as it appears when	188
Gold-pencilled cock and hen,	345			— first planted,	188
Heads of Spanish fowls,	344			— as it appears when fully	189
				grown,	189
				Transplanters,	123
				Wheat, six different varieties,	253

INDEX TO CORRESPONDENTS.

A. S. B.,	19, 339	Franklin, S. N.,	133, 323	Nichols, D. A. A.,	51, 80, 170
A. H.,	19, 132	Fitch, Prof. Asa,	239	Order,	67
Alway W.,	35	Fisk, Miss Addie E.,	313	P. M.,	31
Adams, J. C.,	50, 51, 110, 111, 133, 151, 230, 276.	Gardner, W. H.,	14	P. B.,	47
A Lover of good fruits,	60	G.,	73, 114	P. P.,	86
An Old Subscriber,	61	Garnsey, W.,	151, 174	Pyrus,	85
A Farmer,	63, 160	G. A. F.,	229	Penu,	117
A. G. II.,	68	Given, S. K.,	261	Perkins, J.,	117, 119
A. F.,	183, 184	Javen, J. A.,	262	Palmer, Charles,	113, 229
Amateur,	191, 257	Garratt, W. B.,	303	Purrinton, D.,	141
A Subscriber,	101, 166, 192	Jarusey, M.,	306, 398	P. C. R.,	174
A Lover of flowers,	192	J. A. G.,	324	Powers, Stephen,	176, 292
A Farmer's Wife,	162, 184, 193, 203, 226	J. G.,	181	P.,	241
A. E. B.,	195	G. R.,	230	Prince, William R.,	253
Agricola,	211, 277, 285	Goldsmith, W. T.,	31, 32, 125, 192	Parry, John,	262
A Mother,	59, 225	Hilton, H.,	37	Peck, S. B.,	312
A. D.,	324	Housberger, D. C.,	67	P. A. S.,	320
A Country Invalid,	123, 223, 252, 255, 349	H. E. H.,	59, 96, 154, 250, 253, 375	Parks, M. L.,	377
Allen Joseph,	81	Hayward, E. S.,	83, 111, 144	R.,	15
A. W.,	112	Hubert,	88, 113, 152, 247, 255	R. R. S.,	21, 32
A Constant Reader,	131	H. M. D.,	89	R. D.,	48
Ann H.,	156	Howe, C. N.,	101, 116	R. W. S.,	53, 111
A. J. P.,	166	H. J.,	101	Ruby, J. S.,	67
A. J. C.,	174	H. H. M.,	129, 163	Reno, William,	101, 153
A. E. F.,	256, 289	Hoyt, A. L.,	144	Reynolds, P. C.,	156, 368
Allfather, Henry,	261	Houghton, Joel,	147, 277	Ruble, W.,	127
A. M.,	276	Hecox, H.,	151	Rockwell, Charles,	133
A. J. N.,	292	Hamilton, J. H.,	166	Randall, Isaac,	146, 149, 261
A Young Farmer,	18, 50, 166	Hodges, E.,	177, 273, 301, 313	R. F.,	260
Anthony, J. H.,	85	Hidreth, C. E.,	261	Richardson, M. A.,	166
Bartlett, Levi,	15	H.,	262	R. S.,	356, 352
B. Ning Co., N. Y.,	16, 43, 75, 109, 116, 133, 161, 171, 205, 233, 269, 299, 365	H. C.,	340, 341	R. G.,	261, 356
Bement, C. N.,	20, 44, 123, 190, 271, 338	H. R. S.,	375	Smith, A. L.,	13, 14, 30
B. F.,	23, 46, 115, 242, 254	I. P. L.,	261	S. W.,	16, 17, 53, 75, 109, 139, 172, 266, 293, 288, 270, 299, 366
Brunner, H. J.,	65	I. B. B.,	38	Salter, Josiah,	23, 60, 85, 95, 124, 133, 159, 188, 221, 222, 251, 283, 319, 335, 349, 376
Blaklee, N. J.,	68	J. Johnston, John,	46, 76, 150, 213, 244, 247, 339	Sanders, Edgar,	30
Britton, M. B.,	81	Juvenis,	77	Senior,	49
Bundy, E. O.,	99	J. P.,	101, 163	S.,	61, 292
B., Sandy Lake,	117	J. S.,	101	Selden, Henry M.,	68
Boas, J. N.,	118, 292	J. L.,	129	Stark, Elijah,	100
Bendly, S. H.,	133	J. W.,	133	Stevens, A.,	116
Bacr, O. B. F.,	133, 256, 324	J. W. A. K.,	133	Sanfield, John,	117, 192, 247, 249, 304, 341, 342, 352
Bartlett, B. F.,	133, 376	J. E. B.,	161	S. S. B.,	117
Beman, J. E.,	144	J. H. B.,	173, 351	S. K. G.,	119
B., Rochester, N. Y.,	155	J. R.,	229, 261	Sawyer, W. A.,	119
Brackett, C.,	261	J. F. F.,	207, 248	Sargeant, S. S.,	133
Briggs, John L.,	274, 275, 302, 340, 352	J. E. B.,	276	Street, David,	150, 153, 306, 314
B.,	272	Jim,	300	Starkey, Horace,	165
B.,	367	J. H.,	301	S. K.,	229
Burges, H. S.,	374	J. F.,	301, 324, 325	S. A. W.,	258
Bissett, C. P.,	27	J. L. K.,	305	S. L.,	260
Crockett,	27	J. C. Mrs.,	162	S. G.,	271
Clement, Isaac,	27	J. B.,	381	Smith, Hiram C.,	274
Cooly, Solon,	85, 115	Knox, D.,	48	Sampson, J. G.,	142, 149, 155, 175, 183, 215
Collier, V. L., Jr.,	101	Knowles, R. D.,	249	S. F. T.,	368
Chamberlain, J. D.,	114, 119, 163	Lee, Joseph,	80, 150	Spectator,	377
Chute, Andrew,	118, 120	Lee, Prof. Daniel,	169, 238, 265, 332, 337	Tunison, G. B.,	78
Clement, J. B.,	144	Leatherseich, David,	113	Titus, Alex.,	67, 309
Collins, Mrs. C. H.,	158	L.,	128, 150	Taylor, J. C.,	78
C. A. F.,	166	Lewis, L.,	133	Taylor, H. H.,	86, 116, 145, 154, 184, 193, 206, 209, 218
Caldwell, Joseph,	254	Lyman G. C.,	155, 277, 369	Tanner, Myron E.,	114, 162
Coryell, A. D.,	292	Lay, F. W.,	176	T.,	177
Chapin, W. N.,	341	Livingston, W.,	259, 261	T. G. S.,	278
Constatino,	262	Lowe, John,	260	T. G.,	292
C. F.,	273	Lothrop, D. W.,	313, 351	Tallman, John L.,	323
C. K. H.,	331	Loring, G.,	369	Thomas, Elijah,	260, 340
D., Gates, N. Y.,	15, 25, 28, 119, 162, 183, 187, 192, 193, 207, 208, 246, 255, 260, 262, 278, 302, 367, 369	L. C. S.,	276	Thomas, J. J.,	347
D. F. K.,	28	La Fontaine, A.,	352	T. S. T.,	133
Davison, S.,	83	Miler, J. L.,	21, 133	Terrill, C.,	352
D. K.,	101	M. L. J.,	23	Temple, A.,	352
Delany, H. F.,	181	M. S. B.,	33, 66, 142, 192	Uncle Sam,	243
Denroche, H. R.,	261	McPherson, John,	37	Vinton, James,	392
Decker, B.,	165	Mullins, A. G.,	81	Viola,	321, 353
D. S.,	174, 207, 369	Martin, Horatio,	84	Van Horn, D.,	165
Elliott, W. H.,	67	M. G.,	88	Wood, D. S.,	90
E. A. B.,	90	Meeker, L. A.,	133	W. H. M.,	114, 246
E. A. H.,	91	Mitchell, S.,	141	W. L. B.,	115, 117, 176
E. L.,	101	McCreery, W. H.,	153, 311	Wilder, Marshall P.,	34
E. S.,	132	Maria,	161	W.,	51, 79, 87, 174, 247
E. A. T.,	165, 247	M. W.,	161	White, H. B.,	68, 131
Edwards, D.,	261	Mary,	161	Williams, P. E.,	134
Emmons, W.,	352	Mitchell, Wm. D.,	179, 356	Wilson, C. C.,	146, 176, 275, 278, 305
Fairbanks, L.,	28	McVean, John,	243	W. F. R.,	230
Farmer, B.,	47	McVean, John C.,	303	W. L.,	230
F. A. G.,	49	M. D.,	310	W. D. M.,	307
Francis, Richard,	49, 51, 165	M. A. C.,	38	W. S.,	308
Ford, Chilian,	50, 61	M. T.,	379	W. L. M.,	325
F. R.,	118	M. S.,	82	*Virginia,	37, 68
Forsyth, W. A.,	130	N. N.,	278	*	58, 147, 184
		N. C.,	241		
		N.,	312		



BARN-YARD MANURE.

WHEN a plant is burned, the four organic elements, oxygen, hydrogen, nitrogen, and carbon are driven off into the air, while the ten inorganic elements are left as ashes. Consumption by an animal has been frequently compared to this burning process, and to a certain extent the analogy holds true. It has been supposed, by some at least, that the organic elements of the food passed into the atmosphere in the form of breath, perspiration, &c., while the inorganic, or ashes, were voided in the solid excrements. This, however, is true only in part, and gives but a faint idea of the actual process of nutrition. It is true that one half the organic matter of the food is given off by respiration, &c., but it is not an integral half. None of the nitrogen of the food is exhaled in the breath, or given off through the pores of the skin. It is only the digestible hydrogen and carbon of the food which are burned in the lungs and thrown off from the body in the form of water and carbonic acid. The greater part of the nitrogen of the food is found in the urine, while the undigested carbon compounds, (woody fibre, &c.) are voided, in conjunction with the inorganic elements, in the dung.

Leaving out of the question mechanical action, the composition of the food affords a true criterion of the composition and value of the manure. If clover plowed in would be good manure, clover passed through the body of an animal would be equally good; if straw plowed in is of little value, manure made by animals eating nothing but straw will be no better. Hog and horse manures are known to be of more value than cow and sheep manures. They are so because hogs and horses live on richer food, and for no other reason. A cow or a sheep would make as good manure as hogs or horses if both were fed on the same food and other things were equal.

It is important to ascertain, therefore, what foods make the richest manure. There are many conflicting opinions on this point, which our space will not allow us to examine. *We believe that the value of manure will be in proportion to the amount of nitrogen the food contains.* There cannot be a rational doubt on this point. It is well known that clover is of more value as manure than straw; this is because clover contains more nitrogen than straw. Practical farmers know that manure made by animals eating oil cake and peas is worth more than that made by animals eating nothing but turnips or hay, and this is because oil cake and peas contain such a large quantity of nitrogen. Blood, woolen rags, horn shavings,

leather, hair and the carcasses of animals, are all known to be the best of fertilizers. They are so, simply because they contain such a large amount of nitrogen. In fact, we know of no substance containing much nitrogen, but what practical farmers consider, without knowing why, of great value as manure. The value of Peruvian guano is always estimated by the quantity of nitrogen it contains. The more intelligent dealers, before purchasing, always have the percentage of nitrogen determined in various cargoes, and buy that which contains the most. On this point the late Prof. NORTON says that during his stay in Edinburgh, samples from more than 500 cargoes of guano were analyzed in the laboratory of Prof. JOHNSTON, and were sold by his analyses, fluctuating in price as they indicated more or less nitrogen. "Had there been any mistake," he justly observes, "in this method of estimating value, experience would soon have detected it."

As nitrogen is such an important element of fertility, we may be justified in giving some account of its action and characteristics. In its elementary state, it is always a gas. It forms 78 per cent. of atmospheric air, acting simply as a diluent to oxygen. It is inhaled and respired from the lungs without the least change, and is not taken up by plants in its elementary state. M. VILLE, indeed has published the results of careful experiments which indicate that plants have the power of taking up nitrogen, but the bulk of the evidence on this point is against him. It is an indispensable ingredient in all animal and vegetable life. Nothing that possesses organization or vitality, whether animal or vegetable, can be formed without it.

As plants or animals cannot take their nitrogen *as such*, from earth or air, it follows that it must undergo some chemical change previous to its entrance into organic life. This change is the conversion of unorganized nitrogen into ammonia. This takes place under certain well known circumstances, but the operation is so slow and so limited, that it must have taken indefinite ages to form all the ammonia and products resulting from it at present existing on the earth—unless ammonia was created *as such*. But, whether this was or was not the case, is of little importance. We know that nitrogen is organized, and that by the decay of all organic bodies their nitrogen is converted into ammonia—and that this ammonia is taken up by plants and again becomes organized nitrogen.

Ammonia is always formed by the ultimate decay or combustion of a nitrogenous substance, 14 pounds

of nitrogen uniting with 3 pounds of hydrogen, to form 17 pounds of ammonia. It is a gas much lighter than the air, and rapidly evaporates when exposed in a free state. It is an alkali similar in many respects to potash and soda, forming fixed salts with all the mineral and with most of the organic acids, and has a very strong affinity for them. It is rapidly absorbed by water, for which it has a great affinity, though no combination takes place. As formed from decaying substances it always unites with carbonic acid, forming the *volatile* salt, carbonate of ammonia. It is this salt which all have observed on entering an ill ventilated stable after it has been closed for some time. It is what ladies sometimes endeavor to keep themselves awake with in church, stimulating the nostrils when there is little in the sermon to stimulate the brain. If you doubt that the nice clean hartshorn you have purchased of the druggist is the same as that given off from all decaying animal and vegetable substances, get a little moist guano, urine, blood, or any other animal matter, and mix it with ashes or lime, allowing it to stand a short time in a covered vessel, and then see if you can detect the least difference in the smell of the two gases—the one purchased in the city, and the one of domestic manufacture.

Carbonate of ammonia contains all the four organic elements which compose such a large proportion (generally from 90 to 98 per cent.) of all animal and vegetable substances; and it is in this shape that nitrogen is taken up by the plant and organized into food for animals. This is a strong argument, though we possess a still stronger one, for making and saving as much ammonia on the farm as possible. We know of no modern agricultural improvement, which experience has confirmed as giving larger crops, but what directly or indirectly, brings more ammonia on to the farm or renders that already there more available as food for plants.

As an aid to the farmer who desires to improve his manure heap, we have made up from various reliable sources, the following table, showing the per centage of nitrogen, &c., in various substances used as food and as manure. It is worthy the most careful study and consideration:

	Water	Dry matter	Nitrogen in natural state	Nitrogen in dry matter
Barley straw,-----	11.0	89.0	0.23	0.26
Oat do -----	21.0	79.0	0.28	0.36
Rye do -----	14.0	86.0	0.30	0.35
Wheat do -----	18.0	82.0	0.33	0.40
Buckwheat do -----	11.6	88.4	0.43	0.54
English meadow hay,-----	11.0	89.0	1.15	1.28
Red clover hay,-----	12.7	87.3	1.83	2.10
Pea straw,-----	8.5	94.5	1.79	1.95
Carrots,-----	87.6	12.4	0.30	2.40
Potatoes,-----	74.0	26.0	0.53	1.49
Mangel wurzel,-----	87.0	13.0	0.29	2.27
Ruta baga,-----	88.6	11.4	0.21	1.87
Barley,-----	16.0	84.0	1.60	1.90
Malt,-----	7.0	93.0	1.60	1.72
Wheat,-----	16.0	84.0	1.80	2.14
Oats,-----	16.0	84.0	2.00	2.33
Indian corn,-----	18.0	82.0	1.64	2.00
Malt-dust,-----	7.0	93.0	4.00	4.08
Malt-grains,-----	6.0	94.0	4.51	4.90
Linseed,-----	12.0	88.0	3.75	4.26
Beans, peas or tares,-----	16.0	84.0	4.00	4.76
American oil cake,-----	11.6	88.4	5.04	5.71

Hair, feathers, leather, woolen rags, horn shavings, dry blood, dry flesh, and fish, from 15 to 17 per cent. of nitrogen.

It will be seen that the straw of barley is the poorest, and that of wheat the richest of all cereals. Pea straw is worth five times as much as wheat straw for manure. Clover hay is worth nearly as much again as English meadow hay. We have no analyses of

corn stalks that are satisfactory, and therefore have not given them in the table. The analyses which we have, indicate that the dry stalk contains about 1.2 per cent. of nitrogen, and the dry leaves 2½ per cent., showing them to be of high comparative value. Of the gramineous grains, barley is the poorest in nitrogen, Indian corn a little better, and oats the richest. Flax seed contains a large per centage, peas and beans still higher, and oil cake the highest of all vegetable substances used for food. Hair, feathers, &c., are most valuable fertilizers, equal in nitrogen to the very best Peruvian guano, and much better than what is often sold as such for \$60 per ton. They would be quite equal to good Peruvian guano, but that their nitrogen is in a far less available condition.

In making and preserving barn-yard manure, then, the primary object should be to get as much ammonia as possible; and, as we have before stated, the composition of the food is the true index to the composition of the manure. The more nitrogen the food contains, the more ammonia, or compounds which will ultimately form ammonia, will the manure contain; and therefore, other things being equal, the more profitable will it be for feeding purposes; for in all countries having easy access to the great markets of the world, no farmer can afford to feed cattle unless the manure be accounted of some value.

The first object of the farmer in making manure, will be to give his animals those kinds of food which, other things being equal, contain the most nitrogen. The next most important point is, how to treat the manure so as to retain all the valuable elements it contains, and at the same time reduce its bulk as much as possible by fermentation. The last consideration is seldom mentioned by theoretical writers, but it must not be forgotten. It is intimately connected with the expense and profit attending the application of manure. If, as we assert, the carbon of the manure is of little value on a wheat farm, and its water of no value; and if carbon and water compose four-fifths of all unfermented barn-yard manure, as we know they do, it cannot but be to our advantage to reduce their quantity, if it can be done without loss to the valuable portions of the manure.

The most valuable part of the excrements of animals is the liquid. More loss is sustained by allowing this to run to waste than in any other one thing. Rapid fermentation in a loose heap is another source of loss. Allowing the eaves water to run on and leach out the soluble portion of the manure is another common mal-practice. These three evils every one familiar with agriculture must have observed. The loss to each individual farmer by such mismanagement is great, and viewed as a national question, is most appalling. The direct loss to the farmers themselves, in the aggregate, is immense; while the indirect loss to the country is positively inestimable. To prevent this loss, we must in the first place, save the liquid excrements. This is a problem which has puzzled the most scientific farmers of the age. The difficulty is much greater in England, where turnips, containing 90 per cent. of water, are used for stall feeding, than with us. Here, if the buildings are all spouted, the greater part of the liquid of the animals and the rain falling on the surface of the yard may be absorbed in the course of the year. To do this, the bottom of the yard should be covered with dry peat, muck, saw-dust, waste straw, potato vines and numerous other absorbent substances which can be

found on most farms, and which, valueless in themselves, can thus be made into enriching fertilizers. The bottom of the yard should gently slope to one point where a tank must be built. In this, the superabundant liquid of the rainy season can be preserved, and pumped back on to the heap when it needs it.

In the second place, we must keep up a gradual and slow fermentation, keeping the heap as near as possible at a temperature of 90° to 100°. If horse or sheep manure be thrown up loosely, so that there is a free admission of air and moisture, rapid and most injurious decomposition takes place, with evolution of carbonate of ammonia and water. This burning process (for it is nothing less than a slow process of actual combustion) may be allowed to go on till the heap is reduced to a comparatively worthless mass of humus and ashes. On the other hand, if hog and cow manure be thrown into a *solid* heap, little or no fermentation will take place, and the mass will remain in a raw state, unsuitable for direct application to rapid growing plants. The first object of the farmer, therefore, should be to mix these several manures together, so that the horse and sheep manure shall act as a ferment, and induce the desired decomposition in the hog and cow manure. In this way they will be beneficial to each other, and the heap by spring will be in good condition for direct application to corn, potatoes, &c. Sheep do not like to lie on a fermenting manure heap. They should, if possible, have a separate yard to run in at night, and the manure they make be hauled back to the common heap as often as practicable, fresh straw being supplied in its place. If necessary, sheep and cattle should run on the manure heap in order to compress it and prevent too rapid fermentation. If these conditions—spouting the buildings to prevent leaching, having a tank to save the liquid which straw and other absorbents will not retain in wet weather, and mixing the different manures together in a compact heap, so as to sustain a slow and prevent a too rapid fermentation were complied with, the value of the manure on most farms would be doubled.

To convert the volatile *carbonate* of ammonia into the non-volatile *sulphate* of ammonia, has occupied the attention of the most profound chemists of the age. Many plans have been proposed, but none of them, so far as we are informed, are practical and economical. Sprinkling the heap with dilute sulphuric acid has been proposed. This will convert all the carbonate of ammonia existing in the heap at the time of application into a sulphate, but it will prevent fermentation and the formation of any more carbonate of ammonia. This plan, therefore, will not accomplish the object. Sulphate of iron (copperas) has been often proposed. It will answer well in a chemical sense, but not in an economical one. The copperas costs too much to make its application profitable, and the presence of the iron in the manure is injurious rather than beneficial. Superphosphate of lime, with an extra proportion of sulphuric acid, made on purpose, we have used with success. As a general thing, however, we think its use would not pay. "But," the reader exclaims, "you are forgetting sulphate of lime, (gypsum.) I have seen it stated time and again, in agricultural papers, as well as in 'LIEBIG'S Agricultural Chemistry,' in 'STOCKHARDT'S Chemical Field Lectures,' in 'The Progressive Farmer,' and in every other work I have read on this

subject, that plaster scattered in stables and on manure heaps, would arrest all the escaping hartshorn, and convert it into a fixed salt. Gypsum is cheap, and the application so easy that we cannot desire anything better for the purpose." That is all true, except in one particular; *plaster, UNLESS IN SOLUTION, will not convert the carbonate of ammonia into a sulphate of ammonia, LIEBIG, STOCKHARDT and NASII, and the agricultural papers to the contrary notwithstanding.* We are exceedingly sorry that it will not. It would be such a great advantage to the farmer. By its aid, he could reduce his whole manure heap, by fermentation, to a few wagon loads, and it would be so strong that a few bushels would be sufficient for an acre, saving an immense amount of labor and expense in hauling it to the field, &c.

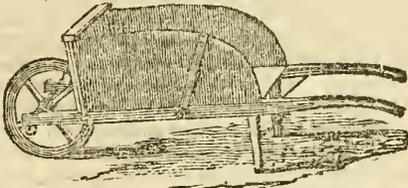
"But can it be possible that such able chemists have made so great a blunder?" It is easy to account for this fact. Chemists always work with their re-agents in solution, and sulphate of lime in solution will convert carbonate of ammonia into carbonate of lime and sulphate of ammonia. Such being the case, the chemist, stung with the taunt, "Chemistry has done nothing for agriculture," asserts that he has discovered something that will be of great benefit to every practical farmer, and states that by scattering gypsum on fermenting manure, the escaping ammonia will be arrested. Learned authors embodied it in new works. The newspapers take up the assertion and scatter it broadcast over the land; so that at the present time it is as familiar as household words, and if you attempt to undeceive a person on the subject, he will take you for a young upstart, and advise you to speak a little more respectfully of the great teachers of science!

Scattering dry or moist plaster on the manure heap, then, is of little use. But if we could only dissolve it, it would be just the thing we want. Cannot this be done? It is true that something like 400 pounds of water are required to dissolve one pound of plaster, but cannot the water be used over and over again, the manure taking the sulphate of lime from the water as it is filtered through it? The water in the tank should always be kept saturated with gypsum. In this way plaster sufficient to form a considerable quantity of sulphate of ammonia might be placed in the heap without rendering the manure too wet for fermentation, inasmuch as the carbonate of lime resulting from the transformed sulphate of lime would materially assist decomposition. This method will not only preserve all the most valuable substances of the manure, but it will enable the wheat growing farmer to drive off a great part of the valueless portion of the manure—carbon and water—and so reduce the weight and bulk of the heap, and the labor and expense of applying it to the soil. Manures managed in this way, and fermented to the extent proposed, may be used as top dressing with little, if any loss. On loamy soil, it may be drawn out in the fall—the comparatively leisure season of the farmer—and spread on the land, ready for plowing in for corn, potatoes, &c., the next spring.

To carry out successfully the plan of preparing manure which we have briefly attempted to sketch it will be necessary to have the farm buildings arranged with this object in view. As a general thing, at present, the barn and cow house, the stables, the piggeries, and the sheep yard, all occupy separate places, often quite a distance from each other. This ought

not so to be. They should all open into, and encircle a common yard, having a southern aspect, and containing a good range of open sheds for young cattle, &c. The importance of this cannot be over estimated. As we now write, our kindling enthusiasm for agricultural improvement is dipped in the bud when we think of the miserably arranged farm buildings common throughout the length and breadth of the land. We have innumerable handsome barns with domes, venetian shutters and glass windows, which an Englishman would mistake for a dissenting chapel or a country school house, but we have very few really good, well arranged, substantial farm buildings. We do not desire to see expensive buildings, but such as are simple, plain, and substantially arranged for convenience, utility and profit. You cannot make the *most profit* on your farms, inasmuch as you cannot make good manure, the sheet anchor of all good husbandry, without them.

Another requisite for carrying out our system is—a *good wheel-barrow*. Reader, you probably have not got one. Few farmers have. Perhaps you have a common dirt barrow. This is better than nothing, certainly, but is not worthy a place in any respecta-



ble barn-yard. Do get a good one, with a large flat bottom, a high front-piece and deep side boards which can be taken off at pleasure. Such a one as is represented in the annexed cut. Then when you clean out your stables, do not throw the litter close to the entrance, where it will lie in a loose heap, and spoil by rapid fermentation, but get your new wheelbarrow and take the litter to a distant part of the yard where it will be mixed with the litter of the pig pens, cow house and sheep fold. The advantages of such a mixture we have already explained.

The system of managing manure here imperfectly sketched is adapted rather to a wheat growing section, and for farms where a large quantity of straw is raised, and which is all used on the farm, than to the New England States, where scarcely enough straw is produced for bedding, even when the most rigid economy is practised. We have no great love for manure cellars, but where straw is scarce and muck plentiful, they have some advantages. In them, as in the open yard, the chief objects of the farmer must be to absorb all the urine, and prevent a too rapid fermentation of the dung. If a considerable number of cows and hogs are kept, and their manure is well mixed with the horse dung, the latter will be easily accomplished; and by spreading a little muck over the surface of the heap occasionally, all the ammonia can be retained; but where horse dung is loosely thrown into the cellar, it will rapidly decompose, and much ammonia will be given off. It is vain to suppose that the cellar can be kept so close as to prevent the escape of ammonia. The only way this can be accomplished is by employing the so called fixers—sulphate of lime in solution, as we have said, is the best—or by the use of absorbents, straw, muck, charcoal, &c.

We cannot resist the conviction, however, that farmers as a general rule, will not employ chemical means to retain the ammonia in manure, and we believe there is less necessity for doing so than is commonly supposed by scientific writers, if the manure heap is judiciously managed. Prof. WOLFF says: "By maintaining the manure moderately moist throughout its entire mass, a fertilizer will be produced, preserving almost entirely the original virtue of the manure, and in a form well adapted to promote the growth of crops; and this without employing chemical fixing-agents, as plaster, sulphuric acid, &c., whose application on a large scale is often too costly and troublesome. Swamp muck, peat, brown-coal powder, or any earth rich in vegetable matter may be economically employed to assist in retaining ammonia. Whichever material be used, it should be strewn as a thin coating over the surface of the manure, from time to time during the summer; and be kept moderately moist by occasional drenchings with the contents of the cistern."

Although Prof. WOLFF thinks that "where yard manure and composts are skillfully prepared, the loss of ammonia is very slight, even without the use of fixing agents," yet he cites the experiment of Dr. KRUTZSK to show the extent to which ammonia is given off when common liquid manure is allowed to ferment unmixd with fixing or absorbing agents. He found that the solid residue remaining after the evaporation of perfectly putrid yard liquid, gave 3½ per cent. of ammonia, while the same liquid treated with an acid (fixer) before evaporation gave a residue which contained 12½ per cent. of ammonia. In the Rothamsted experiments, if we recollect right, sheep urine, evaporated without acid, lost even a still greater amount of ammonia. Yet we should be careful how we apply such results to common practice. It is known that water will hold a large quantity of ammonia, and we believe the loss of "this spirit-like essence of the farm, ever struggling to be free," from fermenting common barn-yard drainings is much less than the above figures indicate, yet it is sufficiently great to warrant the use of any cheap method of fixing it, such as the one we have suggested by the employment of sulphate of lime in solution.

We would just add that though we dwell so much on the importance of nitrogen in the manure, we do not underrate the value of the inorganic elements, which are of course indispensable to the growth of all plants. We speak more directly about nitrogen, because we think it of greatest importance, and because we know there is no way of increasing its amount on a farm, without at the same time increasing the amount of inorganic elements; and also, that there is no way of judiciously preserving and fermenting the nitrogen without at the same time preserving the inorganic elements and rendering them in a better state for assimilation by the plant. Especially is this true of the phosphates and silicates. Nitrogen and phosphoric acid generally exist in the same ratio in most substances used for food or for manure; while the solubility of the silicates is greatly increased by fermentation in the manure heap.

CLOVER SEED.—The *Working Man*, an excellent agricultural paper, published in Indianapolis, Ind., states that the crop of clover seed in that vicinity was a complete failure last year, the grasshoppers having destroyed what little the drouth left.

COST OF RAISING CATTLE.

The following extracts from the *Patent Office Report* for 1855, just issued, will be read with interest:

SAMUEL J. FLETCHER, Winchester, Clark Co., Mo., says: "Stock, in general, in this county are very badly treated, being fed merely on straw and late-cut prairie grass, with no cover to shelter them during the inclement season. I consider a cross from the Durham breed the best, being fine milkers, good workers, and profitable for the butcher. A promising bull calf from the "Clay" stock, at six months old, is worth about \$35, while one of the common breeds is valued at only \$5 or \$6. For seven or eight months in the year, our luxuriantly rich prairie grass furnishes such excellent pasturage that I have sold steers to the butchers, giving six hundred and fifty pounds of prime beef at three years old. Prairie grass, when cut early and salted, also makes excellent hay."

D. R. STILLMAN, Alfred Centre, Allegany Co., N. Y., says: "Calves are usually weaned when two or three months old, when they are turned out to grass. The first winter they are fed with hay and a little meal or roots. The second and third winter they are kept mainly on straw, and the autumn following are sold directly from the pasture, as the fattening of cattle here for the butcher is not extensively practiced. The cost of raising a bullock to three years old, is about \$7 a year, at which age he will bring from \$25 to \$40. The cost of transportation to New York, by railroad, when there are more than one, is \$13.17 each."

A Committee of the Farmer's Club, of Bedford, Westchester County, N. Y., consisting of Messrs. HAINES, HOLMES, HOWE, GREEN, and DICKINSON, says: "A good demand has always existed with us for veal calves for New York market; so much so, that a fat calf from four to eight weeks old would sell for as much as it would at a year old, treated in the ordinary way, say from \$10 to \$15. Indeed, the demand has been so great, for a few years past, that buyers are in search of them at a much younger age, at prices from \$1 to \$4 a head. A common price has been from four to six cents a pound live weight. The kind of stock now most profitable for us to raise, is cows, as they are in great demand for milk dairies, for the supply of the New York market. The cost of raising will average, at one year old, about \$12, valued also at \$12; at two years, \$20, valued at \$25; and at three years old, \$30, and valued at \$30 or \$45 each. The cost of transportation to New York, by railroad, is about \$1.50 a head. We find the Devons to be the best stock for labor, or their cross with other breeds."

JOHN YOUNG, JR., of Forest Grove, Allegany Co., Penn., says: "Good milch cows, this season, range from \$25 to \$50; cost of raising to the age of three years is about \$15."

JAMES McK. SNODGRASS, of Mifflin, Allegany Co., Penn., says: "The cost of raising a heifer till three years old will average \$15, and the price at that age is from \$15 to \$25."

J. S. GORE, of Tippecanoe, Fayette Co., Penn., says: "It costs about \$6 to keep a calf the first year, \$8 the second, \$10 the third, and \$11 the fourth, making \$35. Formerly, they were worth, at that age, from \$12 to \$25. Many of the farmers resorted to having them grazed in the mountains,

where it cost but \$1 a summer, during which they lost several head; the cattle were wintered on straw, and some died before spring. But the farmers were satisfied that they cost only \$1 a head at the mountains; and the straw had no other value. Our Durham cattle command about \$50 a head at two and three years old."

JOHN B. BRUSH, of Sheakleyville, Mercer Co., Penn., says: "The cost of raising cattle till three years old is \$15, which is about the price of good ones at that age. Good cows bring from \$20 to \$25 in the spring, and from \$12 to \$15 in the fall."

CHARLES FOSTER, of Jasper, Marion Co., Tenn., says: "The Cumberland mountain, at its summit, presents a beautifully rolling table country, about forty miles across, at this point, watered with innumerable branches, the heads of the valley streams of this region. The climate is unsurpassed in America. As a grazing region, I know of none equal to it. Indeed, thousands of cattle and hogs are fattened on the range, which is inexhaustible, every year; and, as a general thing, the temperature and other circumstances are such that cattle can be wintered without being fed. I make this statement advisedly, and from positive experience."

JOHN BROOKE, of Sherman, Grayson Co., Texas, says: "The cost of rearing neat cattle till three years old is about \$1.50 per head. This is for the attention given to them, as we do not feed them at any season. Some do not even salt them. The price at three years old is from \$12 to \$15. The value of good dairy cows in the spring is from \$15 to \$20."

JAMES E. KENDALL, of Poplar Grove, Kanawha Co., Va., says: "I am of the opinion that our "scrub" breed suits our mountain range the best. The cost of raising cattle is about \$3 a year. They sell from \$18 to \$20 at four years old. Steers when broken, are worth from \$80 to \$100 a pair. Mules are raised with as little expense as steers, and are worth from \$100 to \$150 a head at three years old."

TOO MUCH SEED CORN.—Last spring the cold, wet weather and mice destroyed more than half of my seed corn. The result was, one-third of the hills missed entirely, another third had one kernel of corn growing, while the other third had two, three, four, and five kernels growing. Where there was one and two kernels of corn to the hill growing, I had the best specimens of corn, for many of the hills that had one kernel growing had a sucker and the main stalk; the sucker would have on always one good ear, and the main stalk would have two and a half ears of well filled corn; and where I had four and five stalks to the hill, I had no more ears of corn than where I had one and two stalks; and I could plainly see that where there were four and five stalks to the hill the corn was not as sound nor as well filled out in the ear as where there was a less number. A. L. SMITH—*Nichols, Tioga Co., N. Y.*

REMEDY FOR SCAB IN SHEEP.—G. B. TUNISON, of Bellevue, Nebraska, writes us that he has cured sheep of the scab by giving them a mixture of four pounds salt, and one pound alum. The ingredients should be pounded up fine, and given to the sheep in the same way, and in about the same quantity as common salt.

COST OF RAISING AND KEEPING SHEEP AND PRODUCING WOOL.

We extract the following estimate of the expense of raising and keeping sheep, and producing wool, in different sections of the country from the last *Patent Office Report*:

D. L. R. BUTT, of Centre, Cherokee Co., Ala., says: "The cost of producing wool, in this section, is about 12½ cents a pound, and the market value, 25 cents. There is no article that can be produced in this region with so little care and cost, according to the market price, as wool, and I am surprised that there is not more attention paid to its production."

D. R. STILLMAN, of Alfred Centre, Allegany Co., N. Y., says: "Sheep are kept in pasture from seven to eight months, and the remainder of the year on hay and straw, the younger portion of the flock usually receiving, daily, a small quantity of grain. The cost of keeping a sheep will vary but little from \$1 a year, and at two years old it will sell for \$2 from pasture, leaving the wool for the profit. Good wool can be produced at a less expense of keeping and labor than poor, as the fleeces are heavier, while the sheep are more quiet and consequently require less food. The cost of raising from three-fourths to full-blooded Merino wool, is about twenty-five cents."

JOHN YOUNG, Jr., of Forest Grove, Allegany Co., Penn., says: "Sheep are profitable stock with us. We have some full-blooded South Downs and Leicesters. From what I have seen of their crosses upon the common stock, I think a very great improvement will be the result. They prosper in every part of the country. Last year, 1854, their wool was worth 33 cents per pound. The cost of raising them is 75 cents per head, and when full grown they are worth \$2 each."

J. S. GORE, of Tippecanoe, Fayette Co., Penn., says: "It costs about \$1.50 a head to keep sheep properly for a year, while wool is worth about forty cents a pound; so that it is evident that sheep-clipping, at two and a half pounds a head, leaves no profit. But our improved breeds, which yield from four to twelve pounds per head, pay very well. Besides this, I find that my French sheep raise about three lambs per head, annually."

["Three lambs per head, annually!" Is not this a mistake?]

R. W. BAYLOR, of Wood End, near Charlestown, Jefferson Co., Va., says: "Sheep are very profitably raised in this section, especially the improved breeds, commanding, at home, from \$8 to \$10 each at two years old. We have as good imported Cotswolds and South Downs as England can produce, the latter being preferred. Their crosses upon our common stock are regarded as highly advantageous. Wool growing amply remunerates the shepherd for his care. Wool cannot be raised under twenty cents a pound."

JAMES E. KENDALL, of Poplar Grove, Kanawha Co., Va., says: "This is decidedly a fine sheep-raising county, but the subject has not received the attention it merits. The cost of producing wool, I believe, does not average more than 12½ cents per pound. Our sheep are seldom fed. They keep in fine condition the whole year on the mountain range.

They are free from disease, and live to a good age. Wool is worth from thirty to thirty-seven and a half cents per pound."

A PROFITABLE FLOCK OF SHEEP.

On the 17th of July, 1855, I purchased of H. LOUNSBURY, of this town, twenty yearling ewes, at \$1.50 per head. They had been confined, with eighty-eight other sheep, in a field of fifteen acres up to the day of purchase. In consequence of this strict confinement, they were poor in flesh and small in size. By careless management in the previous spring, they all lost their lambs, and were themselves affected with disease. I drove them home, and turned them into midding fair feed for one week, and then changed them again into full fresh feed. The result was, they did not scour, but grew and fattened remarkably fast; for, in the following October I was offered \$2.50 per head. Here, you observe, was an improvement of one dollar a head in three months.

On the 1st of December I turned in a buck of the same breed. The first day of May, 1856, I had no lambs, but on the tenth of the same month I had eighteen lambs, all large, fat, and running about. I will here state that these ewes had six quarts of grain per day from the 15th of February to the 10th of May. This feed consisted of corn, oats and buckwheat, in equal parts, and as much good timothy hay besides, as they wanted. In consequence of careful management and good feed, the ewes were in fine condition when they brought forth their young, and gave a large flow of milk, which caused the young lambs to grow with great vigor. To-day, November 20th, I was offered \$2 per head for the lambs, and \$3 for the ewes, and at ten rods distance from the flock you could not tell the lambs from the old sheep.

These ewes turned off fifty-nine pounds of wool, which was sold for thirty-five cents per pound. Now let us figure up the profit on these twenty ewes, from first cost, and throw out all other expenses.

20 two year old Ewes at \$3 per head,	\$60.00
18 Lambs at \$2 per head,	36.00
59 lbs Wool, at 35 cents per pound,	20.65
	<hr/>
Total,	\$116.65
Substract first cost on ewes,	30.00
	<hr/>
Profit,	\$86.65

Almost every farmer can judge correctly of the expense of keeping these ewes during the past sixteen months. They are half native and half South-down. They are all healthy to-day, and fit for the shambles. A. L. SMITH.—*Nichols, Tioga Co. N. Y.*

A GOOD DAIRY.—At the winter meeting of the Cortland County Agricultural Society, premiums were awarded to two brothers named CONABLE for the best cheese dairy, averaging five hundred and ten pounds of butter per cow. The best dairy of butter was from seventeen cows, and averaged two hundred and one and fifteen-sixteenths pounds per cow. Mr. GEO. MILLER, with a large dairy averaged one hundred and ninety-eight pounds per cow. What county beats Cortland? W. H. GARDNER.—*Hornby, N. Y.*

WINTER EVENING NOTES

FRIEND HARRIS:—To while away a stormy evening I will sketch a few notes on some of the contents of the December number of the *Genesee Farmer*.

TURKISH FLINT WHEAT.—The *Patent Office Report*, for 1855, says: This wheat is a heavy fall variety, with a dark-colored chaff, a heavy beard, and long, flinty, light-colored berry, &c., &c. I beg to say I received six varieties of winter wheat from the Patent Office in the spring of 1855; sowed them in the fall. The package labelled "Turkish Flint Wheat" proved to be a white-bearded variety. It most winter-killed. A package labelled "Pithusian Flint Wheat, from the island of Ivica," stood the winter very well; short, barley-looking heads, with enormous beards, from nine to twelve inches long; the chaff and beards as black as the ace of spades. The description in your paper of the Turkish Flint Wheat is an accurate description of my Pithusian. There seems to be a mistake somewhere; I am sure I have made none.

RATS AND MICE, K. N. says, "are very abundant and voracious all over Western New York, and asks, "what will become of us if they go on increasing another winter." In the years 1850 and 1851 this section of the country was overrun with "rats and mice;" the damage done to fruit and forest trees, by their debarking them, and the loss in hay and grain, and other farm crops, was immense. So abundant were they in those seasons, that the boys became wearied out in slaying them; and all our cats were surfeited into uselessness by a superabundance of mouse-meat. A fact!

The following winter, no injury was done to fruit or other trees, or grass-lands, nor the next summer, nor since, have they done any damage to the grass-land, either summer or winter.

Where such myriads of *verments* came from, and where they went, none can tell; and what "besom of destruction" was called into requisition to thus suddenly sweep them from our midst, is a mystery that none can solve; all we know about it is, the next year they were "*non est inventus*."

LARGE AND SMALL POTATOES.—Mr. J. H. HAMILTON gives a sketch of his experience in planting large and small potatoes. The produce of the large potatoes was one-third greater than that of the small seed. He is "inclined to the opinion that large potatoes are preferable for seed." No doubt he is right in his opinion. It is a general law of nature that "like begets like," though it is well known there are exceptions to all general rules.

In the *Irish Farmer's Gazette*, 8th November, a Mr. Dixon gives the result of his experiments in planting large and small seed potatoes the past season. The large potatoes selected weighed about half a pound each—planted exactly a yard apart, each way; product, a few pounds short of eight tons per acre. The small seed, either whole or cut in the usual way, yielded seven tons per acre. The sample from the large seed were *decidedly* the best.

SOWING MOUNTAIN ASH SEED.—My experience in sowing mountain ash seed accords precisely with that of your correspondent, G.

TWO MODES OF PLANTING AND MANAGING FRUIT TREES, is drawn to the life. I've seen the very thing on a large scale, more than once. But my neighbor, "Old Max," says "there's as much differ-

ence in folks as there is in anything." This *fact* explains the difference between Farmer Slapdash and Farmer Forecast.

CHINESE SUGAR CANE.—Col. Peters wrote to me a few days since that he intends to plant about one hundred acres the coming season, for the purpose of manufacturing syrups.

Your "Fair Correspondent's" essay on "cutting hay" is a whole volume in a nut-shell. Please send her two books; it will be cheap at that.

BALSAM FIR TREES.—I have transplanted a great many; usually mine have grown but a few inches the two first years after being removed, but go-ahead after that.

LOCUST TREES FROM SEED.—To insure germination the seed should be put in a suitable vessel, and nearly boiling water turned in sufficient to cover the seeds. Let them soak twelve hours; sow about the time of planting corn, in well-prepared ground, in drills three or four feet apart; by use of the cultivator and hoe, keep the land light and free from weeds. LEVI BARTLETT.—*Warner, N. H., Dec. 3, 1856.*

MULCHING POTATOES WITH STRAW.—*Eds. Genesee Farmer.*—Having seen the advantages of covering potatoes with straw this season, I deem it of sufficient importance to jot a few lines to your (or rather our) paper on the subject. The ground selected for the purpose was a side-hill facing south, and had been in corn the two previous years, without manure. The ground was plowed on the last day of March, as deep as two horses could well do it, and harrowed twice crosswise. The potatoes were planted in drills on the fifth of April, and covered by hand. We then left them until a few tops were visible, when we covered them with straw, to the depth of four or five inches. This was on the 24th of April. We left them to their fate, not stirring the soil in any manner until digging time, when, on taking off the straw, some of the finest potatoes that ever greeted mortal eyes, lay at our feet, on the surface, requiring very little digging.

The same piece of land is now in wheat, and although it was sowed exactly one week later than the other portions of the same field, it has outstripped it in height, and is much more thrifty every way. Any one can see, almost to the inch, where the straw was lain. R.—*Cheviot, O., Nov. 12, 1856.*

RICHARDSON ON THE HORSE.—In looking over the catalogue of "Books for the Farmers," which you keep for sale, I noticed one which I possess, and esteem very highly. It is entitled, "Horses, their Varieties, Breeding, &c., by Richardson." He gives the history of the horse as concisely as possible, and treats, at considerable length, of all the varieties, showing the proper sphere of usefulness of the different breeds, &c. Also, on the management of the horse in health, how to keep him so, and how to manage him when health has been impaired, &c. He mentions the course to be pursued in breaking colts, which, if properly followed, would greatly lessen the number of balky horses. No man, who intends to raise, or even to keep horses, should be without something of the kind, and I would recommend this book, as it can be sent by mail, postage free, to any part of the country, by forwarding to you twenty-five cents. D.—*Gates.*

ITEMS SUGGESTED BY THE DECEMBER NUMBER.

THOUGH curtailed of "its fair proportions" by title-page and index, the *Farmer* for December contains a good many short, suggestive articles. I shall be able to itemize only a few of them.

"MAKE A NOTE OF IT."—Farmers find in their experience many things worth "making a note of" for their agricultural papers. And they like to read such notes, (at least I do), from the pens of others. The short items about Corn, Potatoes, &c., in this and recent numbers, will, I hope, be followed by others from different pens, and any fact of interest to the farmer himself, should be noted and sent to the editor, whose position qualifies him to judge of its general interest, and hence, its fitness for publication.

SEED CORN.—I never knew our seed corn to fail before last year, nor do I remember ever before our being so careless as not to save any. We hired our husking done by a family of Prussians, and in the Spring selected our seed from the crib. It was husked late, and did not dry perfectly before freezing weather, and hence, some of it failed to vegetate. This agrees with the remarks of your New Haven correspondent, and with what I can learn of the seed corn which failed among my neighbors. It should be saved early and dried perfectly, and then there will be no mistake.

FALL PLOWING FOR CORN.—With Mr. JOHNSTON, I agree in not recommending fall plowing for corn. The crop succeeds best when the ground is plowed immediately before planting, and the manure well buried under the soil. Only for early-sown crops would I plow in autumn, and in no case would I plow before seeding.

ARTICHOKE AS A FIELD-CROP.—The letter of Mr. GALLOWAY, on this subject, is an interesting one. That they yield well, there appears to be no question; but is opinion of their value, both for hogs and cows, is at direct contradiction with that of the *Sod's Planter*, quoted on another page. Let us have more facts on the question.

DEAD FURROWS AND HEADLANDS.—The "manner of plowing" is an important subject, one part of which Mr. ADAMS writes well upon. There are generally a great many more dead furrows than are needed, but the headlands have never seemed so objectionable to me. I have often wondered why more instead of less grain, grew where the ground was tramped so hard. That little grows in a dead furrow, I have often noticed, and as often that headlands produced better than the rest of the field, except sometimes in hoed crops.

BREAKING UP PRAIRIES.—In your interesting extracts from Mr. HOWARD's western letters, I notice the remark that the breaking up "is done whenever it is convenient to do it." This may be so, but we did not so learn from prairie farmers during our trip last season. They told us that the first plowing of the prairie sod should be done between the first of May and the last of June, while the grass and weeds were in their most active stage of growth, and that the sod will rot much better, and the after-crops, for several years, be more successful than if broken up at any other time.

BAKED SWEET APPLES.—How seldom do we see these brought on to the table by our country friends. For us, there can be no better sauce, and we would

not care if we had them twice a day the year round. Raw sweet apples are good, and so are sour ones—they should form a part of our daily food nine months in the year. "Bring on the apples!"

"FARMER SLAPDASH."—Many an orchard is managed on the SLAPDASH system—planted in a post-hole, pruned by unruly cattle, barked and broken by the plow—no wonder such fruit-culture is thought a hambug. Look at the pictures, and you will learn a lesson worth heeding—if not from SLAPDASH, from FORECAST and his management. B.—*Niagara Co., Dec., 1856.*

FALL AND SPRING PLOWING.

JOHN JOHNSTON, of Fayette, says, never plow even heavy land, in the fall, for corn in the spring; the opinion of a man whose superior farming has done so much to set farmers to thinking, who never before dared to think outside of hereditary prescription, ought to have much weight; yet there is no doubt but that, under certain conditions of soil, that fall plowing may be practiced to advantage.

JOSEPH WRIGHT got a large crop of corn this season, from a field of three years' clover sod, plowed nine inches deep, last fall, harrowed and planted late in May; no manure. GEO. ALLERMAN, on like soil, with the same surface draining, next field, plowed and planted in the spring, at the same time. WRIGHT harrowed his, using the same kind of seed. The corn both came up at the same time, but WRIGHT's looked best, and gained on ALLERMAN's until harvest, when it was acknowledged that WRIGHT had one-third more in ears and stalks than ALLERMAN. He attributed WRIGHT's success entirely to the fall plowing, which, he said, enabled the sod to rot better than his had done, but that if the season had been wet, his sod would have rotted better, and his crop would have been as large as WRIGHT's. But, on the other hand, WRIGHT attributes his success, in part, to his mode of plowing; ALLERMAN plowed a wide, shallow furrow, turning the sward flat, as if for summer fallow. WRIGHT plowed a narrow but deep furrow, turning the sward edgewise, and leaving a very rough, jagged surface for the spring harrow.

To test the disputed point better, WRIGHT has followed Mr. JOHNSTON's advice by beginning an experiment of fall and spring plowing, in his own field, for corn in the spring. I went with him on the 2d inst. to see the end of his fall plowing: it was a three years clover sod on a gently-rolling stoneless field of friable clay loam, of a dark color, except where the plow now and then turned up streaks of yellow, clayish subsoil. Three yoke of heavy cattle were plowing a narrow furrow ten inches deep—the plowman said eleven. When the rough surface is frozen, it is to be treated with a thin coat of distillery manure; at the same time a like quantity is to be spread on that part of the field which is to be plowed in the spring; then the plowing is to be done as on the other plot, in the fall; both pieces to be harrowed and planted at the same time and treated alike. The result will be published. S. W.—*Waterloo, Dec. 7, 1856.*

QUALITY OF SOIL.—Sands are seldom so rich but it may be a matter of gain to increase their fertility; and few tracts are so poor but that with proper tillage and manuring they may be made to abound of plen

FACTS IN AGRICULTURE.

"There is a *dearth* in the agricultural press, at this time, so far as *facts* are concerned."—*Prairie Farmer*.

We have come to the same conclusion. Day after day have we scanned over the broad pages of our numerous exchanges, European and American, and been compelled to throw down the paper without obtaining one new idea, one solitary fact. It is mainly on this account that we offer the "Premiums for Short Essays," to be found on another page. We are satisfied that the million of intelligent, observing farmers engaged in cultivating the soil on this almost boundless continent, are in possession of *facts* which, could they be induced to communicate them to the agricultural journals, would prove interesting and valuable, and add materially to our stock of agricultural knowledge. Let us have *facts*, brother farmers!

American farmers have a glorious future before them. Unlike the farmers of Europe, they are their own land-owners, and not tenants, compelled by some lawyer-agent to adopt a particular system of culture. They are at perfect liberty to make such improvements as their own experience dictates, and are certain to receive the full reward of their intelligent labor, with no fear of having the "rent raised." We enjoy the blessings of peace, of free institutions, of rapid, safe, and economical intercommunications, of good soil, good climate, and good prices. Ours is a new country, of great extent, of boundless resources, possessing varieties of soil and climate suited for the production of every plant used as food for man and beast. It is peopled with an active, industrious, enterprising, and intelligent race of men and women, representing every civilized nation on the globe; and into this favored arena is brought the experience of agriculture from every clime. Surely, we have every thing to stimulate us to study, observation and reflection. With such stimuli to exertion, need we wonder at the restless enterprise which characterizes the "universal Yankee nation," and which excites the surprise, if not the admiration, of older nations.

But is it not a shame to the intelligent farmers of this highly-favored land that there is a *dearth* of facts in the agricultural press? If we cannot obtain facts here, where shall we look for them?

It cannot be said that there is nothing to call out the observed facts and experience of the past year. Almost every state and county has its organized agricultural and horticultural societies. Farmers' clubs, though not as numerous as they should be, are yet not uncommon, while we have more agricultural papers published in this country, than in all the rest of the world besides; and yet, the truth must be told, there is a *dearth* of facts. We have abundance of organized means of *diffusing* facts, but are almost entirely destitute of the proper methods of discovering them. Farmers must experiment more, and chronicle the result for the benefit of others. We do not need "Model Farms;" we have them already, in every county in the Union; but we need "Experimental Farms," where men of science and practice can unite in investigating the laws of vegetable and animal nutrition. The agriculturists of our country would willingly support such an institution in every State if they could be satisfied that it would be kept out of the hands of wire-pulling, log-rolling politicians, who care more for the almighty dollar than for those laws or *facts* which underlie all

rational systems of agriculture. We hope to live to see the day when the farmers of America will take this matter into their own hands, and when there will never again be occasion to say, "there is a *dearth* in the agricultural press at this time, so far as *facts* are concerned."

NOTES FOR THE MONTH BY S. W.

STILL SLOP AND STILL MANURE.—Many farmers came ten miles before daylight to carry home a wagon load of still slop, which they now get gratis from one of our now hogless distilleries. To how many of these farmers does it occur that a part of the value of this slop is in the superior value it gives to their manure heap, containing, as it does, all the phosphoric acid and protein compounds of the corn itself, having lost nothing but the starch, which went to alcohol. It is encouraging to see one of our largest distilleries now for the first time saving the manure from their pens, instead of washing it into the river; the result will be that JOSEPH WRIGHT, who hauls it daily to his corn and tobacco grounds, will show such crops the coming season as no farmer can hope to more than half equal.

HIGH PRICES RESULTING FROM SHORT FARMING.—I asked a farmer the other day why he did not grow clover seed and sow it more abundantly, to bring back fertility to his now crop-failing soil. He replied that when his land was new, and he got large crops with little labor, the price was nothing compared with the present cash prices; that he got more money now than he did then, and that if farming was improved and brought back to its former fertility, and large crops were grown with little labor, prices would again fall below all remuneration.

WURZEL BEETS FOR MILCH COWS.—There is no sweeter beet grown in this climate than small-sized Wurzel beets. They are much sweeter at this time than the large blood turnip-beet. The largest Wurzels, when fed to milch cows, cause a greater secretion of milk than their weight in raw potatoes, as Judge COE, of Romulus has fully proved by experiment. Chemistry shows truly that potatoes contain more nutritive matter than beets, or even carrots; but experiment proves that in the raw state beets develop, in the process of digestion, their full nutritive value; while raw potatoes do not; hence the importance of cooking potatoes. A little Indian meal, oil meal, or good mill stuff strewed over cut beets, adds much to their nutriment, making less dry feed necessary; and it has been truly said that roots fed to stock in winter, perform the office of aiding the digestion of the ultimates of their dry food. But as a necessary condition to economical feeding milch cows to prevent the decrease in their milk, they must be stabled in wet and cold fall and winter nights. This alone will save both milk and food.

CHINESE SUGAR MILLET. (*Sorghum Saccharatum*.)—This noble plant bids fair to be a great and valuable addition to our cereal grasses; the more especially as it requires precisely the same soil, climate and culture as our great *indigene*, Indian corn. If seed can be had, many here will give it a fair trial next season; at the present high prices of sugar, it may be profitably grown for its saccharine alone; and as fattening food for cattle, it may be found an economical substitute for the Indian corn plants cultivated for soiling and winter fodder. S. W.—*Wa-terloo, N. Y.*

BEANS AS A FIELD CROP.

MESSRS. EDITORS:—Many of your readers have grown beans far more extensively than myself, yet they fail to favor us with their experience in this crop—at least, I notice none reported in your paper. Several farmers of my acquaintance plant from five to ten acres of beans annually, and say they find it profitable to do so. One of them remarked to me that he “planted corn until it was too late to plant more, and then put in his bean crop, which filled up the time until corn was fit for hoeing.” I made a small trial of their culture the past season, planting about half an acre, using up all the seed on hand, and thinking even so much of a crop would give me an idea of their expense and profit.

The soil was a gravelly loam—was in potatoes last year, and not recently manured. I planted three varieties, though most largely of a small white bean, common in this section, but unnamed, so far as I can learn. A few rows of a large white bean were also tried, and quite a patch of a French bean, (the *Haricot flageolet*, distributed by the Patent Office, and characterized as a favorite dwarf variety in the vegetable gardens and markets of Paris.

They were planted the tenth of June, and harvested the middle of September. The account stands as follows:

Dr. To one-half day's plowing,	\$1.00	
“ one-quar. bu. seed, at \$2 per bu.,	.50	
“ 1 day's planting,	.75	
“ 2½ days' cultivating and hoeing,	2.00	
“ 2 days' pulling and threshing,	1.50	
“ interest on land, at \$50 per acre,	1.75	\$7.50

Cr. By 9 bushels beans, at \$1.41 per bu.,	\$12.69	
“ one-half load bean straw,	.81	13.50

Profit per half acre, \$6.00

This trial shows that it costs eighty-four cents to grow a bushel of beans. Prices range from \$1.25 to \$2.25, and higher, per bushel.

Next season I intend to plant several acres, and for a field bean, think the small white the most valuable. They yielded very fairly—as well, perhaps, as any other—and ripened very handsomely and evenly, and were, certainly, the fairest and cleanest lot of beans I ever saw in market. Uneven ripening injures the value of any bean, spoiling the straw, and detracting largely from the good appearance of the crop when threshed for market. The French beans I shall confine to the garden; the drowth seemed to have most effect upon them—the leaves withered and rusted under its influence, and the product was far less fair in appearance. In flavor, whether cooked green or dry, they have no superior. The large white beans ripened later, and imperfectly. We want, for a field bean, one which will mature early, and give time to manure the ground and sow to winter grain, if desired. Such a bean crop may be employed instead of a fallow, to subdue and ameliorate the soil; at least, such is the opinion of

A YOUNG FARMER.

REMARKS.—In a P. S., our correspondent asks us to call upon the bean-growers to give facts in their culture, as he wishes to learn more in regard to them, and from the experience of others. We willingly do so. In regard to their employment as a fallow crop, there is some difference of opinion among practical farmers in this country. In England, on heavy land,

beans are extensively cultivated as a fallow crop to precede wheat, and the experience of practical farmers, and the results of scientific experiment, testify to the advantages of the practice. Beans contain a very large percentage of nitrogen—more than any other crop we raise. This nitrogen is obtained, to a great extent, from rain-water and the atmosphere. If, therefore, you raise a crop of beans, and consume them on the farm, and return the manure made by the animals eating them to the soil, the field will be greatly enriched, especially in nitrogen or ammonia, which is the most expensive and natural ingredient of all manures.

That beans, peas, turnips, &c., organize a greater quantity of nitrogen from rain-water and the atmosphere than wheat, we know to demonstration; and we have little doubt that we may include with wheat our great American cereal, Indian corn, and barley and oats also.

If we plant half a field with corn, and the other half with beans, and sow them both to wheat afterwards, we do not know that the half on which the beans grew would be any richer than the half on which the corn grew. But if the been crop and the crop of corn were fed to animals on the land on which they grew, there cannot be a reasonable doubt that the part on which the beans grew would be much richer in those elements most needed by the wheat plant, than the part on which the corn grew. To obtain the full benefit from beans as a fallow crop, therefore, it is necessary that they be fed out on the farm.

We shall be glad to hear from our experienced correspondents on this point.

SHARPENING EDGE TOOLS.—A German scientific journal says: “It has long been known that the simplest method of sharpening a razor is to put it for half an hour in water to which has been added one-twentieth of its weight of muriatic or sulphuric acid, then lightly wipe it off, and after a few hours set it on a hone. The acid here supplies the place of a whetstone, by corroding the whole surface uniformly, so that nothing further than a smooth polish is necessary. The process never injures good blades, while badly hardened ones are frequently improved by it, although the cause of such improvement remains unexplained.

“Of late, this process has been applied to many other cutting implements. The workman, at the beginning of his noon-sleep, or when he leaves off in the evening, moistens the blades of his tools with water acidified as above, the cost of which is almost nothing. This saves the consumption of time and labor in whetting, which, moreover, speedily wears out the blades. The mode of sharpening here indicated, would be found especially advantageous for sickles and scythes.”

FRENCH HORSES.—LINSLEY SAYS: The best French horses are raised in Limousin and Normandy. Those from the latter province are of large size, with plenty of bone and muscle, large limbs, heavy quarters, sloping croup, deep chest and deep body, but a little flat-ribbed. They are very tractable, and possessed of very great endurance, and can carry great weight at the rate of six to seven miles per hour.

COWS AND BUTTER MAKING

EDS. FARMER:—The first cow we ever owned, (I begin without preface, for I know you dislike them,) is a two year old heifer bought this spring, for which was given "a promise to pay," \$20. She is native breed, her mother a good milker, light red with some white spots, and we call her "Ruby." We also "took" a three year old farrow heifer, a strongly marked cross of the Devon. Her milk, we turned toward keeping two calves, bought of another resident of the farm, until the 10th of July, after that keeping them ourselves on skimmed milk. The Devon answers to the name of "Dora." "Ruby" had a small calf the 13th of June—this was allowed to suck all her milk until July 10th, when it was sold for \$2—less, I think, than its market value.

Then commenced our butter making. Both cows were young, one farrow, and the pastures shortened by the drouth; so they gave only from seven to eight quarts at a milking. "Ruby's" mother, five years old, kept in the same pasture, gave double the quantity. The milk was strained in two large sized tin pans, and stood about two inches deep therein. It was set in a milk room, built of stone and floored with water lime, and well shaded with trees. In the warmest weather, it was allowed to stand about 48 hours before skimming; in cooler, it sometimes stood three days, or 72 hours. We churned in a common dash churn, about once in four or five days—never allowing the cream to accumulate over a week. Butter generally came in about 40 minutes, less or more, according to the temperature of the cream. The butter was salted without washing—worked twice and packed in stone crocks, containing from three to five gallons, or made in rolls, later in the season. The salt used was the common Onondaga, worked in thoroughly and largely at the first working, and out, or a portion of it, with the remaining buttermilk, at the second. Our customers ask for plenty of salt in their butter. No other use was made of the milk than for butter making; so we are able to give a full account of the product. It would be more complete and satisfactory, had we weighed or measured the milk as drawn from the cow.

For six months, (April 24th to Oct. 24th,) we calculate receipts and expenses as follows:—

Interest on Ruby's cost, \$20, 6 mos.,	\$0 70
Use of Dora, \$6 a year,	3 00
Keeping of both, 37½ cts. per week,	10 75
Interest on cost, and use of dairy utensils,	30 _____
	\$14.75
Increase in value of calves fed on Dora's milk, to June 10, afterwards on skimmed milk,	\$5 00
Ruby's calf, sold at four weeks old,	2 00
25 lbs butter, at 16 cents per pound,	4 00
52½ lbs " " " " " "	11 50 _____
	\$22 50
Left to pay for labor of making, &c.,	\$ 7 75

Several things on both sides are not taken into consideration—among them, money to pay for "Ruby"—on the other hand, the increase in the value of the cows.

There is a good chance to learn "the wrinkles" of making good butter, if one will "take an interest" in trying to do so. We have made some progress, even in a single six months, and hope to make still further improvements. Our butter commands the highest

market price—it looks, tastes, and keeps well, and that is good encouragement. With more and older cows, and larger experience, we hope to rival the best dairymen.

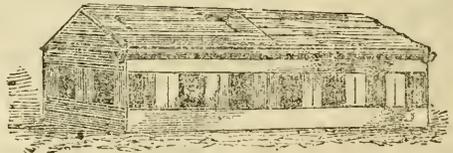
In the management of milk, we think it best to set it in shallow pans, and keep it unstirred until sour and thick,—then the cream rises most perfectly. In warm weather, this takes place in from 24 to 36 hours, and a temperature is desirable when milk will thicken in 48 hours. One difficulty in making good butter in winter, is, that the cream generally rises so slowly, as to become crusted over with a kind of sour, cheesy matter.

The cream should be stirred daily, and in summer it is better not to add the last skimming to the churning, but keep it until the next. We never churn sweet cream. The cream should be "just a little warm to the finger," when it is placed in the churn, and the butter will come in from 20 to 30 minutes—and be hard and yellow. Work it over sufficiently to get the salt thoroughly mixed with the butter, smooth it down, and set it in the cellar two or three days. Then work it again enough to get out all the buttermilk, and no more, and pack down or form into rolls. The latter are preferred, at some seasons of the year, by grocery men.

I did not think to trouble you with so long a story, and find I might say still more to the point, but will defer it until the end of another three or six months
A. S. B.

RACK FOR FEEDING SHEEP.

The rack of which I send you a rough sketch, is built on runners, made of 3 inch plank, 14 feet long, and 4 feet wide; sleepers, 4 by 4, are framed into the runners; the floor of the rack nailed to them. A post, 3 by 3 inches, at each corner. On the inside



SKETCH OF A SHEEP RACK

of the rack the boards are made fast to them. The bottom boards 4 feet wide, the space 9 inches. The top board 16 or 18 inches; the edge of the boards rounded and made smooth. To divide this space, boards 10 or 12 inches wide should be used, with the edges made smooth, nailed on the outside. The space for each sheep's head will be 7 by 9 inches. The roof is made of boards and small rafters, 2 by 2 inches. One half of one side of the roof must be hung by strap hinges, (to prevent its warping,) that can turn up, with a small latch to hold it up when filling with hay. An eave-trough, made of two boards, to carry the water off, can be hung at each corner with old chains on hooks, and let down and answer a good purpose to feed grain in.

This kind of a rack will keep the hay dry and the sheep from trampling it under foot, and can be drawn to any part of the farm with a yoke of oxen or a pair of horses. I have used one for years, and think it preferable to any kind I know. A. H.—Lenon, Ohio

AGRICULTURE—ITS ADVANTAGES.

Of all the various occupations and professions which have engaged the attention of mankind, there is none that seems to be so pre-eminently useful, so honorable, in short, so compatible with all our interests, as the cultivation of the earth. There is none that has so many resources within itself, or which can furnish from its own means the supplies for all our necessary wants. Food, raiment, and luxuries innumerable are the fruits of the farmer's labor and care; and in their train follow health, happiness and independence.

And in view of these facts, for facts they are, we are led to wonder that so many of our young men are placed behind the counter to learn the arts and mysteries of the scales and yard-stick, to deprive themselves of the bloom and the freshness of youth, and bring early and deep furrows of care and anxiety on their brows, by the difficulties and perplexities attending the prosecution of mercantile pursuits, when so many and so strong inducements are held out for them to engage in that profession which was the earliest employment of man, and which, as the light of science is spread abroad, and improvements are made in the art, is becoming more interesting, more profitable, and at the same time less laborious.

With what different feelings do the farmer and the merchant leave their pillows in the morning. The one buoyant with health and spirits, goes forth with the first dawn of day to his cheerful labors in the field, while the other after a restless, and perhaps a sleepless night, walks in a sober, thoughtful mood to his counting-room, anticipating, with fearful forebodings, the insolvency of his customers, or the ill-success of a voyage.

With what honest pride and heartfelt satisfaction does the farmer look at his luxurious fields, his richly laden orchards, and his growing flocks, with the happy assurance that with every returning season his substance is increasing, that he is above want, and far from feeling the fluctuations of merchandise or the embarrassments of trade. Who, that has seen the hale and vigorous plowman whistling along as he turns up the furrow, and has not sighed for the joys of pastoral life? Or, who has enjoyed the privilege of witnessing the internal arrangements of a thrifty farmer's establishment, and observed the care and attention evinced in all her domestic economy by his industrious and frugal wife, and has not coveted the happiness and independence of the farmer? Much as the wealth and prosperity of a nation may be promoted by its commerce and manufactures, still we are constrained to look upon agriculture as its source and foundation. It is absolutely necessary to our existence; for let men pursue what other business they may, they are still dependent on the farmer for what they eat and wear.

And, suppose the farmer, by way of relaxation, occasionally deviates from his regular routine of duties and engages a little in horticulture, or the cultivation of the choicest kinds of fruit, will he not be repaid a thousand times for the time and labor bestowed on a few trees, vines or shrubs? And further, will not the appearance of his house and "front door yard" be immensely improved, himself and family enjoy a large amount of pleasure and gratification, not to speak of the frequent lessons of neatness and order which his children would learn by the cultivation of

a few varieties of flowers. And will not these silent monitors, which so beautifully remind us that

"The hand that made them is divine,"

also have a moral tendency, and teach us to look

"Through nature up to nature's God."

C. N. BEMENT.

BRIEF REMARKS ADDRESSED TO FARMERS.

BY C. N. B.

INDEPENDENCE OF THE FARMER.—The merchant or manufacturer may be robbed of the reward of his labor by changes in the foreign or domestic market entirely beyond his control, and may wind up a year in which he has done everything which intelligence and industry could do to insure success, not only without profit, but with an actual diminution of capital. The strong arm of mechanic industry may be enfeebled or paralyzed by the prostration of those manufacturing or commercial interests to whose existence it so essentially contributes, and on whom in turn it so essentially depends. But what has the intelligent and industrious farmer to fear? His capital is invested in the solid ground; he draws on a fund which has never wholly suspended or repudiated; his success depends on no earthly guarantee, but on the assurance of that great and beneficent Being who has declared that while the earth endureth, seed time and harvest shall not cease.

THE FARMER'S LIFE.—The pleasures of rural nature are consistent with every period of our lives; and they certainly approach the nearest of all others to those of a purely philosophical kind. Those who are partial to the country—and where is the man of genius who feels not a delight, approaching to ecstasy, from the contemplation of its scenery, and the happiness which its cultivation diffuses?—those who have paid attention to the process of husbandry, and who view its occurrences with interest; who are at the same time alive to all the minutiae of the animal and vegetable creation; who mark "how nature paints her colors, how the bee sits on the bloom, extracting liquid sweets," will derive from the study of nature a gratification the most permanent and pure.

FARMERS—Yours are the true sources of wealth; yours the fountains from whence flow the peaceful streams of contentment and of real enjoyment; yours, though a life of toil and industry, is a life free from the thousand temptations which surround the indolent, the vicious, and the votaries of pleasure.

AGRICULTURE IS AN ART.—Man is the artist; the soil his laboratory; manure his raw material; animal strength and machinery his power; air, heat, and moisture his agents; and grains, roots, fruits, and forage his products.

JAPAN PEA.—Our esteemed correspondent, Dr. DUSENBURY of Gates, N. Y., informs us that the Japan pea last year did not fully mature with him. It grew most luxuriantly, but did not produce as many matured peas as the seed sown. It is evidently very prolific and where it matures, as in the Southern States, it may prove an acquisition; but will it in this climate?

WE have no notice of the horse being used in the cultivation of the soil till A. D. 1066.

THE PEDIGREES OF THE ARABIAN HORSE.

LINSLEY, in his Premium Essay on the Morgan Horse justly observes: The earliest records we have of the horse, trace him to Egypt, whence he gradually found his way to the various Egyptian colonies. Among the African varieties, the Barb is remarkable for his fine and graceful action, and is found chiefly in Morocco and Fez. He is lower than the Arabian, seldom exceeding fourteen hands. The shoulders are flat, the chest deep, the joints inclined to be long, and the head very fine. He is superior to the Arab in form, but has not his speed and endurance, nor his spirit and "countenance." The Barb has chiefly contributed to the excellence of the Spanish horse. The Godolphin Arabian was a Barb, and from him has descended some of the best racing stock of England.



OUTLINE OF THE HEAD OF AN ARABIAN HORSE.

The Arabian horse deservedly occupies the very highest rank. So late as the seventh century, the Arabs had very few horses, and those of a very inferior quality. The horses that they obtained from Cappadocia and other neighboring countries, were preserved with so much care, and so uniformly propagated from the finest animals, that in the thirteenth century they had obtained great celebrity. The Arabs divide their horses into three classes: the *Attechi*, or inferior breed, which are little valued, and are found wild in some parts of the desert; the *Kadischi*, or mixed breed; and the *Kochlani*, or thoroughbred. Many of the latter have well-attested pedigrees, extending more than four hundred years, and the Arab confidently asserts that the pedigree of his favorite mare can be traced distinctly to the stud of Solomon. More care is taken to preserve the pedigree of their horses than the genealogies of their chiefs; these pedigrees are always reckoned from the dams. The Arabian horse might not always be acknowledged to possess a perfect form, but no one can fail to admire his head. (See the annexed cut, engraved for the *Genesee Farmer*.) The broad, square forehead, the short, lean, firm, and delicate muzzle, the bright, prominent, and intelligent eye, the small, sprightly, and almost transparent ears, are universally acknowledged to be unrivalled in any other breed. The fineness of his legs, and the oblique position of his pasterns, may be supposed to lessen his strength; but his legs, although small, are flat and wiry, and they are not required to carry heavy weights. The muscles of the thigh and fore-arm

are strikingly developed, and assure us of his ability to perform many of the feats of strength and endurance related of him. But in reading of his really marvellous marches, we must remember that there are no watches to note accurately the time, nor mile-stones to mark correctly the distances on the path of the desert, and we must make some allowance for the proneness of the Bedouin to exaggeration. The Arabian horse is as celebrated for his docility as for his speed and courage. He rarely exceeds fourteen hands in height, his body is light, his hips and loins excellent, and his shoulders extremely beautiful. It is to the Arabian that the English are chiefly indebted for their unrivalled breed of horses for the turf and the chase.

SUBSTITUTES FOR THE POTATO.

The excitement so prevalent, a month ago, respecting the Japan potato, (*Dioscorea Batatas*) having almost subsided, and no fruit commensurate with the great effort made by several prominent horticulturists having been reaped, we think it may not be out of place to present again the claims of our native tuber, the *Apios tuberosa*. It is now nearly two hundred years since the introduction of this plant to Europe, where it has been fully tested. It had not, however, half the notoriety of the Japan root, and we presume it would still stand the test in comparison with that celebrated esculent. Were it not, unfortunately, a native of this country, much might be said in its favor. The *Apios tuberosa* is a leguminous plant, a herbaceous perennial, with tuberous roots, which are farinaceous when cooked, and when analyzed have been found to contain about half their weight in water. An accurate French experimentalist, professor in the university of Pavia, ascertained that the produce, by careful cultivation, in comparison with that of the potato, would be about one-third. Its further cultivation, on a large scale, was not recommended by him. We presume it will not attain any greater reputation than its more modern Japan competitor, though the amount of produce of the *Dioscorea* is certainly much greater than that of our more humble *Apios*.

R. R. S.

LARGE YIELD OF POTATOES.—Last spring I planted three potatoes of the kind called "Lady-fingers," weighing exactly one pound. I cut them in as many pieces as they had eyes, and found that I had 114 pieces. I planted them in a drill about a foot apart, in ground that was plowed the fall previous. I struck out the row with the plow the same as I would corn ground, and put rotten hog manure in the bottom of the furrow, and covered it about an inch with mould, then laid the pieces of potatoes in and covered with a hoe. All came up excepting seven. I hoed them several times through the season. When I dug them I found the yield was little more than half a crop on account of the dry weather, although I had the pleasure to harvest one bushel and a half of potatoes from the three planted, weighing 90 lbs. I brought from Wisconsin in the fall of 1855, six other kinds of potatoes, weighing together five pounds. From these, planted the same way, I raised two bushels and a half, weighing 147 pounds. J. L. MILLER—*East Hanover, Pa.*

FARMERS' CLUBS.

It is a fact already recorded on the page of history, that those towns that have sustained the best Farmers' Clubs, have made the most progress in the art of good husbandry, and have taken the greatest number of the premiums awarded by the county societies. The Farmers' Club should, and does sustain about the same relation to the county society, that the district school does to the academy. It will be found that the towns that sustain the best clubs, furnish relatively a greater number of active members to the county societies, than those where these primary organizations do not exist.

There is not a farming town in this, or any other Commonwealth, that may not, if it will, sustain a club that shall prove highly beneficial to every farmer who interests himself in it, by becoming an active and working member.

Now is the time to form these clubs. But, says an inquirer, how can it be done? The answer is ready. After reading this article, just name the subject to your neighbor, ask him to suggest it to his neighbor, and when a little interest and curiosity is aroused, call a meeting at the town hall, school house, or at some neighbor's house, and organize by appointing a president, vice president, secretary, and an executive committee, whose duty it shall be, with the advice and consent of the members, to arrange the order of business and entertainment of each succeeding weekly meeting.

Select some subject for a public debate, appoint some one or more upon each side to speak upon the subject; also some one or more to write an essay, or essays, upon some subject or subjects connected with agriculture or domestic economy, extending the invitation to the mothers, wives and daughters, for without their aid and presence, you will not be likely to succeed, while with them you cannot fail.

After completing your organization, you will find it profitable to enlist your minister, your lawyer, doctor, and schoolmaster, to lecture occasionally before the club; and by introducing the system of exchange now practiced among ministers, you may have numerous lectures, while each lecturer will not be under the necessity of preparing more than one good lecture during the season.

The club being formed, a desire for books for study and for reference, will soon be awakened, and the steps will soon be taken to secure these, which will serve as a nucleus for a Town Library, where such does not already exist. Every club will need a Cyclopaedia of Agriculture, practical and scientific, developing both the theory and the art of good husbandry, relative to both farm vegetables and animals. There are two good works of this kind now before the public, ready for use, to wit, "The Rural Cyclopaedia," by J. M. Wilson, and another, by J. C. Morton.* Either of these is worth more to the farmer than the entire list of publications by some of the modern book-makers and publishers. * * * While it is desirable to have and to read and study good books, all others are worse than useless, for they serve both to kill time, and mislead the reader. With an outlay of \$50, a club may furnish itself with all the works necessary to begin with. Then let such additions be made from time to time as the wants of the members shall demand. This is the dictate of good economy and practical experience.—*Massachusetts Ploughman.*

* The latter is by far the best work of the two; in fact, it is the best work extant. We heartily unite with the *Ploughman* in recommending it to Farmers' Clubs, and we will send it or *Wilson's* Encyclopaedia, or any other agricultural and horticultural works, to any Farmers' Club at twenty per cent. less than the usual rates, which see in our advertising columns.—Eds. GENESEE FARMER.

EXTRAORDINARY FECUNDITY OF WHEAT BARLEY AND OATS.

We have received from Messrs. HARDY & SONS, of Maldon, Essex, specimens of different grain in the straw (wheat, barley and oats) grown by them, with a request that we would examine them. They are intended to show the effect of their system of thin sowing, and of more care than is usually experienced in the cultivation. The specimens were placed in the hands of a person well qualified to examine minutely, and to report upon them, and we now give below the results, with all the details connected with the several parcels; and without pledging ourselves in the slightest degree to the applicability of the system upon a broad scale, we feel justified in saying that those results are such as to deserve the attention of practical men, and a rigid inquiry how far the system of thin and careful sowing or planting of cereals is capable of being carried out generally under the present course of husbandry:

Number.	No. of plants.	Distance apart, purlins.	No. of ears.	No. of grains per ear.	Average weight per plant.	Average weight of grain.	Quantity grown.	Average produce per acre.
1. Mummy Wheat.	1	1 foot	29	2580	114	2280	3 oz. 5 acres.	136 bushels.
2. Red Wheat,-----	—	1 "	10	1320	112	—	2 oz. 1 acre.	—
3. Ditto do -----	4	1 "	113	7240	64	1810	10 oz.	113 bushels.
4. Ditto do -----	—	1 "	109	8600	86	—	7½ oz.	—
5. Seedless Barley,-----	—	—	2	162	81	—	¼ oz.	—
6. Common Barley,-----	1	1 "	82	2940	25	2040	3¾ oz.	204 bushels.
7. Oats,-----	1	1 "	10	2816	281	2316	2¾ oz.	112 bushels.

Note.—The wheat is estimated at 60 lbs., the barley at 52 lbs., and the oats at 38 lbs. per bushel, which is the full weight of the specimens.

SPECIMENS OF THE PRODUCE OF DIFFERENT CEREALS FROM MESSRS. HARDY & SONS, MALDON, ESSEX.

EXPLANATIONS.

- No. 1. Twenty specimen ears of Egyptian whi wheat as cut from one stub, growing at a wide distance casually in a field of five acres.
- No. 2. Ten ears with thin straw of Hardy's selected and improved red wheat, from one acre transplanted with plants sown by the sparrows in a stubble in August, planted in October, at one foot apart, a little more than one-fourth peck of seed per acre.
- No. 3. Four (out of 8) single roots, 240 ears, averaging 35 each, grown casually at one foot apart, on common plowed land and no manure, was very foul; one peck of seed sown, and thinned out singly quite half, rather blighted.

No. 4. One hundred ears of prolific red wheat transplanted on one foot square, or little more than three pints per acre, rather blighted, as other people's. Estimated produce, 48 bushels per acre.

No. 5. Two ears of skinless barley.

No. 6. One plant of barley, sown one-fourth peck per acre, spoiled with the application of strong liquid manure, which caused it to be blighted.

No. 7. One plant of (Tartarian) oats, one-half bushel of seed per acre. There are two grains in every husk, twin-like.

No. 8. By way of contrast, we have inspected in the same manner, 10 ears of old Norfolk red wheat, grown at Glandford, which contain 511 grains, weighing one and one-twelfth ounces, averaging 51 grains each ear. The crop is estimated at 48 bushels per acre. Quality very good. All the specimens are of this year's growth.

Mark Lane Express.

KEEP AN ACCOUNT WITH YOUR FARM.

EVERY evening for the past seven months I have "posted up" a record of the labors of the day, as each crop was sown or planted, I have transferred to each its appropriate items, (giving my best estimate of their money value,) and as the season has advanced, have "closed the account" with several crops, and brought them so that I can "see through it" with most others, and I think I find it a very convenient as well as economical course of procedure. In any other business it would be a waste of words to argue the case, for none go into operations of even trifling extent, without keeping an account of outgo and income. Why should not the farmer do so? There is no good reason; and the amount of time and thought it requires can well be spared from more active labors.

No particular system of accounts would suit all cases—mine only suits myself, and I see constant chances for systematizing and improving it. So, without going into details, let me say, every farmer should keep an account with his farm—should be able at the close of the season to "strike the balance," showing, not by guess work, but in dollars and cents, pounds and bushels, the profit and loss for the business of the year. They cannot tell how they stand with the world; how each plan has resulted, how each crop and animal has repaid the outlay, without so doing, with any accuracy or detail. They may be losing money on that to which their chief attention is turned, and making a good profit on another product which they consider of little consequence. An account of capital invested, the expenses of growth and culture, and the receipts or return from the products, would at once decide the true policy of the farmer—his profits and losses, and from whence they flow.

But it is not my intention to be tedious with my "preachment." My accounts show me, among other things, that it has cost me more to raise a bushel of oats, this year, than to grow one of barley, and that corn will not pay at less than twenty-five cents a bushel, or \$7.50 per hundred for pork. The year is not up with my stock—there is a winter expense yet to be borne; I am hoping it will be well repaid by their increase in value. The item of Implements is not a small one, though I have no reaper or seed-drill as yet. Taking it all in all, I am bound to know as near as possible, what becomes of the little capital I have invested in farming, and what plans are successes and what failures, and to make the most of the knowledge I buy in one way and another.

Brother farmers, keep an account with your farms, and my word for it, the figures will furnish you many a lesson of value—will give you many a hint by which you can make or save in other years. They will serve as sharp reminders of the folly of attempting too much, or of leaving the finishing touch undone, and will show you where you had the comfortable satisfaction of pocketing the dollars as the result of your well ordered labors.

B. F.

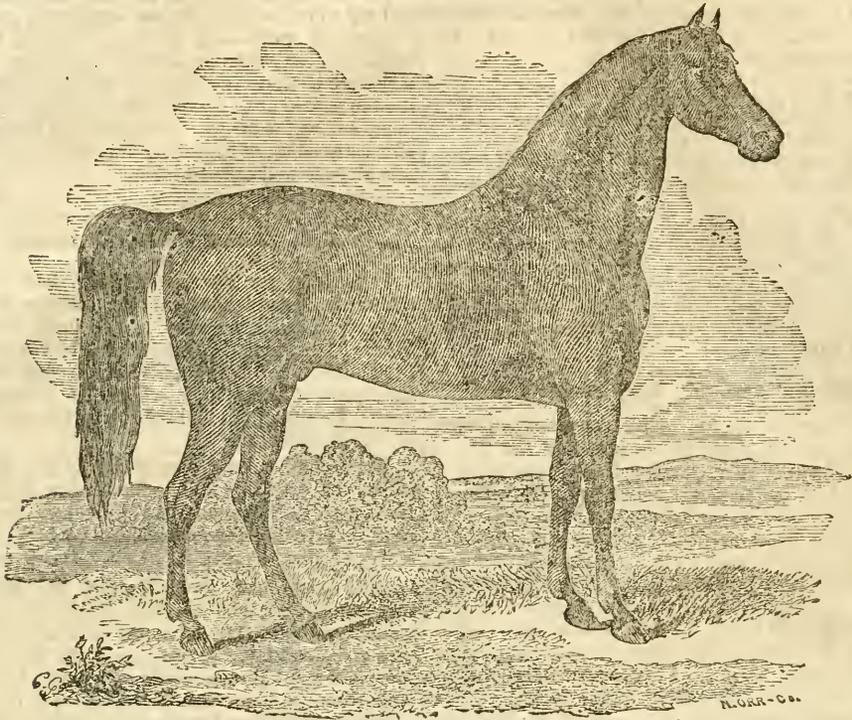
THE "JUSTIN MORGAN" HORSE.

IN the *Genesee Farmer* for May 1856, we published a condensed history of the "Justin Morgan" horse, from which the stock of this justly celebrated breed of Morgan horses originated. It was extracted from a lecture of SANDFORD HOWARD, ESQ., editor of the *Boston Cultivator*, to whom the country is indebted for sifting out and publishing the true history of this remarkable horse.

The following description of the "Justin Morgan," (so named after his owner, Mr. JUSTIN MORGAN, of Randolph, Vt.,) we condense from LINDSLEY'S new work on Morgan Horses, published by C. M. SAXTON & Co., of New York:

"The original, or 'Justin Morgan,' was about fourteen hands high, and weighed about nine hundred and fifty pounds. His color was dark bay, with black legs, mane and tail. He had no white hairs on him. His mane and tail were coarse and heavy, but not so massive as has been sometimes described; the hair of both was straight, and not inclined to curl. His head was good, not extremely small, but lean and bony, the face straight, forehead broad, ears small and very fine, but set rather wide apart. His eyes were medium size very dark and prominent, with a spirited but pleasant expression, and showed no white round the edge of the lid. His nostrils were very large, the muzzle small, and the lips close and firm. His back and legs were perhaps, his most noticeable points. The former was very short; the shoulder-blades and hip bones being very long and oblique, and the loins exceedingly broad and muscular. His body was rather long, round and deep, close ribbed up; chest deep and wide, with the breast-bone projecting a good deal in front. His legs were short, close jointed, thin, but very wide, hard and free from meat, with muscles that were remarkably large for a horse of his size, and this superabundance of muscle exhibited itself at every step. His hair was short, and at almost all seasons soft and glossy. He had a little long hair about the fetlocks, and for two or three inches above the fetlock on the back side of the legs; the rest of the limbs were entirely free from it. His feet were small but well shaped, and he was in every respect perfectly sound and free from any sort of blemish. He was a very fast walker. In trotting his gait was low and smooth, and his step short and nervous; he was not what in these days would be called fast, and we think it doubtful if he could trot a mile much, if any, within four minutes, though it is claimed by many that he could trot it in three.

Although he raised his feet but little, he never stumbled. His proud, bold and fearless style of movement, and his vigorous, untiring action, have, perhaps never been surpassed. When a rider was on him he was obedient to the slightest motion of the rein, would walk backwards rapidly under a gentle



MORGAN HORSE "PAUL CLIFFORD."

pressure of the bit, and moved side-ways almost as willingly as he moved forward; in short, was perfectly trained to all the paces and evolutions of a parade horse; and when ridden at military reviews (as was frequently the case,) his bold, imposing style, and spirited, nervous action, attracted universal attention and admiration. He was perfectly gentle and kind to handle, and loved to be groomed and caressed, but disliked to have children about him, and had an inveterate hatred for dogs, if loose always chasing them out of sight the instant he saw them. When taken out with halter or bridle he was in constant motion, and very playful.

He was a fleet runner at short distances. Running horses short distances for small stakes was very common in Vermont fifty years ago. Eighty rods was very generally the length of the course, which usually commenced at a tavern or grocery, and extended the distance agreed upon, up or down the public road. In these races the horses were started from a 'scratch,' that is, a mark was drawn across the road in the dirt, and the horses ranged in a row upon it, went off at 'the drop of the hat,' or some other signal.

It will be observed that the form of the Justin Morgan was not such as in our days is thought best calculated to give the greatest speed for a short distance. Those who believe in long-legged racers, will think his legs, body and stride were all too short, and to them it may perhaps seem surprising that he should be successful, as he invariably was, in such contests. But we think his great muscular development and nervous energy, combined with his small size, gave him a decided advantage in the first start over taller and heavier horses; just as any ordinary

horse can distance the finest locomotive in a ten rod race. When brought up to the line his eyes flash and his ears quiver with intense excitement, he grinds the bit with his teeth, his hind legs are drawn under him, every muscle of his frame trembles, and swells almost to bursting, and at the given signal he goes off like the springing of a steel trap. His unvarying success in these short races may perhaps be partially accounted for in this way, though he was undoubtedly possessed of more than ordinary speed, and was a sharp runner.

In harness the Justin Morgan was quiet, but full of spirit, an eager and nimble traveller, but patient in bad spots; and although for a long time steadily engaged in the heavy work of a new farm, his owner at that time informs us that he never knew him to refuse to draw as often as he was required to, but he pitifully adds: 'I didn't very often have to ask him but once, for whatever he was hitched to generally had to come the first time trying.' This uniform kindness at a pull was one of the striking characteristics of the horse, and the same trait may be observed in the greater part of his descendants. 'Pulling matches' and 'pulling bees' were as common in those days as short races, and the 'little horse,' as he was often called, became quite celebrated for his unvarying willingness to do his best, and for his great power at what is called a 'dead lift.'

Our engraving is a good likeness of the beautiful Morgan horse "Paul Clifford," now owned by Messrs. HUNSDEN & WILCOX, of Owego, Tioga Co., N. Y. He received the first premium at the Fair of the United States Agricultural Society, held at Springfield, Mass., in 1854.



FEMALE CASHMERE GOAT.

EWES CASHMERE GOAT.

LAST month we gave a portrait of a Buck Cashmere Goat, with a short history and description of these celebrated animals. We have great pleasure in presenting our readers this month, with a beautiful engraving of a Ewe Cashmere Goat. She is the property of Col. RICHARD PETERS, of Atlanta, Ga. Live weight 102 lbs.; weight of yearly fleece 4½ lbs. We hardly dare to hope that these animals will succeed so well in our country that Cashmere shawls will be as cheap and common as woolen ones are at present, but we have, nevertheless, great expectation that they will prove well adapted to our climate, and a decided acquisition in many parts of the country.

LOOK TO YOUR ANIMALS.—Most of your readers, I presume, are aware that all animals require, other things being equal, more food in cold weather than is necessary to keep them in the same condition during more moderate winter weather. Therefore, to insure the comfort of our animals, and save fodder, it becomes imperative (if not already done), to look to the stables and see that there are no crevices through which the snow and chilling winds will drive, to the great annoyance of the animals it may pretend to shelter. They should have plenty of clean litter, which will help to guard against the cold arising from want of banking around the buildings. They should also have light and a proper quantity of air; for I hold that light and air are as necessary for animated as for vegetable nature. They should not be admitted, however, through holes or cracks, but by properly prepared windows and ventilators.

D.—Gates.

THE TILLER OF HIS OWN LAND.—The man who stands upon his own soil, who feels that by the laws of the land in which he lives—by the laws of civilized nations—he is the rightful and exclusive owner of the land which he tills, is by the constitution of our nature under a wholesome influence not easily imbibed from any other source. He feels—other things being equal—more strongly than another, the character of a man as the lord of an inanimate world. Of this great and wonderful sphere, which, fashioned by the hand of God, and upheld by His power, is rolling through the heavens, a part is his—his from the centre to the sky. It is the space on which the generation before him moved in its round of duties, and he feels himself connected by a visible link with those who follow him, and to whom he is to transmit a home. Perhaps his farm has come down to him from his fathers. They have gone to their last home; but he can trace their footsteps over the scenes of his daily labors. The roof which shelters him was reared by those to whom he owes his being. Some interesting domestic tradition is connected with every inclosure. The favorite fruit tree was planted by his father's hand. He sported in boyhood beside the brook which still winds through the meadow.—Through the field lies the path to the village school of earlier days. He still hears from his window the voice of the Sabbath bell, which called his fathers to the house of God; and near at hand is the spot where his parents laid down to rest, and where, when his time has come, he shall be laid by his children. These are the feelings of the owners of the soil. Words cannot paint them; they flow out of the deepest fountains of the heart; they are life-springs of a fresh, healthy and generous national character.



Horticultural Department.

IMPROVING OLD APPLE ORCHARDS.

In all the older settled portions of the country, there are thousands of apple orchards producing an enormous quantity of fruit which is entirely valueless except as food for stock, or for cider-making. Can not these orchards be turned to better account? We believe they can. Even as food for stock, sweet apples would be far more valuable, and though the land occupied by these orchards may yield as much profit when the apples are converted into cider, as could be realized from it by any ordinary farm crop, yet we believe a far greater profit may be obtained by grafting these old trees with good varieties, that will command good prices for cooking and dessert purposes. Apples for cider-making are seldom worth more than eight cents a bushel, and we have known them sold for half that price, while twenty-five cents a bushel is a low price for ordinary "grafted fruit;" and we believe there is no more labor required to grow a bushel of Spitzenburgs or Baldwins, than of the comparatively worthless natural sorts now so common in many parts of the country.

This matter should be attended to during the winter months. Now is a good time to get grafts, to decide what varieties it is best to get, and to learn which is the best means of performing the grafting operation. On this point there is some difference of opinion. We shall recur to it in a future number, giving illustrations of the most approved methods. In the meantime, we hope our correspondents will give us their experience.

McINTOSH says that, in England, "the process of heading down and grafting old fruit trees is a much neglected part of fruit tree culture." The same may with equal truth be said of this country.

It may be said that it is easier and cheaper to get new trees from the nurseries. We would not discourage any one from planting young trees of good varieties; we believe that a properly-managed apple orchard, of the right sorts, is one of the most prolific sources of wealth upon a farm; but still, those who have vigorous trees of worthless sorts had far better re-graft them than to cut them down, or to let them remain as they are. More fruit can be obtained in a given time from one of these re-grafted old trees, than from a young tree; for it is a well established fact that grafting a young twig upon an old stock has the effect of making it flower earlier than it would otherwise do, in consequence of the accumulation of sap in the old stock becoming beneficial to the twig, and giving a check, at the same time, to

its tendency to produce leaves. "As an example," says McINTOSH, "if a seedling apple be grafted the second year of its growth on the extremities of a full grown tree, or even on a stock of five or six years from the seed, it will show blossom buds the second or third year; whereas, if it had remained ungrafted, it might not have shown buds for ten or twenty years." Another advantage of this mode of grafting is, that the organizable matter deposited in the roots and the trunk of the old tree is thrown with great force into the scions, causing them to make strong and vigorous shoots. The late GEORGE OLMSTEAD, of Hartford, Ct., stated in an early volume of the *Horticulturist*, that by re-grafting an old apple-tree—beginning to graft the top of the tree first, and so working down, and completing the process in three successive years—he had obtained from this single tree, in six years from the time he began to graft, twenty-eight and a half bushels of excellent fruit.

There are many old apple orchards in the country, which, though of good varieties, yield no profit to their owners, simply because they have been neglected. Such orchards may easily and speedily be restored to abundant and profitable fruitfulness. Some time before the sap begins to flow in spring, thin out the heads of the trees by lopping off all decayed, stunted, diseased, crooked, or superfluous branches, but avoid the common error of cutting off large limbs, when it is not absolutely necessary. Then in the spring, if the orchard has been in grass for some time, put on a good dressing of manure, and plow it under as deep as you can go without disturbing the roots of the trees. The best way is to throw a thin furrow slice up towards the row of trees, turning towards you and finishing in the centre between two rows. The plow can be put a little deeper each furrow as you recede from the trees.

If you have not manure to spare, spread on old leached ashes, at the rate of about one hundred bushels per acre, or half the quantity of unleached ashes; and if a bushel or so of plaster, and ten to twenty bushels of lime were added, so much the better. Let these be harrowed thoroughly in, and the ground worked into as good tilth as possible. Then sow the land to peas, and when in blossom, plow them in. The ashes, lime and plaster furnish all the mineral elements required by the trees—and of which the soil has probably been impoverished by the removal of the fruit—and the peas will supply a large amount of organic matter. By growing nothing among the trees for a year or two, and keeping the ground clean, sowing a non-exhausting crop and plowing it under, the soil may be rendered very rich, and the orchard fruitful.

We have been asked whether Peruvian guano would be good for an old apple orchard, the soil of which is sandy. We have no doubt it would prove beneficial. Peruvian guano, however, though it contains more or less of all the elements of plants, is comparatively deficient in potash and soda. Many sandy soils are naturally poor in these alkalies, and the removal of the apple crop from year to year, and of the other crops which are—but should not be—raised and removed from the land, also carry with them large quantities of potash and soda, so that it is probable that, relative to other plant food, these sandy soils on which apple orchards have stood for many years, are deficient of that which Peruvian guano, of

all natural manures, supplies in least quantity. If the orchard could have a dressing of fifty bushels of un-leached ashes, per acre, and an equal quantity of lime plowed under early in the spring, and then a top dressing of two hundred pounds of Peruvian guano, sown broadcast and harrowed thoroughly in, and be then sown to peas, which are plowed under when in blossom, or eaten off, on the land, by hogs, the soil would be more speedily enriched than if the guano had not been used. Still, plowing under a good coat of barn-yard manure, will, in most cases be a cheaper mode of renovating the site of an old orchard than any other plan we can think of.

IS THE CULTIVATION OF FRUIT ON A MORE EXTENDED SCALE DESIRABLE?

The answer to this question appears so self-evident, that after stating a few facts, but little remains to be said.

First, an abundance of good ripe fruit is admitted by all physiologists to be eminently essential to the preservation of health. This being the case, it becomes the duty and privilege of every one owning a spot of land, however small, (if not otherwise more profitably employed) to cause it to produce fruit in the greatest quantity, and of the best quality, so that, after his own wants are supplied he may have some to spare for those whose circumstances prevent them from producing it themselves.

At present the supply of good fruit is so limited that mechanics and others depending on their labor for maintenance are compelled to use an inferior article, unripe and unwholesome, or to do without. In either case the health suffers, and the affluent do not enjoy it as fully as would be desirable.

The objections often urged against fruit-growing that it is a business which does not immediately make profitable returns, and that it is uncertain and precarious, are prompted by ignorance. The more common and hardy kinds, as the apple, pear, grape, &c., are easily raised, and with less real hard labor than most of the grains or vegetables. Procure a good variety, plant it with care, and a very little trouble thereafter will insure success.

The glutting of the market is another bugbear. This, it must be admitted, has sometimes been the case in plentiful years, in the neighborhood of orchards, while, at the same time, thousands at the West, and elsewhere, have suffered for want of the surplus. The remedy for this will be found in a better knowledge of the benefit to health derived from the daily use of fruit, (instead of being considered an extravagant luxury,) and also in the increasing means of transportation.

In the case of this, as in that of every other article of real value, the demand will keep pace with the supply.

Then let every landholder "plant a tree," if no more, take proper care of it, and let no one dissuade from planting largely, and with the spread of light and knowledge, he will find an increasing demand for his crops at just and remunerating prices, himself and the world being mutually benefited.

CROCKETT.

ALL paths should be clean, and the edges of beds and borders should be even; the paths, and the beds and borders, should be well defined, and paths kept high and dry in the middle.

THE YELLOW LOCUST TREE.

One of your correspondents asks "how to raise the locust tree from seed, the time to plant, etc." I offer you the following answer:

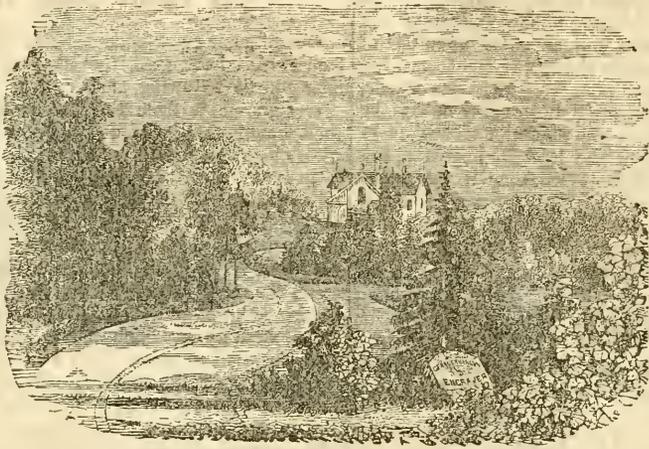
Get the seeds from the trees in the fall, (though they sometimes remain on the trees uninjured over winter,) and keep in a cool, dry place until spring. If kept warm and dry they will not vegetate as certainly and speedily. This is true of all hard-shelled seeds. Prepare the ground as for corn, and any soil fit for corn will grow the locust tree. Mark out drills four feet apart, and plant from four to six inches along the rows. Put the seed in a vessel and pour boiling water upon them; let them stand twenty-four hours, and those which have swollen slightly will come up the first year. Pick these out for planting, and pour more hot water on the remainder, letting the seed stand another day, when the greater part will be ready for use. Cover about one inch deep with mellow soil, and the plants will soon appear. May is the proper month in which to plant.

The cultivation should be such as is given to root crops. Keep the ground mellow, and free from weeds. Some of the young trees will be fit to transplant the next spring, others a year later. Give them a fair chance, and they will grow and do well, unless, as in some localities, the borer attacks them.

As a rapid-growing timber tree, the locust is of high value. No other hard wood can be raised as quick—at least, we are acquainted with none. Its use for posts, for carpenter work, for fuel, etc., is not very extensive, because, though a few trees are grown in almost every neighborhood, it is seldom found in any quantity, to supply such demand. It would be well to plant it more extensively, to fill up the waste corners of our farms with it. Once planted, it propagates itself by sprouts and suckers, and retains possession of the soil, unless special pains are taken for its eradication. M. L. J.—*Dec.*, 1856.

PEACHES.

The December number of the *Genesee Farmer* is at hand. In the proceeding of the Pomological Convention, on the discussion on Peaches, the merits of the Tillotson was discussed. There seem to be different opinions as to its qualities. With me it has always done well, and is considered the best early peach we have, ripening some days before the Early York in the same situation. I received it from the nursery of Thomas & Smith, Macedon, Wayne co., N. Y., several years ago, with a number of other kinds. The original tree is still living and healthy and bears good crops when the winter is not too severe. Varieties differ much in their ability to resist the effects of cold, the soil and situation being the same. I have one variety named Seabolt, which is the greatest bearer I have, a good freestone peach, ripening with the White Imperial. The Yellow Alberge is also a great bearer, but not so valuable on account of being yellow fleshed. I have some seedlings that promise to be of great value on account of their season of ripening; one being very early, another very late. The late one is a white fleshed peach, ripe Oct. 1st, and very juicy. We had a fair crop of peaches in this place the last season, notwithstanding the severe winter. ISAAC CLEMENT.—*Halfmoon, Saratoga Co., N. Y.*



COTTAGE RESIDENCE OF W. H. ASPINWALL, STATEN ISLAND

SPECIMEN OF AMERICAN LANDSCAPE AND GARDENING

We extract from DOWNING'S *Landscape Gardening and Rural Architecture*, the accompanying engraving of the beautiful cottage residence of W. H. ASPINWALL on Staten Island. It is a fine specimen of American Landscape Gardening.

The house is in the English cottage style, and from its open lawn in front, the eye takes in a wide view of the ocean, the narrows, and the blue hills of Neversink. In the rear of the cottage the surface is much broken and varied, and finely wooded and planted. In improving this picturesque site, a nice sense of the charm of natural expression has been evinced; and the sudden variations from smooth, open surface to wild, wooded banks, with rocky, moss-covered flights of steps, strike the stranger equally with surprise and delight. A charming greenhouse, a knotted flower-garden, and a pretty, rustic moss-house, are among the interesting points of this spirited place.

TO PREVENT GIRDLING BY MICE.—A correspondent in Riley, Iowa, gives the following as an effectual preventive for the depredations of mice and rabbits on fruit trees, which, perhaps, is worth trying, although we doubt its efficacy. It is as follows: "Select some fine young crab-apple trees, and plant them out in rows where you wish your orchard, and wait till they get well growing. Then select your scions, and at the proper season graft the trees, and in due time you will have an orchard of trees which neither rabbits, mice, or any other animals will girdle or bark. If any one doubts the above, let him try the experiment on one tree." D. F. K.—*Riley, Vigo county, Iowa.*

CURE FOR GOOSEBERRY MILDEW.—Scrape off the rough bark in the spring, before the buds swell, and apply soft soap freely to the bushes and roots, as far as you can reach them; afterwards, a few times washing them, while the fruit is growing, with soap-suds. Watering young plants a few times in the summer, will prevent the mildew. L. FAIRBANKS.—*Whitby, C. W.*

HINTS FOR THE MONTH.

JANUARY is not a month in which much work can be done in the open garden; but in mild weather, the pruning of hardy trees may be proceeded with. The pruning of fully developed garden or orchard standard trees, will consist merely in cutting away any wounded or broken branches that may have happened in the gathering of the fruit, by the ladder or other means; and the cutting out of all shoots that may have been produced in the fork or up the main arms or in the middle of the tree. Do not allow the middle of the tree to become crowded with twiggy and useless wood; it chokes up and impedes the free circulation of air among the leaves and fruit, and obstructs the action of the sap, (so essential to the full development of fine healthy leaves and fair fruit,) in the main branches. A convenient and easy method of cutting out these little branches in the middle of the tree is, to take a sharp chisel, on a handle five or six feet long, place the edge of the chisel on the under side of the branch and close to the tree, then a smart tap with a mallet will take it off at a blow. Cut away any pieces that are crossing or chafing each other. Always make the cut from the under side of the branch and slanting upwards, so that the wet may not lodge upon the wound. I am greatly of opinion that the spot and rust which we see so much of, upon the surface of so many poor specimens of apples, is owing to poor cultivation of the soil and neglect in careful pruning.

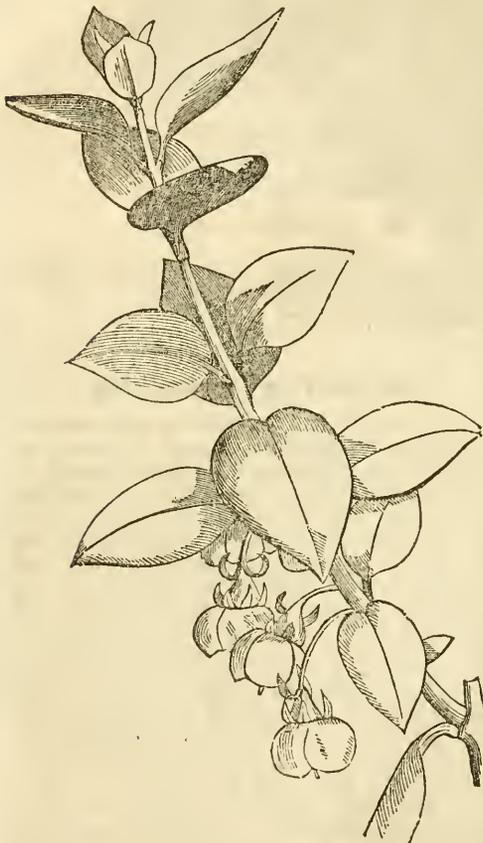
Attend to the mulching of young and newly planted trees, and if snow has collected about them either throw it away or tread it down hard, or mice are apt to work beneath and girdle the trees.

This is, also, the time to mend and repair garden tools, paint watering cans, and paint and repair hot-bed frames and sashes. JOSIAH SALTER.

FLY ON CHERRY TREES.—I was once told by a friend that burning brimstone under cherry trees, while in bloom, will preserve them against the fly which deposits its eggs in the young fruit, thereby destroying the product of the tree for the season. Have any of the readers of the *Genesee Farmer* tried it, and with what result? D.—*Gates.*

EUGENIA UGNI

This new fruit bearing shrub was introduced into England from South America, and from thence to this country. It is nearly allied to the common Myrtle, and is apparently about as hardy. It produces a berry as large as a black currant, which is said to equal in flavor a peach or pine apple. It belongs to a family of plants named after Prince Eugene of Saxony, of the natural order Myrtaceæ. It has stood several severe winters in England, without being hurt



by the frost, but it will not prove hardy in the States much farther North than Washington. It will, nevertheless, be valuable for greenhouse culture, in the North, on account of the excellence of its fruit. In habit it is very graceful, with delicate, globular, white flowers, and, like the myrtle, is an evergreen. The fruit is jet black, about the size of a large black currant, and produced very profusely. In the private gardens of Valparaiso the fruit is grown expressly for the dessert, and is much esteemed. The engraving will show at a glance the habit and appearance of this really beautiful and useful plant.

DAHLIAS.—Those who are keeping dahlias in their cellars, should at this season examine them, and see if they are heating, or if there is any moisture accumulating on them. In either case, repack them, after drying them in a room where the temperature is from 60 to 65 degrees.

CLASS FOR GREENHOUSES, &c

EDS. GENESEE FARMER.—The italicised portion, terminating the remarks from *Turner's Florist*, see page 349, on "different kinds of glass for garden structures," is somewhat contradictory from past experience, supposing each kind of glass was subject to precisely the same treatment, or rather, the plants under the glass. Of this, we are left in the dark, although it is highly probable they were not. For instance, the superiority of the rough plate glass, and perhaps the corrugated glass, as well, consists in its power of admitting all the rays of light; the clear, or crown glass, will, while it stops the burning rays, thus doing away with the necessity of using shading in hot sunshine; besides which, the two first-named kinds are stronger, and being so are less likely to break from frost, hail, &c., thereby effecting a saving, other things being equal.

It is presumed that in the trial both the sheet and crown-glass were shaded, and the others not; and that, as no perceptible difference could be discerned that, for reasons above given, the rough plate glass and corrugated glass are to be preferred for all horticultural structures, where it can be obtained. Unfortunately, from the little call for these articles, as yet, in this country, they cannot be got short of importing expressly, or except at high prices; but there are some few examples, and amongst them we remember a large greenhouse at the Flushing nurseries of the Messrs. Parsons. Perhaps some one, from experience, in this sunny country, will set us right on this matter.

THE MONSTROUS FUCHSIA.—Of which you give us an illustration in last month's issue, is almost, if not quite, a counterpart of one plucked the last season, from the variety called *Duchess of Lancaster*, cultivated in the greenhouse at this place. It had the resemblance of three flowers joined in one, and was the most striking monstrosity of the kind we ever saw, although it is, by no means, rare to meet with those of smaller dimensions on the Fuchsia, when under high cultivation. They are an interesting feature of botanical inquiry at all times, and well worthy of attentive study. **EDGAR SANDERS.**—*Albany, N. Y., Dec., 1856.*

MICE AND FRUIT TREES.—During the past winter many young fruit trees suffered from the depredations of mice; hence, it may be well to look out for the present winter, and try to protect them. I have had some very bad luck in wintering young orchards, but I think I have found a good remedy in this case. If your trees are set in orchard form, you may make an ointment of hog's lard and assafœtida; a piece of assafœtida, the size of a butternut, in a quart of melted lard, will be sufficient to wash seventy-five trees, or more, according to size. Let this ointment be rubbed with a woolen cloth on the body of the tree, one foot and a half from the ground; then hill up the earth around the tree, at least ten inches, and if the dirt is wet, and pounded down with a large wooden mallet, it will help to keep the mice from the roots of the tree. In the spring, as soon as there is to be no more snow, remove the hill of dirt, then wash the tree down with ley, from common wood ashes, or potash dissolved in water; this will remove the oily substance from the body of the tree, and promote good health generally. **A. L. SMITH.**

WINTER FLOWERS FOR ROOMS, &c.

It is really surprising that so few Flowers are seen to be used for Winter adornment of rooms and houses, when so many can be brought into requisition by using a little spare time. Of late, Pomponé Chrysanthemums have been much in vogue for the adornment of greenhouses in winter, and nothing can be more simple than the culture of a few of them for rooms. Plants bought in the spring, may be turned out into the garden border all the summer, and no extra care need be taken of them. And if properly lifted and potted in the autumn, by giving them only ordinary attention they will amply repay the trouble, by the profusion and delicate beauty of their bloom; after which they may be stowed away till spring, to be turned out again to make new growth. The collection of these really beautiful little plants at Messrs. Ellwanger & Barry's, of this city, is, I think, unrivalled in this part of the country, if not in the States. It is worth a walk of ten miles to see them. Such variety of color, such profusion of bloom, and such perfect beauty both in the flowers and habit of the plant, are not to be excelled by any ordinary thing; and as they are so easy to cultivate, they ought to be grown by everybody having any horticultural taste at all. I give a list of a few of the best, viz: Asmodea, Circe, Criterion, Daphnis, Eliza Mielliez, Gitano, Jongleur, Sylphide, Perfecta, La Radicuse, Modele, Mignonette, Bob, Burnettianum, Aurora Boreale.

The larger flowered kinds may also be used to great advantage, if lifted before the coming on of frost. Several of my friends have adopted this method, and potted some, and they now make a splendid display; whereas if left out they would have made none at all. And another great thing is, that they flower early in the season, and by the time very cold weather sets in they need no care at all, at the time when frost is most likely to get into a house.

If people have plenty of room and a little patience, Spireas may be made available, for they force admirably. Prunifolia, Lanceolata and others will flower well in the house, if lifted properly in the fall and cared for in an ordinary manner. The new Spirea callosa, I think, will prove admirably adapted for winter flowering. Camellias are recommended by some; but I think, that without great watchfulness and care, they always prove a failure, as the buds are so extremely liable to drop, either from being allowed to get too dry, or from excessive moisture, or from sudden changes in the temperature, and they are also very apt to be discolored by smoke and dust. Daisies make very pretty window plants, and by selecting suitable kinds one may have a very pretty show all the winter. Verbenas, if properly managed, make a fine display; but they must have plenty of air and light, and not too much water, or they become spindled and straggling. Scarlet Geraniums, also, if properly lifted and potted, without being checked much, make a good show. I have one now which promises to be gay all the winter long, with its splendid scarlet flowers. Tom Thumb and Ingram's Dwarf will be found best for this purpose. The dwarf Double-flowering Almond and the New Dentzia gracilis and Wall Flower, are very fine, if properly managed; and numerous other things may be made to gratify both the grower's taste and ambition, with very little trouble.

All the foregoing should be lifted in the autumn, before they are injured by frost, and brought into a warm place. Water sparingly till the buds begin to break, and gradually increase, as the plants advance in growth. It is very necessary to give them all the light possible. W. T. GOLDSMITH—Rochester.

CULTIVATION OF PEAS, &c.

EDS. GENESEE FARMER:—Your article, headed "Premiums for Short Essays," has just attracted my attention. Among the subjects suggested by you I observe one "on the cultivation of peas." I have had singular success in the cultivation of that vegetable and if others will adopt my method, they will find it a most advantageous one. It is as follows:

Dig a trench of one foot deep, and then fill it again with good soil taken from the surface, to within six inches of the top. This, of course, leaves the trench still six inches deep. Plant the peas in the trench thus prepared, and cover them with six inches of good soil, also taken from the surface. By the time the peas come up the trench will have settled about two inches, and this is to be brought nearly even by subsequent hoeings. I say nearly even because there should always be, in our dry climate, a hollow left to catch and hold the rains.

Now for the results. The peas will make their appearance notwithstanding the great depth of planting; there need be no fear about that. They will grow rapidly when started, will not be affected by drought, and will bear *three times as long, and more than three times the quantity* of peas planted in the ordinary way. There will be blossoms and mature fruit on the vines at the same time, and the vines will not put on the usual yellow, sickly appearance at the roots which is so soon followed by the drying up of the whole stock. If the soil is free from clay, it is better to cover them eight inches, even, rather than six.

Let those try the experiment who have been accustomed to plant in the ordinary way, and they will rejoice that they were subscribers to the *Genesee Farmer*.

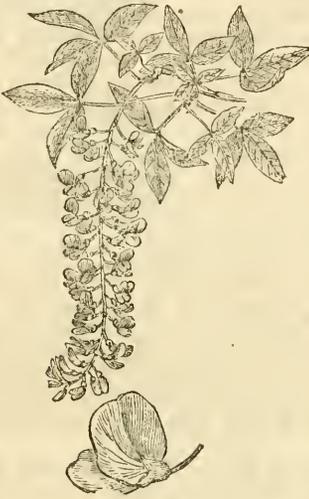
Now, Mr. Editor, will you or some of your readers inform me of the best method of preparing and using the white shell marl so common in this State. I have a large, and I have no doubt valuable bed of it on my farm, but I have injured almost everything I have put it on, because I did not know how to prepare it. I have been told that by letting it lie two or three years exposed to the sun and frost, that it will be valuable; but if any of your readers know of a method by which I may save all that time, I should be obliged. P. M.—Newburgh, November 29, 1856.

THE GARDEN.—No land pays a higher rate of interest than the humble, despised garden. The quantity of vegetables which it can be made to produce almost exceeds belief; and farmers may well open their eyes when told that under good management two acres of a garden will be more profitable than twenty acres of a farm as it is usually conducted. In the vicinity of cities and large towns, the raising of vegetables for market is conducted on a large scale, and is very lucrative, and even the poor man can, by his own labors at odd times, secure an abundance of food for his family, which is as good as money saved as well as earned.

LEGUMINOUS SHRUBS.

There are several very showy and graceful flowering shrubs commonly met with in the gardens of Europe, which fail to succeed in our climate, and for several reasons are not prominent in our shrubberies. Many travellers, and even residents of our country who have been brought up in Europe, are at a loss to know why certain favorite shrubs, familiar to them at home, are not cultivated here. The difference of climate in a measure accounts for this but in addition to this, certain tribes of plants are subject to the ravages of insects, which renders them difficult of cultivation, and detracts from their beauty.

The tribe of *Leguminosæ* embraces several very popular shrubs, which, although hardy enough to withstand our climate, are infested with the red spider, and prove sickly.



THE LABURNUM.

THE LABURNUM is one of these, of the form of which, the accompanying cut will convey an idea. The Laburnum is called the "Golden Chain" by some amateurs, as it is furnished with long pendulous racemes of bright yellow papilionaceous, or butterfly-shaped flowers, which are succeeded by pods or *legumens*, from which the term *Leguminosæ* originates.

Two varieties of the Laburnum (*Cytisus Laburnum*) are cultivated in our gardens and nurseries: one English and Scotch. In some sections of the country the Laburnum succeeds pretty well as a flowering shrub, but seldom attains that luxuriance which its native country, makes it desirable and attractive. The Broom (*Cytisus Scoparium*), is another of this tribe, and is, also, comparatively rare in this country. The Furze, (*Ulex Europæus*), one of the most common English shrubs, will not withstand our climate, though with care and protection it succeeds partially in the middle States.

The CARAGANA, which forms a beautiful dwarf flowering shrub, we seldom see here; there are several species of this family which produce their crowds of pretty pea flowers. To compensate for the want of these leguminous shrubs, we have the locusts, which, both as trees and shrubs, are useful and attractive.

R. R. S.

EVERBEARING RASPBERRIES.

THOMAS RIVERS, of Sawbridgeworth, Herts, Eng., says of the Autumnal Raspberries, in the London Gardeners' Chronicle:

"I have had such an abundant crop of these all last month and up to the present time, for even now the canes are full of fine fruit, that a few words about their culture may perhaps be useful. There are four varieties more particularly worthy of notice. Rogers' Victoria; Merveille des Quatre Saisons, yellow; this is large, sweet and excellent; Merveille des Quatre Saisons, red; this is about the size of the Red Antwerp, and very good; Large-fruited Monthly, or to give its long French name, "Framboisier de tous les mois a tres gros fruit." The first is a sort sent out many years ago by a Mr. Rogers, then of King's Road, Chelsea; it is rather dwarf, not of very robust habit, and yields fruit nearly all through September. The second and third have their fruit on very long spikes and bear most abundantly all through October, and until destroyed by the frost. Their culture is very simple, as they merely require being planted in rows about the same way as the summer raspberries, and cut down close to the ground early in March. No canes to bear in summer should be left, for the fruit they yield then is small and inferior to the summer varieties; in autumn their fruit is large, and of excellent quality. The fourth sort requires a different mode of culture, for unless the soil is very rich and moist it ceases to bear in the autumn if suffered to grow more than one year without removal; the canes should therefore be taken up every season any time during the winter, but not later than February, and planted on a fresh piece of ground, or on the same ground well manured, and then cut down close to the ground, leaving only one bud above the surface; under this treatment, they will yield an abundant crop in autumn, till November, of fine large fruit, and well repay the trouble of transplanting."

There have been many complaints lodged against the autumnal Raspberries in this country, and the cause of such bad success is evidently a lack of knowledge of the treatment required. If they are treated in the same manner as Mr. Rivers describes, success will undoubtedly be the result. The Large Fruited Monthly will require the same treatment as the three first. Eds.

A SMALL COLLECTION OF FIRST-RATE ROSES.

The following varieties will form a collection which cannot be beat: LaReine, a splendid rose, beautifully cupped. Giant of Battles, a first-rate imbricated variety, of a brilliant color, nearly scarlet, habit dwarf, and every way desirable. Sydonie, a very good variety, nicely cupped, of good color, with a curious leafy calyx, very distinct. Eugene Sue, a beautiful, new, light-colored kind, cupped, of good form and habit of growth, worthy a place in every good collection. Victoria, with good culture is one of the very best roses in cultivation; but it must have good treatment. It is, decidedly, the best light colored hybrid perpetual rose we have. William-Jessé is a very showy rose of good color, but indifferent form; it is too flaccid in its texture, and soon falls to pieces; it is, however, worthy of very general cultivation. William Griffith is a superior variety, of good color, and form unsurpassed. It should be in every collection. Baron Prevost is a good, showy rose, although not equal to some of the foregoing—
W. T. GOLDSMITH.—Rochester, N. Y.

Ladies' Department.

INFLUENCE OF WOMAN IN OUR SOCIAL IMPROVEMENT.

The lamented Downing well observes in one of his elegant leaders in the *Horticulturist*, that the Farming class in America is not a rich class—but neither is it a poor one—while it is an independent class. It may and should wield the largest influence in the State, and it might and should enjoy the most happiness—the happiness belonging to intelligent minds, peaceful homes, a natural and independent position, and high social and moral virtues. We have said much, already, of the special schools which the farmer should have to teach him agriculture as a practical art, so that he might make it compare in profit, and in the daily application of knowledge which it demands, with any other pursuit. But we have said little or nothing of the farmer's *home education* and social influences—though these perhaps lie at the very root of the whole matter."

We are not ignorant of the powerful influence of *woman* in any question touching the improvement of our social and home education. In fact it is she who holds all the power in this sphere; it is she, who really, but silently, directs, controls, leads and governs the whole social machine—whether among farmers or others, in this country. To the women of the rural districts—the more intelligent and sensible of the farmers' wives and daughters, we appeal, then, for a better understanding and a more correct appreciation of their true position. If they will but study to raise the character of the farmer's social life, the whole matter is accomplished. But this must be done truthfully and earnestly, and with a profound faith in the true nobility and dignity of the farmer's calling. It must not be done by taking for social growth the finery and gloss of mere city customs and observances. It is an improvement that can never come from the atmosphere of boarding schools and colleges as they are now constituted; for boarding schools and colleges pity the farmer's ignorance, and despise him for it. It must, on the contrary, come from an intelligent conviction of the honesty and dignity of rural life; a conviction that as agriculture embraces the sphere of God's most natural and beautiful operations, it is the best calculated, when rightly understood, to elevate and engage man's faculties; that as it feeds and sustains the nation, it is the basis of all material wealth; and as it supports all other professions and callings, it is intrinsically the parent and superior of them all. Let the American farmer's wife never cease to teach her sons, that though other callings may be more lucrative, yet there is none so true and so safe as that of the farmer,—let her teach her daughters that, fascinating and brilliant as many other positions appear outwardly, there is none with so much intrinsic satisfaction as the life of a really intelligent proprietor of the soil, and above all, let her show by the spirit of intelligence, order, neatness, taste, and that *beauty of propriety*, which is the highest beauty in her home, that she really knows, understands, and enjoys, her position as a wife and mother of a farmer's family. Let us have but a few earnest apostles of this kind, and the condition and prosperity of the agricultural

class, intellectually and socially, will brighten, as the day brightens after the first few bars of golden light tinge the eastern horizon.

HINTS FOR HOUSEWIVES.

CHEAP DYE.—Chestnut bark boiled in water, in an iron vessel, makes a kind of stone color more permanent for either cotton or woolen goods than some more expensive dyes. Dip the goods in a solution of copperas and alum, in water, then in the dye; stir constantly until the color is deep enough, and dry before washing.

APPLE PUDDING.—Put a pint of sour, sliced apples in a small pudding dish, and cover with a batter made of one cup and a half of sour cream, one egg, two cups and a half of flour, and a tea-spoonful of saleratus. Bake three-quarters of an hour; eat with cream and sugar.

WHITE CUP CAKE.—One cup of white sugar, one half cup of butter, the whites of four eggs, half a cup of sour cream, half a tea-spoonful of saleratus, and three cups of flour. Or, one cup of sugar, one of butter, the whites of eight eggs, and one cup of flour.

TO MAKE YELLOW BUTTER IN WINTER.—Put into the cream, just before churning, the juice of grated carrots, and it will improve not only the color, but the quality of the butter.

FRIED CAKES.—One cup of sugar, one of sour cream, two eggs, a tea-spoonful of saleratus dissolved in half a cup of boiling water, and a little cinnamon or nutmeg.

BUCKWHEAT CAKES.—Buckwheat cakes are improved by soaking and mashing fine the cakes left at one meal, and putting them into the batter for the next. H. M. D.—*Gansevoorts, N. Y.*

HOW TO MAKE FARM LIFE ATTRACTIVE.—"What can mothers and daughters do to make farm life attractive to their sons and brothers, and prevent them from leaving the farm to engage in mercantile or professional pursuits?"

By manifesting an interest in all their business. By holding up before them, at all times, a preference for a good farmer, before any other profession. By inciting in them a love for the beautiful—the beauty of flowers, the grandeur of a tree—and at all times speaking of it as most conducive to good health as well as good morals, and as being the most congenial to reflection, religion and study, as well as every part that is manly and noble.

By manifesting a love for the domestic animals, remarking on the handsome parts of this horse, and that cow, fineness and beauty of wool, and of the sheep, &c.

By making little coteries, or visiting parties, introducing historical and benevolent societies, and inviting them to join you; for, many times, it is the lack of excitement, in the quiet, every-day routine of life that makes them dissatisfied.

Coleman informs us that English ladies do all this and much more, and that the happiness and respectability for which the English Farmers are proverbial, are attributed to the interest women manifest in the profession.

M. S. B.

Editor's Table.

Our January number, the first of the New Year, 1857, is now before you, kind reader. Thanks to our numerous and experienced correspondents, it is worthy of your careful examination. We feel proud of the paper, and think you will agree with us that no one need be ashamed to show it to his neighbors and ask them to help sustain the cheapest agricultural journal in the world by sending in their names and thirty-seven and a half cents to the publisher.

From all parts of our extended country we receive daily indications of the good-will of many true friends of Rural Progress, who are doing their best to circulate sound agricultural literature in their respective neighborhoods. The letters we receive, and, not less, the \$3 for a club of eight which accompanies most of them, encourage us to spare no efforts to make our paper worthy of the encomiums bestowed upon it, and to hope that as our circulation nearly doubled last year, we shall be able to chronicle a still greater increase during the present year.

We are free to confess that were it not for the voluntary and disinterested labors of the friends of agricultural improvement in this country and in Canada, who have done so nobly in extending our circulation, we could not afford to furnish so good a paper at so low a rate. Our paper costs as much as the dollar monthlies, and more than some of them, and it is easy to see that our circulation must be very large in order to make a fifty cent paper as profitable as a dollar one.

For instance, supposing the actual cost of the paper to be thirty cents, and the lowest club term to be thirty-seven and a half cents, in the one case, and sixty-two and a half cents in the other, the dollar paper makes more than four times as much as the fifty cent paper. The dollar papers, therefore, make more with five thousand subscribers than we do with twenty thousand. Nevertheless, we are anxious to provide good agricultural reading at such a low rate as to be within the reach of all; and as long as our efforts are sustained as they have been, we shall spare no pains to make the *Genesee Farmer* the best, as it certainly is the CHEAPEST agricultural and horticultural journal in the world.

It has been intimated that the reason why we can afford to make so cheap a paper is because we are engaged in other business, and use the paper as an advertising medium. This is a malicious falsehood. There is no one connected with the paper that has the remotest interest in any business whatever. The principal editor of this paper was born and brought up on a farm, and has spent his whole life in agricultural pursuits and studies till he took the editorial chair in the office of the *Genesee Farmer*, in November, 1851. Since that time he has devoted himself to writing for the agricultural press; and it may not be amiss to state as a fact showing the great interest felt in agricultural literature, that last year he had an engagement with one of our shrewdest publishers to furnish matter, at a far higher rate than is paid by the great British Quarterlies, which are supposed to remunerate their contributors better than any other periodicals in the world. There never was a time when good agricultural reading was so much sought after as at present; and we are under no necessity to engage in any other business than that of endeavoring to make a good farmer's paper. We have never had any other business—except farming—and as long as our paper is sustained as well as at present, we shall devote ourselves exclusively to its interests, and those of its readers.

UNITED STATES AGRICULTURAL SOCIETY.—The fifth annual meeting of the United States Agricultural Society will be held at the rooms of the Smithsonian Institute, in the city of Washington, D. C., Jan. 14, 1857, at ten o'clock, forenoon.

Business of importance will come before the meeting. The report of the Exhibition at Philadelphia, and the journal of the society for 1856 will be distributed to the members present. At the same time, awards of Premiums on Field Crops will be made; the officers of the society for the ensuing year, elected, and the propositions which have been received in relation to the fifth annual exhibition, acted upon.

A lecture will be delivered on the application of Science to Agriculture, by Professor HENRY, of the Smithsonian Institute. Another lecture on the Grasses of the United States will be given by CHARLES L. FLINT, Esq., Secretary of the Massachusetts State Board of Agriculture.

Other lectures and interesting discussions are expected on subjects pertaining to the objects of the Association.

The various Agricultural Societies of the United States are requested to send delegates to the meeting, and all gentlemen who are interested in the welfare of American Agriculture, who would promote a more cordial spirit of intercourse between the farmers in different portions of our land, are invited to be present.

MARSHALL P. WILDER, *President.*

WM. S. KING, *Secretary.*

December 11, 1856.

EXTRACTS FROM COMPLIMENTARY NOTICES.—Prof. J. A. NASH, of the *Plough, Loom and Anvil*, says:

"The *Genesee Farmer* is one of the oldest, the cheapest, and in our view, one of the best monthlies."

The italics are his own. This is high praise from such a man.

J. W. ALWAY, of Kommoka, C. W., says:

"I would not be without the *Farmer* for three times its price."

E. P. UNDERHILL, of Golden Pond, Ky., says:

"I used to read the *Farmer* when small, and think it is, decidedly, the best agricultural paper published for the masses."

J. N. SHEPARD, of Marion, O., says:

"I have taken the *Genesee Farmer* for seventeen years, and, like man and wife who have been a long time together, cannot afford to part in old age."

E. A. GRIFFITH, of Boston, Erie Co., N. Y., says:

"Of late I have taken the ———, but have concluded to change back again for the *Farmer*. The ——— is too full of music and romance to suit my fastidious taste."

JOSEPH HARRIS, Esq.:—I have taken the *Genesee Farmer* for three years, and think it is a very valuable paper and one that ought to be read in every family. I shall endeavor to circulate it among our farmers as much as possible; with little trouble I have formed a club of about forty or upwards; the amount, with subscription, will be forwarded, but your answer is first required how you wish it mailed; it can be registered, if you desire; please answer as soon as my note is at hand. With pleasure I act as your agent, and notwithstanding the various papers published upon the best modes of farming, there is not one, in my opinion, that will be as useful to the farming community as the *Genesee Farmer*; and I hope it will long continue, as it now is, a blessing to all who take it and read it. I remain your Sincere Friend, JONATHAN MILLER.—*Berrysburg, Dauphin Co., Penn., Dec., 4, 1856.*

TO CORRESPONDENTS.—Many excellent communications have been received too late for this number. They shall appear next month.

Premiums for Short Essays.

In the hope of calling out the opinions of the readers of the *Genesee Farmer*, we have determined to offer a BOOK of the value of ONE DOLLAR, for the best article (not to exceed one page of the *Farmer*) on each of the following subjects:

- On the Management of Sheep;
- On the Management of Swine;
- On the Management of Milch Cows;
- On the Management of Horses;
- On the Management of Young Stock and Working Cattle;
- On the Relative Advantages of Employing Horses or Cattle in Farm Labor;
- On Cheese Making;
- On Butter Making;
- On the Cultivation of Winter Wheat;
- On the Cultivation of Spring Wheat;
- On the Cultivation of Rye;
- On the Cultivation of Barley;
- On the Cultivation of Oats;
- On the Cultivation of Peas;
- On the Cultivation of Beans;
- On the Cultivation of Indian Corn;
- On the Cultivation of Broom Corn;
- On the Cultivation of Millet;
- On the Cultivation of Onions;
- On the Cultivation of Crops for Soiling Purposes;
- On Growing Clover Seed;
- On Growing Grass Seeds;
- On the Cultivation of Potatoes;
- On the Cultivation of Turnips, Ruta Bagas, Mangel Wurzel, and other Root Crops;
- On the Best System of Rotation;
- On the Management and Application of Barn-Yard Manure;
- On the Use of Lime as a Manure;
- On the Use of Unleached Ashes as a Manure;
- On the Use of Leached Ashes as a Manure;
- On the Use of Salt as a Manure;
- On the Use of Peruvian Guano as a Manure;
- On the Use of Superphosphate of Lime as a Manure;
- On the Most Economical Mode of obtaining Fertilizing Matter other than Barn-Yard Manure;
- On any Insects Injurious to the Farmer;
- On the Advantages of System in Farming Operations;
- On the Advantages of Forethought in Farming Operations;
- On Cutting Hay, Corn-Stalks, and other Fodder, for Horses and Cattle;
- On the Best Means of Destroying Weeds;
- On the Management of Permanent Grass Lands;
- On Underdraining;
- On Subsoil Plowing;
- On the Advantages of Stirring the Soil in Dry Weather;
- On Irrigating Grass Land;
- On the Best Means of Destroying Mice, Rats, and other Vermin;
- On the Best Plants for Hedges—their Management, &c.;
- On the Management of Woodland;
- On Planting Trees on the Prairies, for Shelter, Fuel and Timber;
- On the Management of a Prairie Farm—Commencing in its Natural State;
- On the Best Method of Fencing a Farm;
- On the Benefits of Agricultural Fairs;
- On the Benefits of Farmers' Clubs, and the Best Plan or their Organization;

On the Influence of Agricultural Papers, and the Duty of Farmers to Write for them.

HORTICULTURAL SUBJECTS.—On the Cultivation of Peas;

On the Cultivation of Apples;

On the Cultivation of Peaches;

On the Cultivation of Plums;

On the Cultivation of Small Fruits—Strawberries, Raspberries, Currants, Gooseberries and Blackberries;

On the Cultivation of Cranberries.

The advantages of shelter for Gardens, and the best means of providing it;

For the best answer to the question, "Why do Farmers so generally neglect their Gardens? and the best means of rectifying the evil;

For the best answer to the question, "Is the Cultivation of Fruit on a more extended scale desirable?"

On the Management of a Farmer's Garden;

SUBJECTS FOR THE LADIES.—For the best Dozen Domestic Recipes;

On the Cultivation of Flowers;

For the best reasons why our Agricultural Societies should *not* offer premiums for a public exhibition of Lady Equestrianism;

For the best article on the other side of the Question;

For the best answer to the question, "Is a residence in the Country or City most conducive to high mental culture, beauty of person, health, happiness and usefulness?"

For the best answer to the question, "Is it right to ask the women folk to milk the cows during the busy season? (*Open to both sexes!*)"

On drying Apples, Peaches, Plums and other Fruit;

For the best answer to the question, "What can mothers and daughters do to make farm life attractive to their sons and brothers, and prevent them from leaving the farm to engage in mercantile or professional pursuits?"

It is desirable that the articles be as *short* as possible,—It is far more difficult to write a short article than a long one; and *other things being equal*, brevity will be considered as a mark of excellence. Write only on one side of the paper, and be sure and do not have the lines too close together. Many persons, to save a cent's worth of paper, put us to a dollar's worth of trouble in preparing their manuscript for the printer, and all because it is written too closely. Those who are not in the habit of writing for the printer, should write on ruled paper, and skip every other line.

The articles will be submitted to competent judges, and the premiums announced and paid as soon as they make their decision. *All articles must be sent in by the first of February.*

OHIO STATE BOARD OF AGRICULTURE.—At the Annual meeting of the Ohio State Board of Agriculture, held at Columbus Dec. 3, 1856, the following officers were electee for the year 1857:

President—Alexander Waddic, of Clark,

Treasurer—Lucian Buttles, of Franklin,

Recording Secretary—John M. Milliken, of Butler,

Corresponding Sec.—John H. Klippart, of Cuyohoga.

TO SINGLE SUBSCRIBERS.—Those who have sent us fifty cents for a single copy of the *Genesee Farmer* can have four more copies for \$1.50, or seven more copies for \$2.50. Those who have sent us \$1 for two copies, can have three more copies for \$1, or six more copies for \$2. We will send the papers to any address or post-office you wish.

THE RURAL ANNUAL AND HORTICULTURAL DIRECTORY, FOR 1857.—This beautiful work, of 144 pages, is now ready.

It contains, besides a great variety of matter interesting to every farmer and gardener, articles on Rural Architecture, with several beautiful designs of cottage, suburban, and farm houses, prepared expressly for the *Rural Annual*: On laying out a small Fruit and Kitchen Garden, with a list of the best varieties of fruits, directions for the preparation of the ground, &c., with a fine engraving: On the cultivation of Strawberries, Raspberries, Blackberries, Currants, Gooseberries, &c., with engravings and descriptions of the best varieties, &c.: On the management of Hedges, with illustrations of the best modes of training, &c.: On the Kitchen Garden: On the management of Grapes in cold houses, with engravings showing the best mode of training, &c.: On planting an Apple Orchard, best varieties for different localities, &c.: On the Architecture of Lodges, School Houses, &c., with two beautiful engravings: On building a Stable, with plan and description: On the breeds and management of Poultry—profusely illustrated: On Ornamental Planting, Landscape Gardening, &c., with numerous illustrations: On the Advantages of Shelter, &c. Also, a corrected list of Fruits recommended by the American Pomological Society, with lists of Nurserymen and Agricultural Implement Makers in the United States and Canadas. The whole comprising a work which for usefulness and beauty should be in the hands of every one interested in Rural Pursuits.

We send it, postage paid, for TWENTY-FIVE CENTS a copy.

In Clubs of Eight, we send the *Genesee Farmer* and *Rural Annual* for FIFTY CENTS the two.

To every one sending us eight subscribers to the *Genesee Farmer*, at the lowest club terms of THIRTY-SEVEN AND A HALF CENTS each, we will send one copy of the *Rural Annual* for their trouble.

OUR JANUARY PREMIUMS.—The names of the successful competitors for our January Premiums will be announced in the February number, and the prizes immediately sent. It is not necessary that the club be sent in all at once. Send on the names as fast as obtained. Read over the premiums, and we think you will be induced to compete for them. If you try, you will be sure of one of them.

FRUIT-GROWERS' SOCIETY OF WESTERN NEW-YORK. The Annual Meeting and Exhibition of this Society will be held in the Supreme Court Room, in the Court House, in the city of Rochester, on Wednesday, January 9, 1857, at 10 o'clock, A. M., when important topics will be discussed, and the officers for the ensuing year elected.

At many post offices, we have but one or two subscribers. Will not such read over our liberal list of premiums, in the advertising columns, and then get us up a club? There is no way in which a young man can more easily obtain a good agricultural library.

PATENT OFFICE REPORT.—We are indebted to the Hon. JOHN WILLIAMS, and to the Hon. CHARLES MASON, Commissioner of Patents, for the *Patent Office Report* for 1855. We have not space to notice its contents this month.

BACK VOLUMES.—We are entirely out of the volume for 1850. The price of the bound volume is \$1 each, and if sent by mail, twenty-five cents additional must be sent to pay postage.

EVERY FARMER SHOULD TAKE AT LEAST TWO AGRICULTURAL PAPERS.—The *Plough, Loom, and Anvil* well says:

“Our opinion is that every farmer should have at least two agricultural papers, one in his own region, and one more distant and general. Intelligence is immensely important to agriculture. A farmer who is feeble in body, and cannot do hard work, will get on better, if read up in his business, than one as strong as Sampson, without that advantage.”

We fully endorse this. It is the duty of every farmer to help sustain the agricultural paper published in his own neighborhood, and if it is not good, to try to make it better by communicating his experience; but he should also take a paper that elucidates principles which can be applied in all countries and climates; and it gives us great pleasure to add that we know of no better paper than the *Plough, the Loom, and the Anvil*, edited by Prof. J. A. NASH and M. P. PARISH, Esq., published monthly in New-York price \$3 per annum, three copies for \$6.

This may be more than many will be willing to pay, and to such we would recommend the GENESEE FARMER. It is so cheap that all can afford to take it in addition to half a dozen other papers. It is a mistake to suppose that it comes in competition with other journals. It occupies a field to itself, and has done more to create a taste for agricultural literature in this country than some of our contemporaries, who are now reaping the benefit, are willing to admit.

TRANSACTIONS OF THE NEW YORK STATE AGRICULTURAL SOCIETY.—We are indebted to the Secretary, B. P. JOHNSON, Esq., for the transactions of the New York State Agricultural Society, for 1856. From a slight examination, we think this the best volume yet issued by this Society. We shall notice more at length in a future number.

MONROE COUNTY FARMER'S CLUB.—We are glad to announce that the Monroe County Agricultural Society have organized a Farmer's Club for the purpose of discussing agricultural and horticultural topics. The first meeting will be held at the Court House, in this city, December 30th. A large attendance is desired.

CHEAP READING FOR FARMERS.—One volume of the *Genesee Farmer* contains 384 pages, the *Rural Annual* 144 pages. In clubs of eight, we send the two for fifty cents. Five hundred and twenty-eight pages for half a dollar! Can any one desire cheaper reading?

PREMIUMS.—Read over our list of Premiums for subscribers to our present volume; it is greatly enlarged. The January Premiums are an entire new feature. No one who tries can fail to take at least one Premium. You may by a little effort get \$70; you are sure of something.

KIND READER! if you can induce any of your neighbors and friends to subscribe for the *Genesee Farmer* we venture to say they will not regret it. Speak to them at once. We will gladly send show-bills and specimen numbers to any who are disposed to act as agents.

LET all who shall or a good Agricultural Library make a little effort to get subscribers for the *Genesee Farmer*, and they shall have it, and one which they will not feel ashamed of.

OWING to a deficiency of water, our paper-makers have been unable to furnish us paper for the *Rural Annual* as promptly as usual. We shall, however, be able to fill all orders for the *Annual* in a few days.

Notices of New Books, Periodicals, &c.

THE AMERICAN POULTERER'S COMPANION; A Practical Treatise on the Breeding, Rearing, and General Management of various species of Domestic Poultry. Illustrated with Portraits of Fowls, mostly taken from life; Poultry houses, coops, nests, feeding hoppers, &c. A new edition, enlarged and improved. By C. N. BEMENT, with 120 illustrations on wood and stone. New-York: Harper & Bros. 1856.

This is an exceedingly valuable work, from the pen of one who, from his great experience in the rearing and management of poultry, is abundantly able to impart valuable information on this important subject. Though the excitement about young roosters that could "eat corn off the top of a flour barrel" has, happily, subsided, yet correct information on all matters pertaining to poultry is at all times eagerly sought by those who have sufficient intelligence to appreciate the value of this species of domestic animals; and we are glad that Mr. BEMENT has brought out, at this time, a new edition of his justly popular work. Unlike many "new editions," it is not the old work with a new frontispiece and preface; every line has been revised, and much new and important matter added. It is, in fact, a new book, and one which is alike creditable to the author and the eminent publishing house from which it emanates.—There is an edition with colored plates, which would be a most appropriate gift book in rural circles.

MILLENNIUM; A Thousand Pleasant Things. Selected from Notes and Queries. New-York: D. Appleton & Co. 1857.

"Notes and Queries" is the name of a London weekly paper, started in 1849, in which "all who know something—have something to ask—or who can solve something," meet on common ground. It is a periodical of sterling merit, and one of great interest to all who have any literary taste. The present work is the cream of the first twelve volumes of Notes and Queries. A more delightful book has not been published for some time. It is impossible to take it up for five minutes at any time without finding something to interest and instruct. It is a miniature encyclopædia of heterogeneous literary facts and anecdotes, as curious and amusing as they are valuable and entertaining, and which can be found in no other work.

RECOLLECTIONS OF A LIFETIME; OR, Men and Things I have Seen. In a Series of Familiar Letters to a Friend; Historical, Biographical, Anecdotal and Descriptive. By S. G. GOODRICH. New York & Auburn: Miller, Orton & Mulligan. 1856.

This is a very readable book, in two handsome volumes. The author, "Peter Parley," is, perhaps, one of the most voluminous and popular of living writers; and his "Recollections of a Lifetime" will be perused with no ordinary interest.

DOUGLASS FARM; A Juvenile Story of Life in Virginia. By MARY E. BRADLEY. Edited by "Cousin Alice." New-York: D. Appleton & Co. 1857.

This is a simple, but well-written and interesting story, designed as a gift-book for young people.

HOME AND THE WORLD; or, the author of "Souvenirs of a Residence in Europe." New-York: D. Appleton & Co. 1857.

A lady friend who has read this story, pronounces it "very good."

THE PLAY-DAY BOOK; New Stories for Little Folks. By FANNY FERN. Illustrated by Fred. M. Coffin. New-York: Mason & Bro. 1857.

MISSING NUMBERS.—We will gladly supply any missing or damaged numbers of the *Genesee Farmer*, to any who wish to preserve the volume.

We will gladly send show bills and specimen numbers to all who are disposed to act as agents.

Inquiries and Answers.

SPRINGHALT IN HORSES.—Can any of your readers furnish me a cure for this disease? J. K.—*Kimberton, Crawford Co., Pa.*

SOEWING PARSNEPS IN THE FALL.—Have any of our readers had experience in sowing parsneps in the fall. If they have, we should be glad to hear from them on the subject.

(JOHN MCPHERSON, Puslinch, C.W.) Peruvian guano and superphosphate are not for sale in Rochester. LONDON'S Encyclopædia of Gardening costs \$10. There is no American edition. We can send you this or any other book at the publishers' prices.

(H. HILTON, Burgettstown, Pa.) **CHINESE SUGAR CANE.**—The Chinese Sugar Cane is said to mature anywhere where corn will grow, and to be sure, as a syrup plant, anywhere south of the State of New York. The seed can be obtained from W. P. Orme, Atlanta, Ga.

WARTS ON COWS.—I wish to learn, through the *Farmer*, what will cure warts on cows teats. I have a fine two-year-old, with a wart nearly as large as all of her teats put together. If you will send me a receipt to cure her you will oblige me, and perhaps more of your readers. W. ALVAY.—*Lebo, C. W.*

We have repeatedly published remedies for warts on cattle, and should be glad of the experience of others.

BURNING CHALK.—I must trouble you for a piece of information which I cannot find in any of the books—specific directions for burning chalk. I have a large bank of it, thrown out years ago at my landing, the ballast of some British ship. I propose to burn it as we do oyster shells, in a green pine pen, with alternate layers of wood; but I do not know if it will require more or less heat and time than shells.

Have you ever known a slight dressing of lime—two to two and a half bushels hydrate per acre—applied broadcast, as a remedy for fly. If aye, does it operate to stimulate the growth, or is the solution washed into contact with the maggot? I know a gentleman—two indeed—who testify strongly in favor of the practice. One of them had made repeated comparative trials, and always to his entire satisfaction. *—*Virginia.*

Chalk is a soft variety of lime-stone, or carbonate of lime. It is found in great abundance in many districts of England, but we believe does not exist on this continent. It is used to a great extent, in some parts of England, in its native state, being spread on grass land, in the winter, as we use marl in this country. The action of the frost causes it to crumble to pieces, and it can be plowed under the next spring, or, still better, the next fall. Chalk is burned and converted into quick-lime in the same way as we burn lime-stone, with this difference, that far less heat is required. We have seen half a dozen rude kilns on a single farm. They are generally made on a side-hill, and are nothing more than a chimney made of brick. A quantity of underbrush, or other cheap wood, is placed at the bottom, and the chalk is laid upon it. Then set fire to the wood, and the calcined chalk or lime is taken out at the bottom. We cannot give "specific" directions for burning chalk, and like our correspondent, can find nothing on the subject in the books. Under the circumstances of our correspondent, we should apply it to the land without burning.

Will some of our correspondents give us their experience on the other subject alluded to above?

(M. A. C.) CRUSHING THE CHINESE SUGAR CANE.— We do not think the Chinese Sugar Cane could be crushed and pressed in an ordinary cider mill, but should be glad to hear from those who have experience in the matter.

HOVEN IN CATTLE.—Can you inform me where I can obtain an instrument first devised by Dr. Monro, and now brought to perfection by Mr. Brae, of the Regent's circus, which is said to be superior to every other method of relieving blown or hoven cattle?

Brad's Patent Veterinary Syringe consists of a syringe to which tubes of different sizes are affixed according to the purpose and kind of animal to be operated upon. There is a large, flexible tube for giving an enema to horses and cattle, and a smaller one for dogs; also for sheep.

A hollow probange which is armed with a stilet for relieving cattle choked with turnip or potato. Asophagus Probange, is about 4½ feet in length, to reach from the mouth to the rumen. You will please inform me what it can be purchased at. J. B. B.—*Laurel, Del., Dec. 8, 1856.*

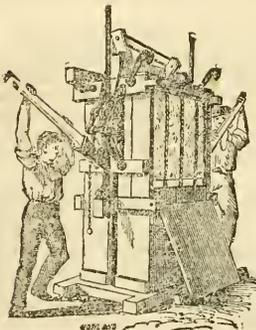
Will some of our correspondents answer the above?

ADVERTISEMENTS,

To secure insertion in the FARMER, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. TERMS—Two Dollars for every hundred words, each insertion, PAID IN ADVANCE.

INGERSOLL'S

PREMIUM PORTABLE HAY PRESS.



THIS Press combines greater power and portability, and requires less labor, occupies less space, and costs less space, and costs less money than any other machine for baling hay ever offered to the public.

It is equally convenient for pressing Cotton, Hemp, Hops, Broom Corn, Rags, Husks, &c. samples may be seen at our Warehouse, and circulars with cuts and full descriptions will be furnished upon application by letter or otherwise, to

FAIRBANKS & CO

Scale Manufacturers,

No. 189 Broadway,

Jan. 1—31. New York.

ANDRE LEROY'S NURSERIES, AT ANGERS, FRANCE.

MR. ANDRE LEROY, Member of the principal Horticultural and Agricultural Societies of Europe and America, and lately promoted by the French Emperor to the rank of Knight of the Legion of Honor, for the best Nursery products exhibited at the World's Exhibition at Paris, begs leave to inform his friends and the public, that he has just published his new Catalogue for 1856, being more extensive and complete than that of any similar establishment on this Continent. It contains the prices, &c., of all the Fruit, Ornamental and Evergreen Trees, Shrubs, Roses, Camellias, Stocks, Seedlings, &c., with the necessary information for importing the same. His experience in putting up orders for America, and the superior quality of his plants have been too well appreciated during a period of ten years, to require other comment. The Catalogue can be had on application to the undersigned Agent, who will also receive and forward the orders.

Mr. A. Leroy is happy to be able to state that his Nurseries were not reached by the inundation which so recently devastated a portion of the district in which they are situated.

ANDRE LEROY, Angers, France.

F. A. BRUGUIERE, Sole Agent,

138 Pearl street, New York.

Oct. 1—4t.

PLEASE TO READ THIS.

EMPLOYMENT FOR THE WINTER. Persons out of employment may find that which is both profitable and pleasant by addressing Jan. 1—4t

ROBERT SEARS, Publisher,
No. 181 William street, New York.

LIGHT HOUSE ISLAND, an Original Novelle, by the author of "Zillah," &c., will be published in the *Saturday Evening Post*. See Prospectus in another place.

Prospectus for 1857.

THE SATURDAY EVENING POST.

ESTABLISHED AUGUST 4th, 1821.

THE publishers of this old and firmly established paper, take pleasure in calling the attention of the public to their programme for the coming year. Surfeited with politics, the claims of literature will be more than ever appreciated by the reading world. We have, therefore, already made arrangements with the following brilliant list of writers:

WM. HOWITT (of England), ALICE CAREY, T. S. ARTHUR, MRS. SOUTHWORTH, AUGUSTINE DUGANNE, MRS. M. A. DENISON, the author of "Zillah," &c.

We design commencing in the first number in January next, the following original Novels:

TALLENGETTA, OR THE SQUATTER'S HOME.

By WILLIAM HOWITT, author of "Rural Life in England," "Homes of the Poets," &c., &c.

This is a STORY OF AUSTRALIAN LIFE, Mr. Howitt having visited Australia expressly with the object of acquainting himself with the novel and romantic aspects under which nature and society present themselves in that singular region.

The following Novels will then be given, though probably not in the exact order here mentioned:

THE STORY OF A COUNTRY GIRL.

By ALICE CAREY. An original Novelle, written expressly for the Post.

THE WITHERED HEART.

An original Novelle, written expressly for the Post, by T. S. ARTHUR.

LIGHTHOUSE ISLAND.

An original Novelle, by the author of "My Confession," "Zillah, or the Child Medium," &c.

THE QUAKER'S PROTEGE.

An original Novelle, by MRS. MARY A. DENISON, author of "Mark, the Sexton," "Home Pictures," &c.

THE RAID OF BURGUNDY,

A TALE OF THE SWISS CANTONS. An original Novelle, by AUGUSTINE DUGANNE, author of "The Lost of the Wilderness."

We have also the promise of a Short and Condensed NOVELETTE BY MRS. SOUTHWORTH, to run through about six or eight numbers of the Post.

In addition to the above list of contributions, we desire continuing the usual amount of Foreign Letters, Original Sketches, Choice Selections from all sources, Agricultural Articles, General News, Humorous Anecdotes, View of the Produce and Stock Markets, the Philadelphia Retail Markets, Bank Note List, Editorials, &c., &c., our object being to give a complete record, as far as our limits will admit, of the Great World.

ENGRAVINGS.—In the way of Engravings, we generally present two weekly—one of an instructive, and the other of a humorous character.

The postage on the Post to any part of the United States, paid quarterly or yearly in advance, at the office where it is received, is only 26 cents a year.

TERMS (cash in advance)—Single copy \$2 a year

3 copies,	.....	\$5.00	a year.
5 "	(and one to the getter up of the Club),	.....	10.00
13 "	(and one to the getter up of the Club),	.....	15.00
20 "	(and one to the getter up of the Club),	.....	20.00

Address always post-paid,

DEACON & PETERSON,

No. 66 South Third Street, Philadelphia.

SAMPLE NUMBERS sent gratis to any one, when requested. December 1, 1856.—2t.

THE HORSE—MOST NOBLE ANIMAL.

THAT indefatigable laborer in behalf of true Veterinary Science, Dr. GEORGE H. DADD, has in press, to be published by us during the winter, the most superb work on the Horse ever published in the world, entitled,

THE ANATOMY AND PHYSIOLOGY OF THE HORSE.

In one large octavo vol. of 300 pages. Illustrated with 20 superb Anatomical Plates of the Horse, from a great French work.

Price, with colored plates,..... \$4

" with uncolored plates,..... \$2

Orders for this elegant and valuable work in advance of publication, are solicited by the Publishers.

Also, just published, the eleventh thousand of

THE MODERN HORSE DOCTOR,

By Dr. GEORGE H. DADD,

Undoubtedly the best work ever issued from the American press on the Causes, Nature and Treatment of Diseases and Lameness in Horses. Price \$1.

Every man who owns a horse should own this book.

JOHN P. JEWETT & CO., Publishers,

Nov. 1—4t.

117 Washington street, Boston.

Genesee Farmer for 1857.

THE circulation of the *Genesee Farmer* during the past year has been nearly double what it was in 1855. Encouraged by this success, we have determined to make great improvements in the present volume, and to spare neither labor nor expense in our efforts to make this Pioneer Agricultural Journal still more worthy of that extensive patronage it has so long enjoyed.

The *Genesee Farmer* is not a reprint. Every line is set up for it, and for it alone. We believe this is true of no other *fifty cent* Agricultural Paper in the country. The *Genesee Farmer* is beyond all doubt the CHEAPEST AGRICULTURAL AND HORTICULTURAL JOURNAL IN THE WORLD.— In Clubs of eight, you get THREE HUNDRED AND EIGHTY-FOUR LARGE, AND CLOSELY PRINTED PAGES, illustrated with numerous and costly engravings, for the small sum of *thirty-seven and a half cents*. Surely no farmer, for the future, will be without an agricultural paper. *If there is any farmer who cannot afford to pay so small a sum, we will, on application, make him a present of the paper for a year, for we are certain he cannot afford to be without it.*

The large circulation of the *Genesee Farmer* is mainly due to the voluntary efforts of the friends of agricultural improvement in all parts of the country. We cannot reward them. The consciousness of their disinterested labors must be their recompense. Wishing to do what we can, however we offer the following

LIBERAL PREMIUMS FOR 1857.

1. To every person who sends EIGHT Subscribers, (at our lowest terms of *thirty-seven and a half cents each*), we will send, postage paid, a copy of our beautiful twenty-five cent book the *Rural Annual* for 1857.

2. To every person who sends us SIXTEEN subscribers, (at our lowest club terms of *thirty-seven and a half cents each*), one extra copy of the *Genesee Farmer*, and one copy of the *Rural Annual*.

3. To every person sending us TWENTY-FOUR subscribers, as above, two copies of the *Rural Annual*, and one extra copy of the *Farmer*, or any agricultural work valued at 50 cents, postage paid.

4. To any person ordering THIRTY-TWO copies of the *Farmer*, as above, three copies of the *Rural Annual* and one extra copy of the *Farmer*, or any agricultural book valued at 75 cents, postage paid.

5. For FORTY, four copies of the *Rural Annual* and one extra copy of the *Farmer*, or any agricultural book valued at \$1, postage paid, or four extra copies of the *Farmer*.

6. For FORTY-EIGHT, five copies of the *Rural Annual* and one extra copy of the *Farmer*, or any agricultural book valued at \$1.25, postage paid, or five extra copies of the *Farmer*.

For larger numbers, books or papers given in the same proportion.

To save expense to our friends, we pay the postage on all these works, and persons entitled will state what they wish sent, and make their selections when they send orders; or if their list is not complete, if wished, we will delay sending until the club is full.

Premiums for the Greatest Number of Subscribers.

In order to excite a little competition among our friends everywhere, as well as to reward them for their voluntary labors in behalf of our journal, we make the following liberal offers. Those who do not get the premiums offered below are sure of the above, so that we have no blanks.

1. FIFTY DOLLARS, in Agricultural Books (at the lowest prices), to the person who shall send us the largest number of subscribers at the club prices, before the 15th day of April next, so that we may announce the successful competitors in the May number.

2. THIRTY DOLLARS, in Agricultural Books, to the person who shall send us the second highest list, as above.

3. TWENTY DOLLARS, in Agricultural Books to the person who shall send the third highest lists, as above.

4. FIFTEEN DOLLARS, in Agricultural Books, to the person who shall send us the fourth highest list, as above.

5. TEN DOLLARS in Agricultural Books, to the person who shall send us the fifth highest list, as above.

Our object in offering books is to increase their circulation throughout the country. If any prefer the cash they can be accommodated.

CLUBS are not required to be at one post office or sent to one address. We send wherever the members of the club may desire.

We are particularly desirous that our friends SHOULD FORM CLUBS EARLY. There are thousands of our readers who every year put off renewing their subscription till several weeks or even months of the new year are gone by, and who are thus without the paper during the most leisure season of the year. To rectify this as much as possible, we offer the following liberal

JANUARY PREMIUMS!

TWENTY DOLLARS in Agricultural Books, to the person sending us the largest number of subscribers (at the lowest club price of *thirty-seven and a half cents each*), before the *fourteenth day of January*, 1857, so that we can announce the successful competitors in the February number.

FIFTEEN DOLLARS in Agricultural Books to the person sending us the *Second* highest list, as above.

TEN DOLLARS in Agricultural Books to the person sending us the *Third* highest list, as above.

NINE DOLLARS in Agricultural Books to the person sending the *Fourth* highest list, as above.

EIGHT DOLLARS in Agricultural Books to the person sending us the *Fifth* highest list, as above.

SEVEN DOLLARS in Agricultural Books to the person sending the *Sixth* highest list, as above.

SIX DOLLARS in Agricultural Books to the person sending us the *Seventh* highest list, as above.

FIVE DOLLARS in Agricultural Books to the person sending the *Eighth* highest list, as above.

There is not a town in the United States or Canada, where any person, by showing his neighbors a copy of the paper and asking them to subscribe, might not take some of the above January Premiums.

The Premiums will be promptly paid. The Books can be selected by the person taking a premium from the very complete list which we publish in our advertising columns, or we will get any works which are required, and furnish them at the lowest retail price of the publishers.

Persons who compete for the January Premiums can also compete for the April Premiums, and in this way it is not improbable that TWO PREMIUMS will be obtained for the same list of subscribers.

THE RURAL ANNUAL AND HORTICULTURAL DIRECTORY FOR 1857.—We have made great improvements in the present volume of this work. It is considerably larger than that of last year, profusely illustrated with expensive wood cuts, engraved expressly for the work; printed with new type, on better paper, and the pages surrounded with a neat border; while the originality, practical value and variety of the reading matter are such as to render the *Rural Annual* for 1857 worthy a place at every fireside in the country. Every one interested in rural pursuits should have a copy. Price, 25 cents a copy, postage paid.

THE RURAL ANNUAL AND GENESEE FARMER IN CLUBS.

Every Subscriber to the *Farmer* should have a copy of the *Rural Annual*. In clubs of eight, we send the *Farmer* for one year, and a copy of the *Rural Annual* for fifty cents. In other words, for FOUR DOLLARS we will send *eight copies of the Farmer* for one year, and eight copies of the *Rural Annual*. FOR EIGHT DOLLARS we will send *sixteen copies of the Genesee Farmer* and *sixteen copies of the Rural Annual*, and one extra copy of each for the person who gets up the Club.

Any person sending us \$3 for a club of eight of the *Genesee Farmer* shall receive one copy of the *Rural Annual* for his trouble, postage paid.

Postmasters, Farmers, and all friends of Rural Improvement are respectfully solicited to obtain and forward subscriptions. Money may be sent at our risk. Address,

JOSEPH HARRIS,
Rochester, N Y

BOOKS FOR THE FARMERS!

FURNISHED BY THE PROPRIETOR OF GENESEE FARMER.

Morton's Cyclopedia of Agriculture. Two volumes beautifully bound in Morocco. Price \$22.
 Morton's Cyclopedia of Agriculture, bound in cloth, \$18.
 Wilson's Rural Encyclopedia. Four vols. (second hand) \$16.
 Rhind's Vegetable Kingdom, with colored plates. Price \$6.
 The Farmer's Guide. By James Webb. Price \$7½ cents.
 How to Choose a Milch Cow. Price 62½ cts.
 Smith on the Construction of Cottages. Price \$1.
 The Farm Engineer. By Machie. Price \$3.
 Gunn's Domestic Medicine. Price \$3.
 The Cow, Dairy Husbandry, and Cattle Breeding. Price 25 cts
 Every Lady her own Flower Gardener. Price 25 cents.
 The American Kitchen Gardener. Price 25 cents.
 The American Rose Culturer. Price 25 cents.
 Prize Essay on Manures. By S. L. Dana. Price 25 cents.
 Skinner's Elements of Agriculture. Price 25 cents.
 The Pests of the Farm, with directions for extirpation. Price 25 cents.
 Trees—their Varieties, Breeding, Management, &c. Price 25 cents.
 The Hive and Honey Bee—their Diseases and Remedies. Price 25 cents.
 The Hog—its Diseases and Management. Price 25 cents.
 The American Bird Fancier—Breeding, Raising, &c. 25 cts.
 Domestic Poultry and Ornamental Poultry. Price 25 cents
 The poultry made Easy for the Use of Farmers. Price 25 cts.
 The American Poultry Yard. The cheapest and best book published. Price \$1.
 The American Field Book of Manures. Embracing all the Fertilizers known, with directions for use. By Browne. \$1.25.
 Bab's Kitchen Gardener. Price 75 cents.
 Stockhart's Chemical Field Lectures. Price \$1.
 Wilson on the Cultivation of Flax. Price 25 cents.
 The Farmer's Cyclopedia. By Blake. Price \$1.25.
 Allen's Rural Architecture. Price \$1.25.
 Phelps's Bee Keeper's Chart. Illustrated. Price 25 cents.
 Johnston's Lectures on Practical Agriculture. Paper, price 25 cents.
 Johnston's Agricultural Chemistry. Price \$1.25.
 Johnston's Elements of Agricultural Chemistry and Geology. Price \$1.
 Randall's Sheep Husbandry. Price \$1.25.
 Miner's American Bee-Keeper's Manual. Price \$1.
 Dadd's American Cattle Doctor. Complete. Price \$1.
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Contents of this Number.

Barn-yard Manure, 9
 Clover Seed, 12
 Cost of Raising Cattle, 13
 Too much Seed Corn, 13
 Remedy for Scab in Sheep, 13
 Cost of raising and keeping Sheep and producing Wool, 14
 A profitable flock of Sheep, 14
 A Good Dairy, 14
 Winter Evening Notes, 15
 Mulching Potatoes with Straw, 15
 Richardson on the Horse, 15
 Items suggested by the December number, 17
 Fall and Spring Plowing, 16
 Quality of Soil, 16
 Facts in Agriculture, 17
 Notes for the Month, by S. W., 17
 Beans as a field crop, 18
 Sharpening Edge Tools, 18
 French Horses, 18
 Cows and Butter Making, 19
 Rack for Feeding Sheep, 19
 Agriculture—Its Advantages, 20
 Brief Remarks addressed to Farmers, 20
 Japan Tea, 21
 The Pedigree of the Arabian Horse, 21
 Substitutes for the Potato, 21
 Large Yield of Potatoes, 21
 Farmers' Clubs, 22
 Extraordinary fecundity of Wheat, Barley and Oats, 22
 Keep an account with your Farm, 23
 The "Justin Morgan" Horse, 23
 Erve Cashmere Goat, 25
 Look to your Animals, 25
 The Tiller of his own Land, 25

HORTICULTURAL DEPARTMENT.

Improving old Apple Orchards, 25
 Is the Cultivation of Fruit on a more Extended scale desirable? 27
 The Yellow Locust tree, 27
 Peaches, 27
 Specimen of American Landscape Gardening, 28
 To Prevent girdling by Mice, 28
 Cure for Gooseberry Mildew, 28
 Hints for the Month, 29
 Fly on Cherry Trees, 29
 The Cineraria, 29
 The Violet and its varieties, 30
 Eugenia Ugni, 30
 Dahlias, 30
 Glass for Greenhouses, &c., 30
 Glass and Fruit Trees, 30
 Winter flowers for Rooms, 31
 Cultivation of Peas, 31
 The Garden, 31
 Leguminous Shrubs, 32
 Ever-bearing Raspberries, 32
 A small collection first-rate Roses, 34

LADIES' DEPARTMENT.

Influence of Woman on our Social Improvement, 33
 Hints for Housewives, 34
 How to make Farm Life attractive, 33

EDITOR'S TABLE.

United States Ag. Society, 34
 Extracts from Complimentary Notices, 34
 Premiums for Short Essays, 35
 Ohio State Board of Agriculture, 35
 To Single Subscribers, 35
 Rural Annual and Horticultural Directory for 1857, 35
 Every Farmer should take at least two Agricultural papers, 36
 Transactions of the N. Y. State Ag. Society, 36
 Monroe Co. Farmers' Club, 36
 Fruit Growers' Society of Western N. Y., 36
 Patent Office Report, 37
 Notices of New Books, Periodicals, &c., 37
 Inquiries and Answers, 37

ILLUSTRATIONS.

Sketch of a Sheep Rack, 19
 Outline of the Head of an Arabian Horse, 21
 Morgan horse "Paul Clifford," 24
 Female Cashmere Goat, 25
 Cottage Residence of W. H. Aspinwall, Staten Island, 28
 The Cineraria, 29
 The Eugenia Ugni, 31
 The Laburnum, 32

Alice Cary writes for the *Saturday Evening Post*. THE STORY OF A COUNTRY GIRL. See Prospectus in another place.

T. Arthur writes for the *Saturday Evening Post*. THE WITHERED HEART. See Prospectus in another place.



SHALL WE HAVE TO ABANDON WHEAT GROWING IN WESTERN NEW YORK?

OWING chiefly to the depredations of the weevil— or more correctly the wheat midge (*Cecidomyia tritici*) it is feared that wheat culture will have to be given up in Western New York, at least for a few years.— The subject is one of great importance, and is attracting some attention. At the late meeting of the Farmer's Club of Monroe County, the question for consideration was, "What substitutes for the Wheat crop can be adopted with the most profit in this county?" The fact that such a subject should be selected for discussion at two successive Farmers' Clubs in a county which, according to the census of 1845, produced more wheat per acre than that of any other county in the State, and a greater number of bushels in the aggregate than the whole five New England States, is well calculated to create alarm.— Is it true that wheat culture must be abandoned in Western New York? *We think not.* We are well aware that the midge has done serious damage to the wheat crop in this vicinity for the past few years; still we believe the extent of the injury has been over estimated. In 1855, we should have had a full average crop of excellent wheat had it not been for the rainy weather which set in just as the crop was ready to cut, and which continued for nearly a fortnight, causing the grain to sprout to an extent never before known in this country. One of our most experienced millers estimated that at least three-fourths of the crop was destroyed in this way; and from careful examination of the crop in several counties at the time, we believe the estimate is none too high. This grown wheat *was used for seed* to a great extent, in the fall of 1855, and the crop of last year suffered materially in consequence. The failure of the wheat crop in 1855-6, therefore, cannot be ascribed to the depredations of the midge alone, but, in some degree at least, to causes which are of unusual occurrence.

While this is true, we cannot close our eyes to the fact that the midge has made serious havoc with the wheat crop in some sections. On one field in this vicinity, which came under our own observation, last year, at least one-half of the crop was destroyed; but this took place on land which was too low and too wet to grow a good crop of wheat, even under the most favorable circumstances. On another field on the same farm, where wheat was sown on good, dry, well-prepared soil, a little over twenty bushels of good wheat was obtained per acre. *So far as we could judge, the midge injured one nearly as much as the other.*

Had not the midge injured either of the fields of wheat, the one would have produced a crop of 10 bushels, and the other a crop of 25 bushels per acre. The midge destroyed 5 bushels per acre on both fields, and left, on the low, wet land, 5 bushels, and on the good land, 10 bushels per acre. The midge destroyed as much wheat in both cases, though it took half the crop on one field, and only one-fifth on the other!

There may be instances where the midge has destroyed more than five bushels per acre, but we think that in this neighborhood, except under very unfavorable circumstances, this was the extent of the damage. Now, while a loss of five bushels per acre causes no trifling diminution of the profits of even an unusually large wheat crop, yet it is evident that the loss is far less under a good than under a poor system of cultivation. It seems to us, therefore, that instead of looking for substitutes for the wheat crop, we should endeavor to ascertain the most economical means of increasing the fertility of our farms, and of concentrating more labor and manure on those portions of the farm best adapted to wheat culture.

On the farm of Mr. E. S. HAYWARD, of Brighton, in this county, results were obtained, last year, even more favorable to "high farming" than in the instance already mentioned. He obtained his seed from Canada (where the harvest weather of 1855 was propitious, and the wheat was not injured as in this neighborhood), and sowed two bushels per acre, on naturally good, dry wheat soil prepared in the best manner. From the quantity of shrunken grains, it was estimated that the midge destroyed about five bushels per acre, and yet the crop yielded over thirty five bushels of very superior wheat per acre. The midge in this instance destroyed as much wheat *per acre* as in the first case mentioned, where it eat half the crop, and yet here only one-eighth of the crop was lost.

We are well aware that it has of late years been fashionable to recommend "High Farming" as a remedy for every evil that affects the farmer; and though we have more than once shown the absurdity of such recommendations, it is evident to us that the best means of alleviating the fearful injuries caused by the wheat midge will be found in a better system of cultivation, or if you will excuse the term, in "High Farming."

It is well known that early wheat is less liable to injury from the midge than that which matures later. The reason for this is well known, and we need not allude to it here. On this account early sowing is

generally recommended, and has been attended with success; but early sown wheat is more liable to injury from the Hessian fly than late sown.—Early sowing, therefore, cannot be adopted in all cases. The object of the wheat grower, it would seem, should be to increase the early maturity of the berry, or to accelerate the elaborating processes after the grain is formed. Anything which increases the healthy growth of the wheat is favorable to this result. Underdraining is one of the great prerequisites on all land that is not naturally drained. The next thing is to supply the plants with appropriate food. In saying this we would guard against a popular error. The food of wheat is composed of the same elements as that of other plants, and, in one sense, therefore, the food of wheat is the same as the food of other plants. So of the food of animals, however diverse in form and characteristics it may be, it is all composed of the same elements.—The food of the gentle lamb and the food of the fierce tiger are composed of the same elements, but still there is a vast difference between grass and flesh. So the food of plants is composed of the same elements, though there is unquestionably a great difference between the appropriate food of wheat and of many other agricultural plants. A carnivorous animal would not remain long in health if fed on vegetables, neither can we expect wheat to attain its maximum healthy growth unless fed on its most appropriate food. What that food is, thanks to the experiments of Lawes and Boussingault, is now pretty definitely understood.

The appropriate food of wheat abounds in ammonia, and is comparatively deficient in carbonaceous matter. It also contains less available potash and phosphates than is required in the appropriate food of clover and turnips. It should be the aim of the wheat grower, therefore, to increase the amount of ammonia in the soil without increasing the quantity of carbonaceous matter. We have frequently stated how this can be most economically attained. Grow clover, peas, beans, turnips, ruta bagas, mangel wurzel, beets, carrots, parsneps, artichokes, lupins, and such other crops as obtain a large amount of ammonia from the atmosphere; feed these crops out on the farm to animals, and if grain is fed to them in addition, let it be such as, other things being equal, contain the largest quantity of nitrogen; (see table in last number, page 10) husband the manure so as to retain all the ammonia, and this will furnish the wheat with appropriate food.

The object of the wheat grower, we have said, should be to increase the early maturity of the berry. Fortunately, an increase of the appropriate food of the wheat plant seems to have this effect. JAMES CAIRD, of Beldoon, Scotland, dressed a fifty acre field of wheat with 224 lbs. of Peruvian guano per acre, at the time the seed was sown in the fall, leaving an acre in the centre of the field without guano. The product at harvest was, without guano, 25½ bushels per acre, weighing 60 lbs. per bushel; with guano, 32½ bushels per acre, weighing 63 lbs. per bushel.

What we wish to call attention to, however, is not the increase of wheat from guano, or the superior quality of the grain on the guanoed portion of the field, but to this remarkable fact; that acre without guano in the centre of the field, was a week later in ripening than where the guano was used.

We think most farmers will agree with us that if

we could bring our wheat to maturity a week earlier than usual, we should have little to fear from the ravages of the midge. We are not, however, about to recommend the farmers of Western New York to use guano,—at the present price of guano it would hardly be profitable, unless wheat commands a high price. We must supply the soil with the elements of guano from natural and more economical sources.—The plan we have recommended,—growing more roots, clover, peas, &c., and feeding more stock on nitrogenous foods—will be an approximation to this object. Peruvian guano is nothing more nor less than the excrements of birds living on highly nitrogenous food; namely, fish. The excrements, as explained in an article on "Barn Yard Manure," in last number, may be considered as fish with nearly all the carbon extracted from them by the processes of nutrition. Wheat needs but little carbon in its food, and a large quantity of ammonia, and hence guano is one of the very best manures that can be used for wheat. Now fish, in their natural state, may be, and unquestionably are, very beneficial as a manure, but any organized matter is not as natural a manure as the excrements obtained from the consumption of such matter. Animal life cannot exist on inorganic matter, and plants cannot live on organized matter. The lifeless substances of earth and air, are organized by plants, and are thus made capable of sustaining animal life, with all its pleasures. It is true that there are plants which appear designed to furnish by their decay matter for the support of plants of a higher organization, but there are few if any agricultural plants which properly belong to this class. It is contrary to the economy of nature to use plants which are capable of sustaining animal life for the purpose merely of furnishing food for other plants. It is reasonable to suppose, therefore, that decayed vegetable plants do not furnish as healthy food for the high order of plants as the excrements of animals living on these plants. For this reason, while we are earnest advocates for the extensive cultivation of clover on all wheat farms, we think it is contrary to the laws of nature to plow under such a large amount of matter capable of sustaining animal life for the simple purpose of furnishing food for the following wheat crop. Manure furnished by decayed clover is not as appropriate food for wheat as the excrement of animals living on clover. It contains too much carbonaceous matter, and while the nitrogen of the clover furnishes, by decay, the required ammonia—and this ammonia not only increases the crop, but accelerates early maturity—the carbonaceous matter (forming over four-fifths of the clover) is of little manurial value, and at the same time has a tendency to retard the ripening processes.

In order to enrich the land, therefore, and at the same time increase rather than retard the early maturity of the crop, we would recommend to grow as much or more clover than at present, and instead of plowing it under to convert the organized carbonaceous matter into beef, mutton, cheese, butter, wool, &c., and to return the ammonia to the soil in the form of manure.

We cannot bring ourselves to believe for a moment that we shall have to give up wheat culture in Western New York. It is true that in the Eastern States, and in the eastern counties of this State, wheat culture has been to a great extent abandoned. The soil there is not and never was a good, natural wheat

soil, and the farmers have found it cheaper to cultivate other crops than attempt to compete with western growers in the production of wheat. The ravages of the Hessian fly, it is true, and the impoverishment (not *exhaustion*) of the soil have also helped to bring about this result, but the case is different with us. Our soil and climate are exceedingly favorable for the production of wheat. There is no *better* wheat soil in the world, and but very little in this or any other country that is as good. In fact the soil which is naturally adapted to wheat is comparatively limited on this continent. This fact is an additional reason why the farmers of Western New York should not abandon wheat culture without an earnest effort to discover some method of counteracting or at least mitigating the ravages of the midge. If the "Genesee country" will not produce wheat, where shall we look for the "staff of life?"

While nearly all the soil of Western New York is well adapted to wheat culture, there are on every farm some fields that are more suitable for wheat than others. We must confine the cultivation of wheat to such land. Let the portion of the farm less favorable to wheat be cultivated with those crops which, when consumed on the farm, furnish the most valuable manure. Let this be used to enrich the soil for wheat. (How this can best be done we leave for future consideration.) In short, sow early varieties of wheat on the best portions of the farm, underdrain, adopt a judicious system of manuring, and our word for it, wheat culture will not have to be abandoned in Western New York.

ITEMS SUGGESTED BY THE JANUARY NUMBER.

CHRISTMAS day brought me the *Farmer* for January, so I had a foretaste of the New Year, and some thing to set me to thinking on my favorite topics—practical and scientific agriculture. The volume opens with an excellent editorial on

BARN-YARD MANURE.—An examination, to a considerable extent, of what is known—practical and scientific—on this subject, has led me to the conclusion that the dung of animals possesses its greatest manurial value when *green*, or before decomposition takes place. If the straw and corn stalks fed out and used as litter, were first passed through a cutter, the manure would be perfectly fitted at once for plowing under the soil—so far as its capacity to increase the elements of fertility therein is concerned. As we cannot, however, apply winter-made manure immediately, and as the coarse straw, &c., usually mixed with it renders its handling and covering very inconvenient, we must study the best means to prevent loss, and to fit it for use when the season for its application arrives. Your system is worthy of the adoption of farmers, and it is one which I attempt to carry out as far as my circumstances and farm buildings will allow. Such a wheel-barrow as you describe is in frequent use for mixing manures—for placing as great a portion as is convenient under the sheds which shelter the stock.

PROFITS OF SHEEP.—Taking the estimate of Mr. GORE, in the adjoining column, of the expense of keeping sheep, the profit of Mr. SMITH'S flock is about \$40. The rise in the market price of sheep has much more to do with it than anything made from wool growing; though the latter seems coming up into the neighborhood of other farm products. It may well do so.

RATS AND MICE.—We have heard it remarked that these "pests of the farm" were generally more abundant after a snowy and steady winter, like the last, and disappeared as rapidly as they came. We are glad to see this confirmed by Mr. BARTLETT'S experience.

SHADE AS A MANURE.—Your Cheviot correspondent brings forward a fact in regard to mulching potatoes, and the after wheat crop, which would be taken as a confirmation of the value of shade as a manure. It is a fact that covering the ground closely causes a change in its character and some experiments show that it is produced by the rising of mineral matters of a fertilizing nature from the subsoil. When moisture comes up by capillary attraction to the surface from any cause, it generally brings with it something beneficial to the soil.

FALL AND SPRING PLOWING.—It seems to me that the *manner* of plowing had more to do with the result than the *time*, in the case stated by your correspondent, S. W. The depth of the soil prevented the full effect of the drouth, and had ALLERMAN'S field been plowed deeper, and with narrower furrows, the sward would have rotted more rapidly. Still, fall plowing had some effect, and I am glad to see that WRIGHT proposes to apply another test to the question.

BEETS FOR MILCH COWS.—Though my crop of sugar beets, this year, is hardly worth what it cost me, yet I find them of high value for milch cows. That they are worth more for milk than potatoes, I have little doubt, for the increase in milk from feeding raw potatoes, seems always at the expense of its quality. S. W. says that "experiment proves that in their raw state, beets develop in the process of digestion, their full nutritive value." I cut mine, add warm water and salt, and mix in buckwheat bran, giving about six quarts a day to one of my milch cows. The result is very satisfactory, though an aunt of mine, a notable butter maker, used to say that one beet, *boiled*, would make as much milk as three fed raw.

BEANS FOR STOCK.—In your remarks upon beans as a fallow crop, you say that to obtain the full benefit of it, they should be fed out on the farm. In this country very little use is made of beans for stock—indeed, I do not know that anything except sheep will eat them raw. I am feeding bean straw to my sheep—they eat it very readily; and in the fall, when boiling apples, potatoes, &c., for my hogs, I put in a quantity of refuse beans—the screenings, of the crop—which were not refused by these animals. Would it be profitable to feed beans to sheep at \$1.25 per bushel, the present market price?

SPRING-HALT IN HORSES.—This disease, about which J. K. inquires, is little understood by farriers, but is supposed to be a partial paralysis of the nerves leading from the limb to the brain, which is the cause of the peculiar involuntary motion observed. The following remedy is simple, and has been used with success: Rub neat's-foot oil over the cord on the inside of the gambrel, making frequent and thorough applications. In warm weather it is said that it will generally effect a cure, and at any time afford great relief.

PATENT OFFICE REPORT FOR 1855.—There is a steady improvement in the arrangement and getting up of this document, and the volume for 1855, sent us by Hon. H. FISH, is the best yet issued. BROWN is doing a good work in the Agricultural Bureau, as men who are interested in their labor always can and will. B.—Niagara Co., N. Y.

THE NUMBER OF POUNDS IN A BUSHEL.

The following Table of Weights, obtained by a firm in this city from the Secretaries of the different States, showing the number of pounds which their

laws recognise as a bushel of the following articles, will be of value for reference.

All States not included in the table, as well as the blanks, are regulated by the United States standard :

STATES.	Wheat.		Rye.		Corn.		Oats.		Barley.		Buckwheat.		Clover Seed.		Timothy Seed.		Flax Seed.		Hemp Seed.		Blue Grass Seed.		Dried Apples.		Dried Peaches.		Dried Plums.		Coarse Salt.		Fine Salt.		Potatoes.		Peas.		Beans.		Castor Beans.		Onions.		Corn Meal.		Mineral Coal.					
	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	LBS.						
NEW YORK,	60	56	56	32	43	48	60	45	56	44	15	22	22	25	56	56	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60				
OHIO,	60	56	56	32	43	48	60	45	56	44	15	22	22	25	56	56	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60			
PENNSYLVANIA,	60	56	56	32	43	48	60	45	56	44	15	22	22	25	56	56	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60		
INDIANA,	60	56	56	32	43	48	60	45	56	44	15	22	22	25	56	56	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	
WISCONSIN,	60	56	56	32	43	48	60	45	56	44	15	22	22	25	56	56	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	
IOWA,	60	56	56	32	43	48	60	45	56	44	15	22	22	25	56	56	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	
ILLINOIS,	60	54	56	32	44	49	60	45	56	44	14	24	23	50	50	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	
MICHIGAN,	60	56	56	32	46	42	60	45	56	44	14	24	23	50	50	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
CONNECTICUT,	56	56	56	28	45	45	60	45	56	44	14	24	23	50	50	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	
MASSACHUSETTS,	60	56	56	30	46	46	60	45	56	44	14	24	23	50	50	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
RHODE ISLAND,	60	56	56	33	48	52	60	45	56	44	14	24	23	50	50	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
KENTUCKY,	60	56	56	30	48	50	64	45	55	44	14	24	23	50	50	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
NEW JERSEY,	60	56	56	32	46	46	60	45	56	44	14	24	23	50	50	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
VERMONT,	60	56	56	32	46	46	60	45	56	44	14	24	23	50	50	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
MISSOURI,	60	56	52	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m		
CANADA, (Custom),	60	56	56	34	48	48	60	48	56	44	14	22	22	56	56	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	

FEED FOR POULTRY.

Neither fowls, nor anything else, can prosper unless well cared for. No observant person could have the charge of fowls for a month, and not be fully aware, at the expiration of that period, that the growth of the chicken, the accumulation of flesh, and the production of eggs may be best promoted by a judicious adaptation of the food to the object specially in view. That without good shelter for our birds, the consumption of food is also increased in proportion to the carbon thus exhausted, will be soon manifested to the dullest intellect.

Grain of different kinds forming the main article of our poultry's feed, at the present high prices would seem to indicate increased inquiry as to the relative value of each for that purpose.

In estimating the comparative value of the numerous items which are more or less a portion of our fowls' "bill of fare," let us take Indian corn as our standard. Now the present price of this grain is 87½ cents; barley \$1 25; buckwheat 80 cents, and oats 60 cents per bushel. Oats at this price, (30 lbs. to the bushel,) we would not recommend, excepting where some change of diet appears necessary; but while the relative prices of corn stand as above, we should not be found among the purchasers of oats, to be given whole, however useful in the form of meal, or crushed.

The existence of fowls would be of short duration were they confined, or limited to one single kind of food, however excellent of its kind; this would necessarily imply a state of confinement for the experiment, for a large variety would always be at hand. Many articles most useful for a change would, if given continuously, prove highly injurious, such as wheat, pea-meal, or animal food; while others, such as barley and crushed oats, harmless in themselves, would either be refused, or else, if taken, disorder the natural functions of the body.

But though wheat is a dearer article than barley it is most useful at certain periods; for nothing ex-

ceeds it for laying on flesh, and forming muscle for young birds.

Barley sprouted, and malt mixed, could, occasionally, be given with excellent effect; and it is excellent for poultry of all ages—and so is brewers grains, if given fresh and hot. Buckwheat must be of the very best, for samples any way stale, will be rejected; indeed, we have found our poultry dainty about it even when accustomed to it when young; but many breeders find it otherwise, and use large quantities of this grain, which, when boiled, appears to be more highly esteemed.

Indian corn, whole or cracked, the latter probably is most profitable shape, we consider the most economical, and most highly esteemed.

Whenever flesh is to form a portion of the food of our poultry, we should prefer giving it boiled, and not in a raw state.

Poultry eat a great variety of food: all kinds of grain, and seeds, and preparations made from them; also, most sorts of vegetables, raw or boiled; and, it is well-known, they are fond of a certain quantity of animal food, raw or cooked—insects and worms, grubs and maggots, they search for and devour with avidity, and some persons collect these on purpose for them. Wheat middlings, shorts, bran, corn and oat meal are useful, and are profitably given in combinations, particularly with boiled or steamed potatoes, in which form they afford a cheap supply of very nourishing food; but it is essential not only that these should be boiled or steamed, but that they are given warm, for fowls dislike them if given to them cold. In most houses there are many scraps, and refuse, that will serve for fowls, such as crumbs of bread, fragments of pies and puddings, and even bits of meat, and fish, and vegetables, such as lettuce, endive cabbage, spinach, chickweed and grass.

Fowls do not judge so much by taste and smell as by the eye in distinguishing their food, which, when first swallowed, passes into their crops, and after being there macerated, goes into the funnel-stomach, and then into the gizzard, in which it is triturated, or ground, as in a mill, which appears to answer the

same purpose as the teeth of quadrupeds. To assist this effect, fowls pick up and swallow many small pebbles and stones; and it is proper to lay some of these about in the place where they are kept. Pure water only should be given them, for foul or bad water is certain to cause disease.

The faults of modern feeding, are feeding out of vessels of any description,—throwing down large heaps of food,—irregularity,—and too often the substitution of anything cheap, for that which is wholesome.

Fowls are early risers. In a state of nature, all birds, at break of day are in search of food, and they find it. What an evil it is, then, for them to be fed one day at seven, next day at nine, and sometimes not till mid-day. A still greater evil is, to endeavor to make up for previous neglect by an extra quantity. If whole grain is fed, it is better to throw it far and wide, and scatter it as much as possible—among straw or grass, spread over the ground, making them work for a living, and you will see the fowls scatter about in a natural way, seeking the stray grains, and there will none be lost. It will cost no more than feeding in troughs, and the condition of the fowls will amply compensate for the little extra trouble.

BEMENT.

PLOWING LAND FOR CORN.

MESSEURS. EDITORS.—Would you please tell S. W. to tell his friend Mr. JOSEPH WRIGHT not to plow his sod land too deep in the Spring for corn. I never got a good crop of corn when I turned up subsoil. His distillery manure was put on far too late. Had it been put on the sod about the 1st of October, it would have told with good effect. He had better, now wait until the land is plowed, and then mix the manure with the soil by the harrow. Sod rots much sooner when the furrows are not laid flat,—it is bad policy to lay furrows flat for any crop.

You know I advocate rest for land. I will tell you how I have managed a 17 acre field, to which I never applied manure, except salt and plaster, and I do not know that they can be called manure. I have taken a crop of wheat from the 17 acres, every third or fourth year; seeded with clover and timothy, and pastured it with either sheep or cattle. The intervening years under this treatment the crops of both grass and wheat have been improving. I plaster it every seventh year and some years sow a barrel of salt to the acre on the wheat. It is wonderful the amount of pasture it affords. I have sometimes fattened 17 large three and four year old steers thoroughly fat, and those wintered with hay only; and some years I have known it make 120 wethers very fat. It would not have fattened half the stock at one time.

My last crop of wheat on this field was 31 bushels to the acre, notwithstanding the weevil. Considerably more than half the field was more or less injured by water, according to the season. It is thoroughly drained now, and sown with wheat. If you will visit me before harvest, I believe you will see a great crop of wheat. It is on the extreme east of my farm, and the highway passing along side, so that all who go along the road can see for themselves. I never had a failing crop on underdrained land, and I have no fear of this unless too heavy straw. JOHN JOHNSTON.

Near Geneva, N. Y., Dec. 14, 1856.

A MARSH AND ITS PRODUCTS.

EDS. FARMER:—About one-half of my farm was originally a marsh, its product dwarf bushes and cranberry vines in the centre, and a border of alder, willow, and poplar, next the highland. The muck covering it varied in depth from a few inches to several feet—the subsoil in most cases is a tenacious clay, though there are spots underlaid with light-colored sand, full of small sized cobble-stones. It was nearly cleared and partially drained when it came into my possession, but required still more labor to fit it for profitable tillage.

Some attempts were made at draining and clearing portions of this marsh, nearly forty years ago, by one who still owns the largest share of it, but the want of descent and depth of outlet for ditches, hindered its full success. When the drains were first cut, they carried off the surface water, and fine crops of oats and hay were grown in favorable seasons. But the surface seemed to settle year by year, and the ditches soon became clogged, and the water remained on late in the spring, which killed out the cultivated grass, so that the meadows proved of little value after three or four years' cropping. Favorable results, however, always followed the clearing and deepening of the ditches, and the plowing and re-seeding of the grass lands, but it was not until nearly twenty years ago that any part of the marsh was brought into cultivation.

The season to which I refer was a very dry one—there was no water on any part of the marsh—and, late in summer, a fire caught there, burning over a great portion of the same; taking out bogs, bushes, and muck from ten to fifteen inches in depth, and leaving the brush, well seasoned, resting on a bed of ashes from four to six inches in thickness. Living near by, many an evening did I spend with "the boys," raking these bushes into heaps and burning them, with the logs which had lain in the muck, roasting green corn by way of interlude. In course of the fall, some thirty or forty acres were cleared, and all that part I now own was thus burned over.—During the winter it filled up with water and formed a grand skating pond, attracting from miles around those fond of that exciting exercise. In the spring, we found the ashes well leached, as the stream into which the water drained showed for miles, and, as I then thought and think still, to the great loss of the land and its owner. Better far had the ashes been gathered and applied to the adjacent upland.

When the marsh became sufficiently dry (the ditches had been cleared and deepened but a year or two before) the land was plowed and sown to oats, barley, and some portion planted to potatoes. All gave a bountiful yield, though I noticed that the straw became more and more liable to fall or lodge, and the grain lighter at each successive crop. Grass succeeded well, but corn and wheat gave no product worth mention. But I shall make far too long a story if I dwell on this past history.

My first seeding was to oats, but the wet summer of 1855 drowned out the greater share, so I did not get enough to replace the seed. Oats were again sown the next year, and the drouth burned them up, or, at least presented any decent growth, so that I was facetiously advised to *pull* them by a neighbor. The ditches had become filled up, and the water hindered plowing and sowing until very late, and the

oats had scarcely got rooted when hot, dry weather came, which they were unable to contend with successfully.

Next season I hope for better results. I have expended much more in enlarging the ditches and deepening the outlet, (in company with those owning the remainder of the marsh,) than I have yet made from my little farm, and last fall I had the marsh plowed into narrow lands, and the furrows nicely opened into the main ditch, so that the water can pass off at once in the spring. The land will be fit for early sowing, and I shall again try oats and seed down to grass, hoping for more profitable returns hereafter. I find that some parts of the field, previously fall-plowed, are in better condition, especially where clay was turned up, and think that mixing muck and clay will have a good effect, and make a soil better fitted for our dry summers; while draining will *fix it* for our wet ones.

It is astonishing to see the vigorous growth the mud thrown out of the bottom of the ditch has produced. There must be great virtue in it, and I have no doubt that, if spread over the land, it would produce effects equal to the best manure. This is partly due, I think, to the animal matter it contains, for thousands of small fishes perished therein, as the water dried away, and there were also a great many little shells and water insects.

The higher portion of this marsh has lain for several years in meadow and pasture. I plowed it up last fall, and intend to plant some portion to corn and sow the remainder to oats and barley. I would like to underdrain this part, but must get some profit from it before I go to that expense—though if I had the money to do it at once, I am quite confident that it would be the most direct route to the *farming that pays*. B. F.—*Jan.* 1857.

CULTIVATION OF POTATOES.

THE Potato has long held a very prominent place among the necessities of man as an article of food, but being easily cultivated, and yielding a large return, with slight care or labor, there seems to have arisen among our farmers a most culpable negligence in raising and propagating so useful a vegetable; most farmers seem to think that it is sufficient to plow the ground, put in any kind of seed, run a plow between the rows once or twice in the season, and let them take their chance. If it should be a good season, and they happen to have the right kind of seed, they have a good crop; but the contrary *circumstances*, and their potatoes are not worth digging. Now if a farmer would be a farmer, it should be his aim to put in his crops in such a way that he may have at least a remunerative return, even in a bad season.—For instance, in this part of Illinois, this past season, most farmers have but few potatoes, and those very "small potatoes," on account of an extremely dry summer, while two or three, profiting by past experience, had large and profitable crops. Their process was this: They laid their seed on the top of the ground in rows two feet apart, and covered the ground all over with straw six inches deep, in which the potatoes grew without any further trouble; for while the potato vine was stout enough to force its way through the straw, weeds had to hide their diminished heads, as the straw was too much for them. But this would only answer for very dry seasons; and if these gentlemen repeat the process in a very *wet* summer,

they will find the boot on the other leg; for the straw will hold so much water that if the potatoes are not entirely rotted, they will be found to be only fit for cattle and hogs; but that can be easily remedied.—The plan I shall adopt will be this: Put down three rows of seed two feet apart in beds six feet wide, leaving one foot wide outside of the outer row on each side, and dig a trench two feet wide and nearly as deep between the beds, throwing the beds, just barely covering the seeds; then put on straw five or six inches deep. If it should be dry weather, the straw performs its office by retaining moisture; if an extremely wet season, the surplus water drains off into the trenches.

A very important object in planting potatoes is to have sound seed, of a good variety. All who have planted the same kind of potato a number of years on the same farm, know that the potato will run out or get watery and hollow in the heart, and the evil increases every year whatever the season may be. Such potatoes can be restored to their former soundness, with the loss of only one season, in the following manner: Save back two or three bushels of potatoes for six or seven weeks after the usual time of planting, say until the last of June; then plant them in the usual manner. They will not be ready to dig till a frost has wilted the vines. On digging them then, they will be found to be quite small; save them carefully till spring, and plant them at the usual planting time, and if the season is favorable, they will produce large potatoes and as sound as ever that variety was originally. CHARLES SEAGAR.—*Waverly, Morgan Co., Ill.*

POTATOES ON CLOVER SOD.

"No plant enriches the soil so much for potatoes as red clover. But a tough clover sod, turned over immediately before planting, prevents, more or less, that thorough after-working of the soil, with the horse and hand hoe, which is essential to the production of a good crop. How can we get the enriching advantages of the clover sod without this drawback?—*Eds. Genesee Farmer, March, 1856.*

THAT clover sod prepares the land well—in fact first-rate—for potatoes, I know from experience. But that there is any material difficulty in proper after-cultivation, I have never found, though I know it is not quite as easy hoeing as in a mellow soil. Let me give you my method of growing potatoes—one I have practiced for many years.

The same soil and preparation which will produce good corn, with me, brings a good crop of potatoes, and very generally the soil is fitted for both at one operation. I take a good clover sod, on a loamy soil, and apply from twenty to thirty loads of barnyard manure—leaving it in heaps as drawn out, and spreading it immediately before plowing. Plow it but a few days before planting, from six to nine inches deep, taking care to make no balks, and to turn under the manure as perfectly as possible. I then harrow thoroughly, lengthwise the furrow, then, perhaps, across, so as to get the surface in as fine tilth as may be. But very few sods are torn up, and the *tougher* they are, the better in my estimation.

The ground is then marked out and the potatoes planted—in hills, so as to give chance for cultivating both ways. I have never tried rows or drills, and think it would require more labor. To get the most

potatoes put in half a dozen eyes to the hill, or one whole potato, but to get nice, large ones, do not put in more than three eyes in any instance.

The culture is simply passing through them twice each way with the horse hoe and filling with the hand implement. If I expect to hoe twice, I make small hills at first, and finish them up on the second hoeing. I think it would be a capital plan to harrow the whole surface as soon as the plants appear, with a light harrow, but have not yet tried it. I generally find it pretty mellow hoeing, am very little troubled by sods, if the plowing was done properly, and generally keep a clean surface without extra labor.

After hilling, I find it a good plan to top dress each hill with a spoonful of plaster. Have never been troubled with the disease, more than those who plant without fresh manure, and in all cases have as good crops as are produced in the neighborhood by any course of treatment. P. B.—Niagara Co., N. Y.

CULTIVATION OF POTATOES WITHOUT THE USE OF THE HAND HOE.—MESSRS. EDs:—In the summer of 1855 I hit upon a plan of cultivating potatoes with as little labor as any I have seen recommended. The ground (the sward having been turned, manured and planted with corn the year before) should be plowed as soon as it is dry enough in the spring, and if time permits allow the weed seeds near the surface to germinate. Then give it a thorough plowing again, mark it with a plow three feet apart each way; drop one medium sized potato in each cross, covering with light mould about two inches deep, the seed having been selected carefully, using nothing smaller than a hen's egg, and if twice as large, split in two, none the worse; neither should they be planted until the ground is dry, if it is in May.

When they get out of the ground about four or six inches, take one horse, and a half mould board plow, go through them both ways, plowing two furrows in a row as close to the hill as practicable, turning the furrows from it, and be not afraid to let the plow run in, as now is the time to protect the crop from the effects of drought. At intervals of about one week, stir the ground three times with a small plow, turning the dirt towards the hills, kicking the dirt off with the foot where it pushes the tops over too much.—The ground by this time is thoroughly pulverized, and there will be no weeds except, perhaps, a few in the hill which are speedily removed by hand, taking two rows at a time. FROM A YOUNG FARMER WHO PREFERS DIGGING POTATOES TO PULLING WEEDS IN AUTUMN.—Yorktown, West. Co., N. Y.

WINTERING CALVES.

MESSRS. EDITORS:—As I was attending to my four calves, the other day, a looker-on said to me, "Why take so much pains to stable your calves—many people let them take their chance with the other stock through the winter." A mighty *poor chance*, I tho't it would be; for a farmer who would do that, would not take much pains for the comfort and thrift of any of his cattle.

There is "a more excellent way,"—one more satisfactory to the "merciful man," and in the result which follows. Calves "that take their chance," are the same breed which furnish crows with bait and the tanners with hides in spring time. If they live it takes all summer for them to get ready to grow again

—if *tough* enough, they will stand another winter and fill the ranks of the bony cows and unruly steers, which are the pests of our highways. My calves don't need *lifting* to get them up,—open the door and they are ready to run and jump, and all sorts of "cow-capers."

I'll tell you how I keep them—and it is at a small expense, too. They have a stable partitioned off in one of the sheds, 14 feet square, with rack and manger in one corner. Their apartment is close, except an open window on the east side, to let in light and air, and so sheltered that the wind does not blow in on that side three times through the winter. I feed them good hay twice a day, oat straw and chaff once, and water them daily. It would be better if they could have running water close at hand to drink at will, but this winter water is a scarce article; our well is dry, and the pond frozen nearly to the bottom.—Their stable is kept well littered and level, but at one time, the weather being pretty warm it got rather soft, so I changed them into another shed until this got frozen dry again. Their coats are smooth and sleek, and have a very different appearance from that presented late in the fall, when kept out of doors, before I got the stable ready for them.

There will be a lot of first-rate manure in that stable in the spring: former trials have convinced me that one load of it is worth three of common yard manure, and it is worth while to get as much good manure as you can—it tells on the yield amazingly—and, do you know,—all you increase the product above a certain point (the cost of production) is *clear profit*. Then, brother farmer, give your calves a chance, don't wait for them to *take* it—you will find it to pay in more ways than you think of. FARMER B.,—Jan. 13, 1857.

AGRICULTURAL READING.

EDITORS GENESSEE FARMER.—Having spent considerable time in getting subscribers for an agricultural journal in this neighborhood. I have observed that those who have taken an agricultural paper this year have never refused to subscribe for the ensuing year. But where the land looks poor I always think that no agricultural paper ever enters the owners house, and that he reads little, if any, but is willing to do as his fathers did before him. I will give an incident of my experience with one of that class. In going my rounds, I approached the homestead of Mr. —, and after the compliments of the day were over I drew from my overcoat pocket a specimen copy of an agricultural journal with the request that he would subscribe for it, after looking it over for awhile he handed it back saying "he guessed he wouldn't take it, for he did not believe it would be any use to him, for all they, (the papers,) talked about is to drain, lime and manure your land, and I know that already." His last wheat crop belied his knowledge of agricultural science, for his land yielded at the rate of ten bushels per acre, while his more intelligent neighbor obtained twenty bushels per acre. Farmers must study if they wish to raise remunerating crops. But "just as the twig is bent, the tree 's inclined:" so begin young.

The importance of good reading for farmers' sons and daughters, is not appreciated as it should be.—Home must be made attractive if you wish to see your sons and daughters grow up intelligent men and

women. And how can it be done better than by furnishing good books; not works of fiction which poison the mind, and leave it in a worse condition than it was before, but works which contain good, substantial reading, that inform and invigorate the mind. I have often thought that it would be a good idea for farmers to expend the money they receive at the autumnal fairs for premiums, in books and papers adapted to their business, and let their families have free access to them, for the more they read the better will they be fitted to follow what WASHINGTON calls "the most healthy and honorable, as it is the most natural and useful pursuit of man." D. KNOX.

WINTER BARLEY

EDS. FARMER:—Some inquiry has been made in regard to the cultivation of Winter Barley, but as yet we hear no reply. It is well known that in the milder districts of Europe, and even in the south of England, some varieties of barley are sown in the fall. WATSON'S *Practical Husbandry* says, "this tillage may be pursued in any country which is not exposed to severe changes of freezing and thawing, which produces heaving of the land; or, when the earth remains covered by snow during the winter."—

This would indicate that it is peculiarly subject to *winter-kill*, and that the soil for it should be a well-drained one. The winter barley is beginning to be cultivated in Western New York, but as yet little is known of its adaptation to this region.

In southern Indiana this crop is one of the most profitable. It is sown the last of August or early in September among the standing corn, (so stated by a writer in the Patent Office Report) from one to one and a half bushels per acre, and covered with a light plow or cultivator. Some farmers, when the corn will admit, plow it in one way and cross with the cultivator. The yield is from 40 to 50 bushels per acre. It ripens the last of June, and is used for feeding horses, coarsely ground and mixed with oat barley straw; or fed to fattening hogs, cooked or fermented. The barley fields are used as pastures for colts and calves during the winter, and afford a good supply of excellent fodder.

Some winter barley was sown last fall in this neighborhood; I shall be able to give you some experience in season for next autumn's sowing.—B. S. F.

AGRICULTURAL PAPERS, AND THE DUTY OF FARMERS TO WRITE FOR THEM.

AGRICULTURAL SCIENCE is still in its infancy. "Darkness as darkness itself," hangs over the pathway of him who attempts to explore its fields. In its present stage of development, some of its most important truths are incapable of demonstration. What one approves both in theory and practice, another condemns. Philosophical deductions and practical experience are arrayed against each other. And yet its principles are as fixed in their operation as are the principles of any science; and when they shall have received the careful and philosophical attention which the coming years are destined to bring them, they will be found as demonstrable as are the truths of mathematics.

In attaining so desirable and important a result, we must rely in no small degree upon agricultural papers. It is their peculiar province to awaken in-

quiry, direct it in proper channels, and stimulate the energies of the laboring masses. That they have accomplished very much in this respect during the last decade, cannot be denied. We are indebted to them to a great extent for the increased attention which has of late been given to agricultural science. But broader and richer fields, sparkling with rarest gems, are opening before them; all the sciences are coming to their aid in clearing away the mists that have so long enveloped the great truths of Agriculture; educated intellect is anxious to pay its *devoirs* to those truths; the best disciplined minds of the age are reckoned in the lists of practical Agriculturists. But whatever offerings science may bring, whatever discoveries she may make, actual experience must attend her *pari passu*.

Upon farmers, therefore, devolves a sort of moral obligation to give to the world, through the medium of agricultural papers, the results of their experience. And, dear farmer, when you experiment let me persuade you to do it with the *utmost care* and *exactness*—thus the *reflex* influence of your experiments will be no small part of the benefit resulting therefrom. When we can bring to bear upon the disputed points of Agricultural science the careful experience of thousands of practical men, we shall have done much towards their settlement, and therefore, much for the benefit of the world. No subject offers a richer reward to patient investigation. SENIOR.

EXPERIMENTS WITH THE CHINESE SUGAR CANE

EDITORS GENESEE FARMER:—On the 5th of May, I planted some seed of the Chinese Sugar Cane, in rows three feet apart. It came up, and I thinned it out to six inches in the row. It grew to the height of eight to ten feet. I fed part of it to my cows and hogs, and they eat it with great avidity. On the 16th of September, I cut 40 stalks, and pressed the juice out by passing them through a pair of tinsmiths' rollers; the produce was seven quarts of juice, which I boiled to one quart of good syrup, or at the rate of 181½ gallons per acre.

I concluded to try it again, in order to determine at what stage of its growth the stalks contain the greatest amount of sugar. On the 23d of October, the seed being fully ripe, and after some light frosts I cut up 60 stalks, stripped off the leaves and pressed the canes as before, but as the rollers are very small, fully ten per cent. of the juice remained in the stalks; I also spilled four or five quarts of the juice. After all mishaps, the result stands thus: weight of 60 canes 102 lbs.; juice 14 quarts; good molasses 5½ pints; dry fodder 4 lbs.; seed 6 quarts. Rate per acre of cane 49,368 lbs.; juice 1,694 gallons; molasses 332 gallons and 3 quarts; dry fodder 1,936 lbs.; seed 90 bushels—good seed weighs 40 lbs. to the bushel.

Farmers keep up your spirits for the sweet times are coming. R. D.—*Deerfield Street, N. Jersey.*

REMARKS.—We are much obliged to our correspondent for the results of his experiments. The Chinese Sugar Cane is attracting considerable attention, and it is desirable to ascertain from careful experiments what are its true merits. There seems to be no doubt that in the Southern States it will prove useful for the production of molasses,—as it has in France for the manufacture of alcohol; but that it will be as useful for this purpose at the North as some

appear to imagine we think inconsistent with the laws of vegetable physiology. However, we hope it will have a fair trial. The experiments detailed above by our correspondent were made on too small a plot of ground, to be perfectly satisfactory. Agricultural journals often contain records of enormous crops obtained in the way adopted by our correspondent in estimating the average production of the Chinese Sugar Cane, but it is well known that no such crops have been, or can be raised, on an acre. We know a gentleman who estimated a crop of potatoes on this principle; he found that he had almost 1,300 bushels per acre, and yet on digging the whole he obtained only 230 bushels per acre. One of our correspondents, some years ago raised an enormous crop of turnips, as follows: "The rows were two feet apart, and the turnips one foot apart in the rows. "This gives," said he, "21,760 turnips on an acre. The turnips weighed 10 lbs. each, which makes about 109 tons per acre." The absurdity of such a method of estimating a crop is apparent to all, and yet whenever a new thing comes up, it is frequently adopted. The last Patent Office Report contains an account of an enormous yield of green corn estimated from the weight of two or three of the hills. The product of Dwarf Pear trees is sometimes estimated in the same way, and the enthusiastic cultivator being "afraid to look the figures in the face," reduces them one-half, to meet all contingencies, and then finds that the trees will yield over a thousand dollars per acre annually.—Eds.

DOCKING HORSES A BARBAROUS PRACTICE.

MESSRS. EDITORS:—I was considerably amused, and not a little gratified, to see the "Petition of the Horses," in the November number of the *Farmer*. The evils against horse flesh that are there enumerated are sufficiently plentiful, one would think, to complete the whole category. But there is one ill which horse flesh is heir to, that has not been mentioned; I mean cutting off the tails of horses. Whoever first introduced this barbarous practice deserves to have a monument of braided horse tails erected to his memory, and a leather medal struck off for every one of his numerous imitators. I have heard it said that the more ridiculous a custom was, the more followers it would find; and in this instance have come to the conclusion that it is about so. Few, now-a-days, especially those who are good judges of horses, like to see a *bob-tailed horse*; yet, there are those who pretend to be great horse fanciers, (and I am sorry to say they are by far the greater portion of the community,) who seem to think that a horse is not thoroughly "got up," until his tail is off.

Sometime ago I was with an acquaintance of mine, when a friend from the country drove up to the side of the road with a young horse, which had evidently seen but little service. The animal was a bright bay and had a long tail and mane, and to my mind was about as fine a looking horse as I had seen for many a day. Ah! observed my acquaintance, who was one of the "fast" horse fanciers, what a pity that animal has not his tail cut off; what a remarkably fine horse he would be.

This, I regret to say, appears to be the opinion of nine tenths of the owners of horse flesh,—and as a matter of course, the tails are taken off. But, aside

from the looks, is it right to cut off the tails of horses? I say, emphatically, *no!* In the first place, they would never have been put there if they were useless appendages, and who that has the least spark of humanity in his composition, when he sees a horse worried by gnats and flies until he is almost frantic, does not inwardly curse the man who first brought into practice this barbarous fashion? But there is one more argument, and not the least important, against this practice. Cutting off the tails of horses weakens their strength. This is a well known fact, and for this reason, if for no other, the custom should be stopped.

Sometime ago, I read an account of an English gentleman who had a splendid hunter, "Which," the gentleman remarks, "could carry me with ease over a five barred gate." The horse not carrying his tail to suit his owner, he had it taken off, and the consequence was, that it utterly ruined him so far as hunting was concerned; for he could never after leap the smallest fence.

About fifty years ago, it was customary in England to cut off the horses' tails to within two or three inches of the roots; but in our time no one would argue in favor of such *close docking*—This perhaps is owing to our advance in humanity; and who knows but that some genius may yet astound the world by a learned and scientific treatise on the progress of civilization as illustrated by the comparative length of horses' tails. Let us hope, however, that we, as a liberal and enlightened nation, casting aside all "old fogy" notions, will at once cease, and by our example decry, such a useless and cruel custom, and that the time is not many years distant, when a "bob tailed horse" will be as great a novelty as a long tailed one is at present. F. A. G.—Rochester, Dec 18, '56.

ON RAISING ONIONS.

Large, and superior, onions may be raised by the following process. Let the farmer take his corn cobs after the threshing, and throw them into some bye corner, to rot. After they have become thoroughly rotted, haul them on to the place designed for onions, and let them be thoroughly mixed with the soil. Or they may be thrown into a cauldron and burned, and the ashes scattered on as aforesaid. Then take and mark rows eighteen inches apart, running north and south, to admit the sun, and the free use of the hoe. Papers of seed purchased at the store, labelled large red onions, are the right kind to sow. The seed should be buried one-half or three-fourths of an inch deep, and the soil be well pressed down upon them. The best time to sow is from the 15th to the 30th of April. A top dressing of ashes after the seed has come up, is of especial benefit. The soil may afterwards be kept rich by applications of composition from the stable, henroost, hog pens, &c.

The writer, by this process, has raised onions weighing from 16 to 18 ounces, for the two last years, and received premiums at our Town Fairs therefore; and, I might add, they were far superior in size to any that were shown, and excited the admiration of the spectators. R. FRANCIS, *Virgil, N. Y.*

Would not, the crop of onions be just as good without the corn cobs or the ashes of corn cobs?—Eds.

ANOTHER "CHAPTER FROM EXPERIENCE"

EDS. GENESEE FARMER:—In the December number you published my account of "Two Crops and how they Paid," one of them a barley crop. I then stated that other fields had done far better, and others still, far worse. As a specimen of the former, I send you a statement of the culture and product of five acres of barley, sown like the other, after corn, but *earlier*, and on land in better heart. The previous crop of corn reached fifty bushels per acre, and was planted after an application of seventy-five loads of barn-yard manure. For barley, we finished plowing the 29th of April, sowing and harrowing in on the 30th. Harvested the middle of July—the product twenty bushels per acre. The account stands as follows:

Dr. Plowing and harrowing, \$2 per day,.....	\$8.00	
Seed, 12½ bushels, \$1.25,.....	15.63	
Sowing and harrowing in,.....	4.37	
Harvesting,.....	9.00	
Threshing and marketing,.....	7.00	
Interest on land, \$50 per acre,.....	17.50	\$61.00
Cr. 100 bushels of barley, sold at \$1.25,.....	\$125.00	
Profit of the crop,.....	\$54.00	

This crop of barley, instead of costing \$1.60 per bushel, cost only 61 cents. It was sold at \$1.25, the last of August; the other crop is still on hand, and is estimated in the statement at \$1.13 per bushel. The seed sown cost one shilling per bushel more than this—having been secured later in the season. One material reason why the product of the crop formerly reported was less, was its ten days later sowing, leaving it exposed to greater injury from the drouth—another was the less favorable soil, both in character and fertility. Here the stronger soil prevented the effects of dry weather in a considerable degree—combined with the greater strength of the plant from earlier sowing.

Barley is now our most profitable crop, and farmers who have land suited to its production will do well to engage in its culture. Give it early sowing, a rich sandy loam, and thorough preparation, and in favorable seasons it will pay 200 per cent profit. I have known several crops to do better than that, in this neighborhood. Sown late, on a poor soil, it yields poorly, and should the season prove unfavorable, entails loss upon the farmer. Of its effect upon the character and productiveness of your farms we have yet to learn; I think, however, in a judicious rotation, it will do them no injury. Succeeding best after well manured corn, it will incite farmers to better care of that crop, to the increase of manure by means of stock feeding, and the gathering of neglected fertilizers.

A YOUNG FARMER.

PRODUCTIVENESS OF HEADLANDS.

MESSRS. EDITORS:—"The best swath is always next the fence," said an old man some ten years ago, about the time I commenced farming for myself.—And as I sat reading the remarks of B, Niagara, on "Dead Furrows and Headlands," in the January No. for 1857,—(by the way, a splendid sheet, a whole book of itself, and worth the price of a year's subscription.) I was forcibly struck with the remark, and must state that I have often noticed what "B" speaks of, and as often noticed a still greater difference where the headlands were left loose and mellow. I must, therefore, attribute it to some other cause than

tramping,—else why not tramp the whole field? I admit, that some kinds of grain need a more compact soil than others.

As there is a perceptible difference in the grain grown, on the headlands, and other parts of the field, it becomes us as farmers to know why this difference exists.

The reason I shall attempt to give, may be entirely wrong, and if so, I should be pleased if my brother farmers would set me right.

The difference is attributable to the droppings of the farm stock, as they gather near the fence for protection, against the driving storm, or the scorching rays of a noonday-sun; to the decaying fence; to the mice, ground-squirrels, woodchucks, &c., that burrow there, committing deprivations upon the standing grain; to the grass suffered to rot in the corners of the fence; to the leaves of the trees and loose straws that are carried by the wind, and deposited there; to the snow bank that melts away and leaves a rich sediment of pulverized earth; to the rain and to the sun as its rays are reflected from the fence; to the careless farmer who suffers his ground to be heaped in this particular spot, to the detriment of the rest of the field; to the plow boy that invariably stops his team there, for a drink, or to have a chat with the boy in the next field. These and many other things, too numerous to mention, contribute their mite to the enrichment of the headland.—J. C. ADAMS, *Seymour, N. Y.*

DISEASE IN THE FEET OF CATTLE

EDITORS GENESEE FARMER.—Perhaps you are aware there is a complaint among cattle occasionally, in this part of the world, and it may be in many others. I have heard of it in Canada. I do not know the correct name. It is not the hoof ail although it attacks the hind feet of cattle, and, if not arrested, the limb will rot off, up to the second joint of the leg, and the animal must be killed, or it will die—after it has proceeded so far as to be incurable the only way is to knock in the head.

I write this to inform your numerous readers of a cure we have here, although, perhaps, the remedy is generally known. It is to cut off the toes of the hind foot (in which only it appears,) about an inch horizontal, so as to open the foot sufficiently there for the blood to come out; then put the foot in a stocking with plenty of tar at the toe. If taken in time, this will effect a cure. It must be done early, however, when the animal first shows symptoms of the complaint, by a frequent and slight kicking out of the hind foot, as if pricked with something.

I have heard the cause attributed to poisonous hay such as smut. Do you, or any of your correspondents know anything about it? If so, let us have your, or their, experience.

CHILTON FORD.

Morristown, St. Law. Co., N. Y.

THE SHEEP RACK, figured in the November number, pleases me very much on trial. There is *no waste* from their treading the fodder into the mud and snow—they eat all clean before them. I would not be without them for twice their cost. I was told that the sheep would fill their necks with chaff in eating out of a rack—but the small depth of mine prevents this, as they cannot pull out hay without "standing from under" the rack. B. H. J.

CARE OF STOCK IN WINTER.

EDITORS GENESEE FARMER.—What farmer is there who has failed to notice the vast difference between stock, whether cattle, sheep or horses, reared by the industrious and careful farmer, and those of a slack and careless man who takes no pains to make his animals comfortable or provide them with shelter? The stock buyer discovers the difference if the farmer does not, and the no small difference in the price paid for a thin, humpbacked, poor, shivering animal, compared with the sum paid for a robust, lively one, will not fail to convince the owner which is the most profitable. Any farmer having more stock than he can keep comfortably through the winter, and keep them as they should be kept, will, if he has foresight enough, embrace a favorable opportunity, and dispose of his surplus in the fall, which he can usually do to advantage at that season of the year, and be enabled by so doing to feed well what he does keep.

Cattle should have shelter from the cold winds and storms so prevalent in this latitude; such undue exposure engenders disease, and will not fail to terminate in the ruin of a good animal.

Young stock feel the effects of such treatment and it is easily detected in their stunted growth, rough hair, and unhealthy appearance, from the effects of which they seldom, if ever, recover. W. MICH.

CULTIVATION OF BEANS.—“Young Farmer,” in the columns of the *Genesee Farmer*, calls for the experience of agriculturists in bean raising. I give my plan, which is as follows: After having ploughed and harrowed the ground smooth, take a plough and mark light drills, or furrows, two and-a-half or three feet apart; then take Marrowfat beans, which are the best I know for field planting, throw them along in the furrows by hand almost as thick as peas; or at the rate of a bushel, or bushel-and-half, to the acre, remembering to make allowance for the seed worm.—They may be covered with the plough. The best time to plant is from the 25th of May to 15th of June. The Marrowfat is a very early kind; growing and ripening sooner than many other ones. Pull before dead ripe; stack around a pole four or five feet high in single file, roots and tops out, with bits of boards or sticks underneath, to keep them off the ground, with straw on the top. The writer has learned from good authority that a man raised 20 bushels of this kind on one-fourth of an acre.

Beans should be hoed, or cultivated, when dry, as hoeing when wet injures them. If kept clean with the cultivator, hilling them up will be unnecessary.—R. FRANCIS, *Virgil, Cort. Co., N. Y., Dec. 30.*

RACKS FOR FEEDING SHEEP.—For a flock of fifty sheep, build a shed forty feet long, and twenty feet wide; posts fourteen feet long; double roof; inclose it tight, excepting, of course, doors, &c.; divide it by a floor into two stories; the lower for the sheep and racks; the upper for hay; racks of two boards, eight inches apart, all around the shed—on the inside, of course; instead of drawing a rack full of hay, with a flock of sheep in chase, all over the farm; draw your hay on wheels, put it into the shed, in summer; in the winter put it down through the floor into the racks as needed; saving one-fourth of the quantity, and treating your sheep as they deserve to be. D. A. A. N., *Westfield, N. Y.*

HEADROPES FOR CATTLE.—For the benefit and comfort of those who suffer with cold fingers in tying and untying cattle, I would suggest, that they procure a common breast-snap, a strip of leather six inches long, of sufficient width to fit, and a ring for each.—Rings can be obtained from old harness, bridle bits, &c., or from the blacksmiths. Divide the headrope near the head. Slip a ring on the part that goes around the head or horns, and make it fast. Punch or cut a round hole in each end of the strap, no larger than the rope, pass the leather through the snap and bring the ends together; put the rope, (that is fast to the manger,) through the holes in the strap, and tie a knot in the end. Snap it on to the ring that is tied to the head, and the creature is fast. The cost is about 12½ cents a head. They are much more comfortable for the animal than stanchions, as it can back and move forward the length of the rope, can look out for a comfortable place to sleep, and lie down in a position, natural and peculiar to itself. Can be loosened or made fast nearly as quick, and with *mittens on.* J. C. ADAMS, *Seymour, N. Y.*

SEED CORN.—The best method of securing good seed corn, is to select a few stocks from the best part of the field, and husk them about two weeks after cutting, taking care to save the seed ears with a few husks on them, then braid them together in strings of about two dozen ears each, and hang them in a dry cool place, where, if the mice do not molest them, they may hang till Spring, in safety. W. MICH.

SMITHFIELD CLUB CATTLE SHOW.

Our English agricultural exchanges contain full accounts of the Great Smithfield Club Cattle Show. The Club was formed in 1798. The great improvement in the early maturity, and fattening qualities of the British breeds of cattle which has taken place since that time is rightly attributed in a good degree to the inducement of the annual exhibitions of this venerable association. The show of stock at the recent exhibition is said to have been a remarkably “even” one. “There was not,” says the *Mark Lane Express*, a bad beast in the yard. Turn to what class you would, and nearly all were found developing the best points of the breed in the highest degree.”

The first prize of £25, and a Gold Medal, as the best steer or ox, in any of the classes was awarded to a three year old Devon, exhibited by Wm. Heath, of Ludham, also a Silver Medal to the breeder, JOHN PASSMORE, of Bishop's Nympton, South Moulton.

The first prize of £25, and Silver Medal, as breeder, together with the Gold Medal, as the best heifer or cow, in any of the classes, was awarded to a five year old cow, (which had had two calves,) bred and exhibited by Richard Stratton, of Henton.

The former is said to have been a very complete, well formed animal; his breast-end not sufficiently prominent, twist good, but hips too near.

The latter is pronounced by the *Mark Lane Express*, “the most perfect animal in the yard,” beautiful both in color and frame; a deep symmetrical form throughout; head and horns good, with a very handsome countenance; chine and neck both slightly defective, being rather too fine in proportion to her great frame, but in every other respect nearly perfect; stands wide and is noble looking.

The show of sheep was excellent. The first prize

of £20, and Silver Medal, as breeder, together with Gold Medal, for the best pen of long woolled sheep, in any of the classes, was awarded to GEORGE WALMSLEY, of Rudston, Bridlington, York. They were very superior animals, possessing beautiful forms, very full in almost every point, with admirable looks; their rumps rather short, but hips and loins wide, thighs and legs good, chins broad, plaits remarkably heavy, girth great, necks good and full, with very ample chest, and deep through from chine, stand wide and well; large frames on fine legs; wool fine, and well matched; loins not deeply covered.

The first prize of £20, and a Silver Medal, as breeder, and Gold Medal for the best pen of one year old, (under 23 months,) short woolled sheep, was awarded to the Duke of Richmond.

The *Mark Lane Express* remarks: "The pen is a very superior one. The form of the sheep is nearly perfect, but in some respects they have been slightly improved in appearance by judicious management; their frames are deep and well formed, full, and broad throughout, but they are not very large; they denote good condition, and great inclination to fatten; they have full, broad backs, and loins well covered; their rumps are rather short; but have wide hips, and deep, full thighs and flanks, capital plaits, chins and chest; necks full and short—this is a decided improvement in his Grace's flock; their looks are very handsome, wool heavy, and of excellent quality, offal fine. They surpass those of former years, from his Grace's well-known flock.

"The Lord Walsingham takes second prize, and we think for a pen of equally good, and probably more profitable, sheep, being larger in frame; they are exceedingly good, and prove well under careful examination; they are longer in frame than their competitors, stand rather higher, have wider and as good backs, rumps longer and better, and are heavier animals, with equal quality of mutton; their wool is finer, their necks somewhat too long, and rather thin, looks very handsome and good; frames, as a whole, perhaps not compact enough; offal fine."

Nearly all the pigs shown were of the small breeds. The first prize of £10, and a Silver Medal, as breeder, and Gold Medal for the best pen of pigs in any of the classes, above 10 and under 18 months old, was awarded to J. COATE, of Hammoon, for a pen of "Improved Dorset."

The *Mark Lane Express* says, "Mr. Crisp exhibited a very fine sow of the small breed, weighing alive 8 cwt. 2 qrs. 8½ lbs. [848½ lbs.] He was offered, in our hearing, £19 10s. [\$93.50] for her by a butcher."

EXPERIMENTS ON SOWING A MIXTURE OF DIFFERENT VARIETIES OF WHEAT.

The *Journal d'Agriculture Pratique* contains the results of some exceedingly interesting experiments made by M. LUCIEN ROUSSEAU, of Angerville, France, with a view to ascertain which of several good sorts of wheat was best adapted to the soil and climate of his district. Fifteen of the best varieties of wheat were chosen for the experiment—grain tender and light and the straw soft and light colored. It is of little interest to us to know which of these fifteen kinds gave the best results, but one principle of great practical importance was elicited, which is as applicable in this country, as in France. On one plot a

mixture of all the fifteen varieties of wheat was sown, and this plot, produced much the best crop.

The following remarks of M. ROUSSEAU, in relation to this result will be read with interest:

"Now, how came it that mixed wheat was the finest? All the varieties do not ear at the same time; and is not this an advantage to the earing of those kinds which, stifled if they are alone and too thick, cannot get up or consequently ripen? The mere fact that the ears do not appear at once necessarily prolongs the time of flowering, and no doubt increases the chances of good impregnation; for if the first flower which has lost its pollen has not been fertilized, owing to the badness of the weather, it may still be capable of being impregnated by the pollen from a later ear. Another advantage seems to result from this want of simultaneous earing and unequal length of stem in mixed wheat; and that is that the ears being less crowded get more light and air, and their flowers can consequently more easily expand, and are thereby alone rendered more fit for impregnation. This accords with what we find in practice, for wheat which is a little thin is generally better fertilized than that which is too thick.

"This hypothesis of more easy impregnation naturally leads to the supposition of better maturity, and the examples furnished by meslins of wheat and rye, of barley and spring wheat, seem to confirm the notion. We find in these mixtures that each grain is generally much finer than the grain of the same kind of wheat grown unmixed. Is not this owing to the fact that the ears, not being all on one level, are more free, afford more protection to each other, and derive more advantage from light, and so escape that early ripeness which we call scorching? Scorching, which is so common with very full wheat, arises from the formation by the ears of a compact mass not traversable by the sun's rays, which are reflected from the surface, and thus ripen the ear without penetrating to or ripening the root, as is indispensable to perfect cultivation. In mixtures again, may not crosses be obtained, which, under favorable circumstances, may lead to new and valuable varieties?

"In a practical point of view, one of the greatest advantages in sowing mixtures, is the removal of all uncertainty as to the particular kind it will be best to select. For even if in a mixture of 15 sorts, three or four are not adapted to the soil and climate, the spaces which will be left by them will be readily filled by the other sorts, and even if some of these should be bad, coarse, and not fruitful, they will still be useful as a protection to the weaker and later kinds."

THESE experiments are confirmed by results obtained in England, with what is known as the "Fenton White Wheat," a variety originating as follows: About eleven years ago, a plant of wheat bearing three ears on a remarkable stiff and short straw was pulled by Mr. GEORGE HOPE, of Fenton Barns, E. Lothian, Scotland, out of a quarry in his farm, on the debris of which it had accidentally grown. The grains which these ears contained on being sown for a few successive years produced enough to seed a field; and as the wheat retained during that time the characters which distinguished it at first, Mr. HOPE sent it into the market as a new variety, and it is now known in every part of Great Britain. It is characterized by a moderately large ear of even shape on a straw not only remarkably short, but remarkably various in length. The consequence of this latter peculiarity is that its yield of grain generally exceeds the expectation formed of it by those who see it before harvest for the first time. This abundant yield is no doubt the result of the distribution of the ears through

various heights above the land; there is not that crowding of them which there would be if they stood all on one level. And this one sort accordingly exhibits in itself a result which can be obtained in other cases only by mixing two or three sorts together which grow straw of various lengths.

NOTES FOR THE MONTH BY S. W.

THE WEATHER AND FUEL.—December was the coldest and most snowy December we have had since 1825; the mercury fell one night to 6 degrees below zero, which is very unusual in this lake warmed region. Night before last it again fell to zero, and last night, 7th January, it was 8° above; which is very cold winter weather for this region. The outlet is now dammed at the lake by anchor ice, and our mills are short of a full supply of water. But thanks to the antediluvian age of carbonic acid gas, which made both ferns and trees grow, like Jonah's gourd, to form coal for subsequent man, we are now blessed with Pennsylvania anthracite from Ithaca and Elmira, at the cheap price of \$4.50 to \$5.25 the ton, to the evident dismay of the woodseller, who has heretofore had it all his own way. Despite the severe cold weather, our lemon tree is thus early in full bloom, with some incipient fruit, as if to give a beautiful and fragrant acknowledgement to the all quickening anthracite.

SORGHUM SACCHARATUM.—The *Bulletin d'Acclimatation* of Paris, has a notice in its September number of the North China *Sorgho a Sucre*, or Sugar Millet, from the pen of Dr. TURTEL, Secretary of the Agricultural Committee of Toulon; he says that in the vine growing proprietaries in that region, the juice of the Sorgho has been profitably mixed and fermented with the juice of the grape, and without impairing the flavor of the wine produced. He, also, speaks of another species of Sorgho to which LEOPOLD WRAY gives the name of *Sorgho at Imphy*, or Sorghum of the Caffres; it is an earlier variety than the Chinese, and its cereal product is more abundant; hence M. NAYOT who grows it successfully at Martinique, says that the grain is there ground into flour which is more nutritive than rice, and is preferred by the Coolies there to rice, as palatable food; its leaves also make an abundant and excellent forage, and the juice of the canes, the best of rum, (*tafia*.)

FRENCH AGRICULTURAL JOURNALS.—The *Agriculture Pratique*, of the 5th August, contains the following summary articles. The Absorption of Azote, (Ammonia,) by Plants, Editorial. Letter from the Emperor on the late inundations. Cattle market of London. Merino's at the great National Show of 1856. Secretion of Ozone by plants. Experiments on the comparative merit of Beets, for Sugar and Alcohol. Great Agricultural Show at Chelmsford, Eng. Agricultural tour in France in 1854 among the Pyrenees; The Maritime Pine. The bovine race of Brittany and its antecedents. Remarks in the Galine broods at the World's Agricultural Show.—Agricultural summary by the conducting Editor, J. A. Barral, for the last two weeks of July. Essay on the harvesting machines exhibited at the Universal Show of 1856 at Paris; Ergot in Wheat. Commercial review, &c., with fine wood engravings of *Pinus Maritimus*, cane and leaf; Prize Cow of Brittany,

exhibited at Universal Show of 1855; Bull Breton, ditto; Plan of a Park for Fowls, a birds eye view of the same completed, &c., &c.

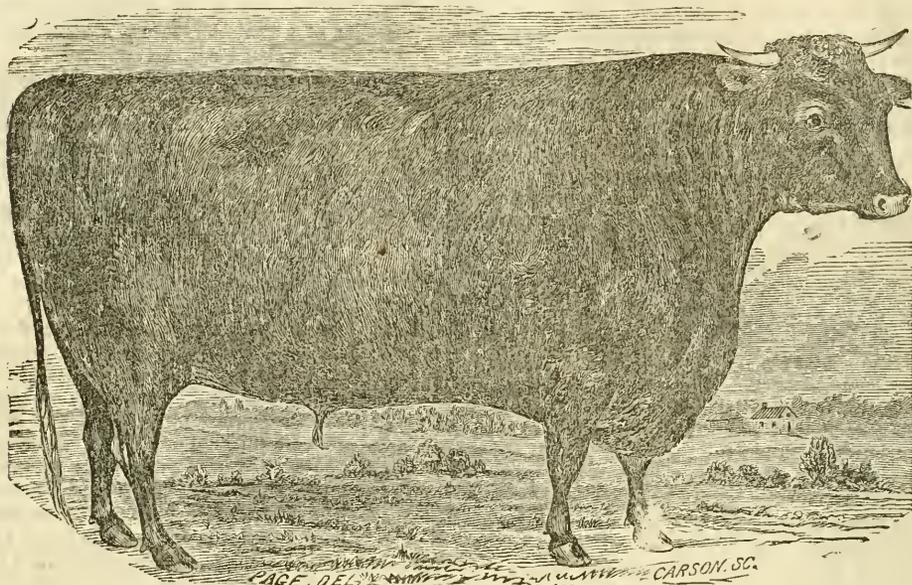
Editor BARRAL's remarks on the absorption of Azote by plants from dew and rain, is only intended as an endorsement of that theory, based as it is on the discoveries of BERGMAN, DE SAUSSURE, BOUSSINGAULT, LIEBIG, and others. The article on the absorption of ozone by plants is from the pen of M. SCOTTETEN, Chief Surgeon of the Hospital at Mentz.—The Editor significantly remarks that many physician chemists have labored like M. SCOTTETEN; and although he admits all the results claimed by the learned author, he still demurs to their consequent importance to vegetable physiology; he also omits for the present the physiological *expose* which terminates SCOTTETEN's article, waiting for experiments to verify his conclusions. The Editor ends his remarks by saying that as the learned physician of the Military Hospital of Mentz, does not dispute that plants placed in Seltree water give off considerable oxygen during day light, he should certainly pardon the reviewer for adjourning his theory, if he accepted his facts.

Agricultural progress in France has, undoubtedly, been stimulated by the Great Expositions at London and Paris. The Imperial Government has taken hold of the matter in earnest; regional fairs are established in the departments, the number of these fairs for 1857, are eight; to be increased to ten in 1858. The fairs, (*Concours*.) are to be held three days; and the highest prize, (*prime d'honneur*.) at each fair, is to be five thousand francs, with a silver cup to the value of 3,000. S. W.—*Waterloo*, January 10, 1856.

CHEAP BOARD FENCE.—The following will be found to be a cheap and lasting fence: Posts six feet long, holes dug 15 or 18 inches deep; then have the posts set in and well rammed. Next, throw up an embankment at least two feet high; this will make a narrow ditch as deep as the foot of the posts, thereby preventing decay. It will also drain the land considerably. Two boards—one a foot wide, the other eight inches, with a cap-board four inches wide, on top, will be high enough for a common fence. It can be easily seen that a fence made in this way will last longer than any other fence made of wood, and the first cost is but little more than a common zig-zag rail fence. R. W. S.—*Canada West*.

A CHEAP FENCE.—Being short of rail timber, and hedges require so much labor and patience, I have tried the following method of economizing, with perfect success. Plow and shovel up a ridge six feet wide and two feet high; then lay stones or blocks for the ends of the rails to set on, a foot thick or more; this makes it 3 feet high to the rail. Four rails high with poles along the middle well locked or staked, make it as high as eight or nine in the ordinary way. It should be well banked up to the bottom rail, and seeded down to grass. Hogs cannot get a foothold to creep through, neither can cattle knock it down or jump over, as the shoveling leaves a deep furrow on each side.

CONDITION POWDERS FOR HORSES.—Take equal parts pulverized gentian, elecampane, ginger, and wild turnip. Horses troubled with cold or heaves should have a tablespoonful each day.



DEVON BULL PURITAN (283).

"PURITAN," the property of Hon. John Wentworth, of Chicago, Ill., was bred by Col. L. G. Morris, of Fordham, N. Y. Calved Dec. 8th, 1853. Got by Frank Quartley (205); dam Virtue (469); g. d. Virgin (468); g. g. d., Violet (467.)

"At our late visit to the farm of the Illinois Breeding Association, at Summit, Cook county, Ill.," says the editor of the Boston Cultivator, Sanford Howard, "we saw, among other fine stock, "Puritan," whose figure is above given. We had not seen him before since he left Fordham. He is a compact animal, with very short legs, a good handler, and, with the exception of some superfluous leather about the neck, and a slight coarseness of the head, is very handsome. Mr. Wentworth showed us several of his calves, which partake strikingly of the Devon characteristics."

A MARK OF PROGRESS.—*Porter's Spirit of the Times*, a journal devoted, as our readers are aware, "to Field Sports, the Turf and the Stage," has frequently congratulated the country on the happy fashion just now so prevalent, of ladies' riding at our County, and some even of our State Agricultural Shows. It last week furnishes a striking example of the progress thus effected toward achieving what it considers the aim and tendency of this Female Equestrianship, viz: to "help make racing a national sport." Agreeing entirely, as we do, in this view of the probable result of such exhibitions, we cannot neglect to chronicle all the steps taken toward its accomplishment. The one in question is as follows: A challenge for a match of horses recently appeared in the paper above quoted, from a lady, who has found several equally "spunky" dames and damsels to accept it—about one of the latter of whom we now receive the information below:

"Three times has she been a victor at the trotting courses of the Agricultural Fairs; on one of which occasions she, (at Canandaigua,) drove a black Morgan stallion, in harness, in the slashing time of 2.38.—This lady desires us to say to Di Vernon, that she is indifferent whether the trial be in running, steeple-chasing, or in trotting; and if in running, is willing to go in either one or four mile heats."

According to present probabilities, the Union course, which has already been the scene of so many similarly refined and ennobling contests, will shortly "behold two beautiful and high-spirited women, mounted on blooded running horses, flying through a four mile heat!" With *Porter's Spirit*, "we confess to no little interest in this business." Are our mothers, wives and sisters to be engaged in thus drawing the country "a few inches nearer the millennium" of the turf and its accompaniments?—*Country Gentleman*.

QUARTER-ILL IN CATTLE.—A correspondent writes us that this fatal disease is quite prevalent in some parts of the west at this time, and asks for a remedy. It usually attacks young animals, such as yearling heifers, and is frequently caused by lying on a cold, damp soil. Animals quite well the previous evening, are sometimes found dead in the morning. At other times they are found with one quarter much swollen, attended with considerable lameness. The course indicated is to bleed in the first instance, unless the pulse is feeble; but, previous to this, a diffusible stimulant should be administered, such as two ounces of spirits of nitrous ether, with a drachm of camphor, and given with warm gruel or water. The part should be well fomented with hot water. The other variety of the disease may be ascribed to a sudden change from poor winter food to rich and luxuriant pasture, which greatly increases the supply of blood. It often attacks two-year-old cattle, and is most prevalent in the spring. Bleeding largely should be practised as soon as possible; after which the bowels should be opened, and the part well fomented.

TO KEEP MEAT FRESH AND SWEET.—Take a box or barrel, put in a layer of snow and a layer of meat, until all is in and covered; then set it in a cold place, where it freezes a little. Meat packed thus will keep from November to April, and be as fresh, and more tender than when just killed.

MANY are great because their associates are small.



Horticultural Department.

ANNUAL MEETING OF THE WESTERN NEW YORK FRUIT-GROWERS' ASSOCIATION.

The Annual Meeting of the Fruit-Growers' Association of Western New York, was held in this city January 7th. There was a good attendance, and the Association bids fair to be one of great interest and usefulness. The exhibition of fruit, owing to the failure of the apple crop last year, was rather meagre. MESSRS. ELLWANGER & BARRY made a fine show of winter pears, and there were several good collections of apples, grapes, &c. The following officers were elected, or rather re-elected, for the ensuing year:

President—JOHN J. THOMAS, Union Springs.

Vice-Presidents—H. P. Norton, Brockport; Asa Rowe, Sweden; E. C. Frost, Catharine.

Secretaries—J. B. Eaton, Buffalo; H. E. Hooker, Rochester.

Treasurer—W. P. Townsend, Lockport.

Executive Committee—P. Barry, Rochester; T. C. Maxwell, Geneva; H. E. Dickerson, Lyons; W. B. Smith, Syracuse; P. R. Freeoff, Auburn.

Committee on Native Fruits—P. Barry, Rochester; Thos. Smith, Geneva; S. H. Ainsworth, West Bloomfield; A. Loomis, Byron; E. C. Frost, Catharine, Schuyler Co.

Committee on Foreign Fruits—Geo. Ellwanger, Rochester; T. C. Maxwell, Geneva; I. C. Hanchett, Syracuse; J. J. Thomas, Union Springs; Edward Frost, Rochester.

Committee on Nomenclature—B. Hodge, Buffalo; W. P. Townsend, Lockport; J. B. Eaton, Buffalo; Joseph Frost, Rochester; J. J. Thomas, Union Springs.

COUNTY COMMITTEES.

P. BARRY, of Rochester, General Chairman.

Mourne—H. E. Hooker, Rochester; Austin Pinney, Clarkson; Zera Burr, Perinton.

Eric—John B. Eaton, Col. B. Hodge, W. R. Coppock, Buffalo.

Niagara—W. P. Townsend, C. L. Hoag, H. L. Burrall, Lockport.

Cattaraugus—Spencer Scudder, Randolph; Hon. F. S. Martin, Olean; J. C. Devereux, Ellicottville.

Cayuga—Dr. A. Thompson, Aurora; John Morse, Cayuga; P. R. Freeoff, Auburn.

Genesee—A. Loomis, Byron; Col. H. U. Soper, Batavia; R. B. Warren, Alabama.

Ontario—T. C. Maxwell, Geneva; S. H. Ainsworth, Bloomfield; E. S. Smith, Geneva.

Yates—Charles Lee, H. Olin, Penn Yan; Isaac Hildreth, Big Stream Point.

Tompkins—James McLallen, Trumansburg; James M. Mattison, Jacksonville; Aron Branan, Ithaca.

Wayne—T. G. Yeomans, Walworth; John J. Thomas, Union Springs; M. Mackie, Clyde; E. W. Herendeen, Union Springs.

Ontonago—W. B. Smith, Syracuse; Mr. Hamlin, Clay; E. P. Hopkins, Conodaga.

Chautauque—Lincoln Fay, E. S. Bartholomew, Portland; A. H. Moss.

Orleans—S. Burroughs, Medina.

Wyoming—Hugh T. Brooks, Pearl Creek.

Allegany—Ransom Lloyd, Argolica; William Howe, North Almond; John Atherton, Philipsville.

Livingston—M. Colby, Nunda; J. R. Murray, Mount Morris; Rev. F. D. W. Ward, Genesee.

Steuben—Judge Denniston, William B. Pratt, Prattsburg; R. B. Van Valkenburgh, Bath.

Seneca—H. C. Silsby, William Langworthy, Seneca Falls; George Dunlap, Ovid.

Chemung—Harvey Luce, Elmira; George W. Buck, Chemung; Albert Owen, Big Flatts.

Schuyler—E. C. Frost, Catharine; John Woodard, North Hector; Dr. Nelson Winton, Havana.

Oswego—S. Worden, Minetto; A. Stone, S. S. Gillett, Hinmansville.

Tioga—George J. Pumpelly, Owego; John S. Nichols, Spencer.

Cortland—P. Barber, Homer; Nathan Boughton, Virgil; B. J. Campbell.

MESSRS. BARRY, RYAN and HARRIS were appointed a committee to prepare business for the meeting, and reported the following subjects for discussion, which were adopted:

1. Small Fruits—Which of them can be grown on an extensive scale profitably?
2. Shelter of Orchards and Fruit Gardens—Is it important, and if so, what trees, plants and shrubs are most suitable, and what form of plantation?
3. Hardy Grapes—Can their culture, in the open air, be made profitable?
4. Is it better to top graft old apple trees, or to plant new ones?
5. Is it a good practice to renew peach trees by heading them down?
6. Winter Pears—Can they be grown profitably?

SMALL FRUITS.

The Currant.—Mr. BARRY, of Rochester, said the currant was seldom cultivated properly. The common White and Red Dutch were greatly improved by proper training and manuring. In reply to an inquiry, he said there were several new varieties that were a decided acquisition. He mentioned the White Grape, Cherry, and Victoria,—the latter valuable on account of its lateness. He thought the cultivation of the currant might be safely recommended to farmers—it bears transportation to market without injury, grows well on all soils, and requires little care and cultivation. Good crops, by good management, could be obtained in one year from cuttings.

Mr. ELLWANGER, of Rochester, presented some wine made from the White Grape currant this fall, which was, for its age, really excellent.

Dr. LONG, of Rochester, found *port wine*, made from Black currants, very useful for medicinal purposes. When three or four years old, it was as good as any port wine he could obtain.

Mr. BARRY was informed that large quantities of black currants were bought in New York for the purpose of making *port wine*.

The Raspberry.—H. E. HOOKER, of Rochester, said the best kinds would not bear transportation, as they soon lost their flavor, and had to be picked every day. He found the common Black Cap, with good cultivation, the most profitable variety for market.

Col. HODGE, of Buffalo, agreed with Mr. HOOKER. The Antwerps had to be covered in winter at much labor and expense. He thought that the Black Caps might be greatly improved, and would then be best suited to one's wants. He, also, spoke highly of the Allen Raspberry, a native variety cultivated by L. F. ALLEN, and others, at Black Rock, N. Y.

Mr. BARRY thought that in this part of the country, near large cities, the Red Antwerp was the best, as it always yielded good crops. They always bend the canes down in the fall, and cover them slightly—it was but little trouble. For delicacy of flavor the Black Cap could not compare with the Red Antwerp. Some new varieties, such as *Brinckle's Orange* would sell for four times as much as the common kinds.

Mr. HOOKER found that the grocers always preferred the common to the Red and Yellow Antwerps, and always purchased them first, they were extensively used for cooking and preserving.

Dr. ROACH said that the first man who commenced raising raspberries near Geneva, N. Y., could only get eight cents per quart, but when many had gone into the business, the price rose to from twelve to fifteen cents per quart.

The Gooseberry.—Mr. Hooker thought the Gooseberry very profitable on his grounds. Some that he sold in this city, brought the large price of eighteen cents per quart—a man might make, he thought, an independent fortune at that price.

Mr. ELLWANGER said that some kinds, such as the Crown Bob, Whitesmith, and Houghton's Seedling, seldom mildew.

Mr. HOOKER said that he planted his bushes first on sandy ground, and found that they invariably mildewed—when he removed them to a clayey soil, and they were entirely free from it. He said that those on the clayey soil were shaded some, while those on the sandy soil were entirely exposed to the sun.

Col. HODGE, of Buffalo, found in 20 or 30 kinds, that in two or three years they were always destroyed; even on clay, they would in time mildew, and he thought that the English kinds could not on this account be recommended. It would be sure have a tendency to prevent mildewing if they were transplanted every three or four years, and that with severe pruning the damage might be considerably reduced. Fully one-half of the vines ought to be taken off every year.

Mr. BARRY said that the English Gooseberries ought to have a cool soil—that was the reason why they grew so well in England. They succeeded near Chicago for the same reason; as, also, in Canada East, Maine, and the northern counties of this State. Some persons near this city had no difficulty with them.

R. B. WARREN, of Alabama, Genesee Co., had had good success in cultivating the Gooseberry on light, sandy soil. He planted on the north side of a board fence.

SHELTER FOR ORCHARDS AND FRUIT GARDENS.

Col. HODGE, of Buffalo, thought this a very important subject. Peaches could not be raised around Buffalo, not because of the cold as was generally supposed, but because of the bleak winds from the Lake. At the lower end of Grand Island is a tract of land called Peach Haven. It is protected from the west winds by a natural forest. There the peach succeeds well.

He invariably found in his travels that situations protected from cold winds always produced much better than exposed ones. The best kind of screen for protection to fruit trees, is the Norway Spruce. It grows rapidly, and is used extensively in Boston, both for its protection, and as an ornament. The wind which does the most injury, is the west wind—next, the north and north-west.

Mr. BURTIS, of Rochester, would plant an orchard on the coldest, bleakest hill he could find, the fruit buds were usually killed in the spring, and the object should be to keep back vegetation as late as possible. He never feared for peach trees in winter unless the thermometer sunk more than 12 below zero. He thought trees needed shelter, but should be planted on elevated places.

Mr. B. FISH, of Rochester, thought the buds were killed in winter—never in spring; he had seen water frozen in the blossoms in the spring, and yet the trees bore a good crop of fruit.

Dr. ROACH, of Ontario County, had two orchards, one of 300 trees is exposed to the west winds. The other of 100 trees in a sheltered situation—from the former he obtained three pecks of fruit, from the latter 150 baskets. The outside trees yielded the least fruit.

Mr. STONE, of Hiramville, Oswego County, had noticed that old orchards with thick tops, bear fruit when younger trees would not; and that trees usually do best on hills.

Mr. BARRY had found in all his reading and experience, that shelter was necessary—animals needed it—everything tender needed it. During the late severe winters hemlock trees were killed on the west side, and the hardy privet hedges were frequently killed on their western exposure. It was not remarkable then that tender fruit trees should need protection. On their grounds, part of their pear trees were exposed; on these they seldom obtained much fruit; while on the remainder, which were sheltered, fine crops were produced. He thought that the Norway Spruce was the best for protection,—though the European Larch was also very good.

Col. HODGE said, if he were setting out an orchard, he would, if he could, have a forest all around it.

H. N. LANGWORTHY, of Rochester, had found that for peaches, the west and east exposures yielded but little fruit. He thought that the cold and frost did not do much harm while the fruit was in bloom; but that afterwards, when it was larger, the cold wind killed it.

Dr. ROACH thought the best way was to plant high and then protect by trees.

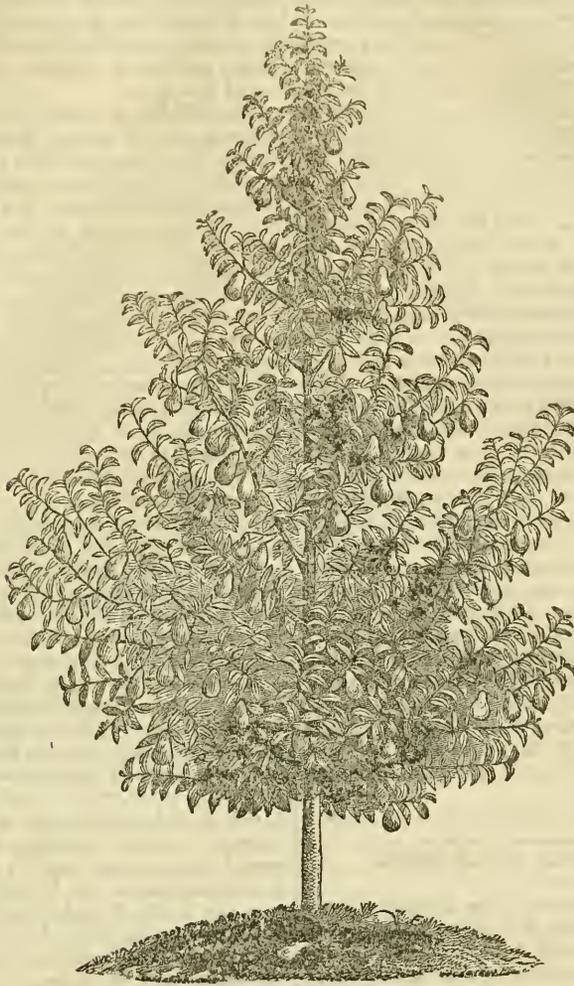
Hardy Grapes.—H. N. LANGWORTHY had often observed the best grapes were produced where vines had run up high, on some apple or other trees. He argued from this that sun was not particularly needed to ripen the grape—it needed warm air. They seldom mildewed on trees.

Mr. BURTIS said the best grapes he ever saw, grew in Philadelphia, on tall vines by the sides of houses, and he was of opinion that they would grow best on tall trees.

Mr. BARRY thought that grapes needed heat; if he were to plant a vineyard, he would plant the vines on the south side of a tight board fence, to secure more heat. Mr. McKAY, of Naples, Ontario County, had succeeded perfectly in raising grapes, and as there were gentlemen present who were well acquainted with Mr. McKAY's process, he hoped they would favor the society with a description of his method.

[To be Continued.]

TOMATO plants, for early fruiting, may be raised very early by sowing a few seeds in a large dove pot, or small box, in good rich soil.



DWARF PEAR TREE.

Drawn from a *Louise bonne de Jersey*, growing on the Quince stock, in the grounds of a successful amateur cultivator, in this city.

SELECT PEARS ON THE QUINCE STOCK.

Much difference of opinion prevails, and frequent discussions take place among planters of fruit trees, on the subject of pear culture. Even experienced cultivators are not always unanimous in their decision, on certain important questions submitted to them by the professedly inexperienced amateur. When we take into account the attention which has been devoted to this branch of fruit culture, for the past few years, we might reasonably expect to find matters a little better understood with respect to certain debated points. But on the other hand, when we estimate the small amount of really practical knowledge which is brought to bear on these disputed points, and how much more importance is attached to the dicta of a few influential persons, who having themselves taken a partial view of the subject, from an unfavorable point, labor to direct the observation of others in the same unfavorable direction, we cannot feel so much

disappointed at the result as we should have done, had the facts been permitted to speak, and the experience of less ostentatious witnesses been weighed against the high sounding, and dogmatical assertions of those who are generally found to deal in extremes. The spread of horticultural knowledge is a great desideratum, but we fear if horticultural writers continue to multiply as they have done within a few years back, the information imparted will be of but little value. Our object now is to show that certain varieties of pear may be successfully and profitably cultivated on the quince stock, provided certain conditions are complied with; and, lest we should say too much at one time, we propose to take the varieties, singly.

The *Louise Bonne of Jersey* may be cultivated with success, on the true Angers quince, in a moderately heavy loam, or at least on such soils as are acknowledged to be favorable to the growth of the quince, provided the subsoil be thoroughly drained

and the surface soil kept mellow by the use of the cultivator with the addition annually of such a dressing of suitable manure as is acknowledged to be necessary for the preservation of the soil in a proper condition in case any other root or grain crop were to be taken from it. Provided always that the cultivator is an intelligent and careful man who attends to the necessary routine of keeping the ground clean, pruning the trees in a proper manner, and providing against the attack of vermin, and other depredators.

That this variety may be cultivated with profit, it is also necessary that the owner should make provision for the marketing of fruit, and that the fruit should be picked in due season and house ripened, having a market, or purchaser, in view, to receive them when in good condition, and in such a community as can appreciate choice pears.

The *Louise Bonne of Jersey* is a large and juicy pear, sub acid and melting, a very productive bearer on the quince, as well as a very ornamental and vigorous tree; ripens in this vicinity about the last of September. Healthy trees, such as that in the annexed cut, of from six to eight years from the bud, will produce from two to three pecks, after thinning about two-thirds of the original crop, which should be done to preserve the vigor of the tree. If the whole crop is allowed to remain, the tree would bear more than a bushel, but the specimens would prove inferior in size and flavor. Such trees may stand at 10 feet apart, or at least 400 trees to the acre.

Making a very low estimate from the actual produce of such trees, during the past season, and allowing for cost of trees, annual labor, and rent of land, with other contingencies, we could show that a small profit could be realised in the sixth year, and each succeeding year, an annual gain of from three to five hundred dollars per acre.

We shall continue this subject. *

RE-GRAFTING OLD APPLE TREES.

EDS. GENESEE FARMER:—In the January number of your journal you discuss the utility and the practicability of "Improving Old Apple Orchards," and as the same subject in some of its aspects was discussed at the Annual Meeting of the Fruit Growers' Society, on the 7th inst., with interest and profit to the Convention, I wish to add a few words to what has already been said; more for the sake of gathering up what seems to be the combined experience of our best cultivators and experimenters, than for the sake of adding anything new to what has been set forth.

It is evident from the results brought before the meeting that thrifty, vigorous young apple trees, not more than twenty or thirty years old, can always be made profitable by grafting with the best standard varieties of *free growing* or vigorous varieties. The new tops formed by judicious grafting will become abundantly productive in five years, bearing at that age nearly or quite as much as a tree twenty years from the first transplanting.

Success in grafting over trees of this age is best secured by grafting quite early in the season; for the reason that after the circulation of sap becomes very active in the tree, the check produced by amputation of large limbs is so great that injury and stagnation to the force of the tree is the consequence. In early grafting, vigorous young sprouts are secured, which, together with the scions inserted, keep up a healthy

flow of sap, and secure the old wood from death and decay. The practice of sawing off the limbs which are to be grafted, at a leisure time in the latter part of winter, and before the weather is warm enough to do the grafting, is, therefore, quite in accordance with sound principles.

The difficulty of securing a symmetrical form and a new growth of top near enough to the ground to render the fruit accessible, is often urged against grafting old trees; but in most instances where trees are worth grafting over, this can be secured by grafting the upper parts of the tree first, cutting off quite large limbs which have a vigorous flow of sap, and inserting a larger number of scions upon them, *cutting* them in instead of splitting the stock, if it is *very* large. By this practice the force of the tree for the coming season is directed into the lower and weaker branches; these branches will, by this increase of sap, become very thrifty, and can be grafted the following spring with great care and success; by inserting the graft in the lower limbs farther from the trunk than those first set in the upper parts of the tree, they will be found to grow rapidly, and, not being shaded by the upper ones, they will soon be equally vigorous and productive.

The idea that it is practicable to renovate an old tree by cutting it back and thus securing some vigorous sprouts with large healthy leaves, whilst the soil about the roots is allowed to remain uncultivated and unenriched by strong and lasting manures, is inconsistent with facts. The result produced is simply to cause what life there is in the whole tree to be expended in a "course of sprouts," which, in another year become more feeble than the old limbs were, and the tree, galvanized into life for a time, falls into incurable decline. The proper course is, when the vigor of the tree is not great enough, to *feed* it where only it can be fed, through the soil, by cultivation and manuring; and in manuring, do not be misled by *special manures*, nor even by guano, which, altho' a useful stimulant, is not by any means to be relied upon for a steady and reliable fertilizer. The best fertilizers are placed by a kind Providence directly in our way, and, as if to make it certain that we should use them, most of them are utterly worthless for anything else, and in fact an offence to us. We can, then, scarcely go amiss in plowing in all the nuisances about our farms; and thus, while we purify the homestead we are increasing the harvest; we can scarcely give the orchardist a better receipt for renovating his orchard than by saying to him, "follow your nose."

Another inducement for grafting over trees of considerable age, is, that many of those old orchards of natural fruit occupy the positions which are most desirable for such purposes. There are many farms upon which suitable soil can be had only in limited quantity, and none but such soil is valuable for orcharding: if this be occupied, we have no choice but to graft the standing trees. A young orchard planted among the old trees will never flourish, nor will it do well if the old trees be cut down, until some years of time, and care in plowing, manuring, &c., have restored to the soil its original fertility; the site of an old orchard is one of the worst places for a young one, whilst it may be very productive of grain or grass.

Many of the orchards which were productive and vigorous a few years since, have now become unprofitable, simply because they have become too

dense, the growing tops and roots having completely filled up the spaces allotted to each. Such orchards should be thinned out, grubbing up every other row running north and south, and liberally manuring the whole ground; grafting over such trees without thinning will not do.

There are also many apple orchards which never have paid and never will pay for the ground they occupy. If the soil is cold, wet, and with a hard pan bottom, no amount of manuring, or grafting, or pruning can ever make them valuable. The original selection of a location was not good, and grafting on other varieties will not remedy the evil. In such cases, plant a young orchard immediately upon a piece of rich land with a dry, gravelly, or otherwise well-drained subsoil, and proceed to make experiments upon your orchard upon the wet land with drain tiles, and communicate the result to the *Genesee Farmer*. If you succeed in producing uniform crops of fair apples upon such a soil, the experiments will make your name immortal.

There is a limit to the durability of apple orchards, and some of the old ones have already passed beyond the time when to graft them would be of any use, and manuring or cultivating them is scarcely worth while, the fruit being poor at best. As soon as the places of these declining patriarchs can be supplied, let them be cut down, unless their shadows are precious to the porch or the walk, they are not worth preserving.

The passing away of these old trees is sure proof that we must continually plant new ones if we and our children would always have some trees in their prime, and no improvement of old orchards should prevent the planting of young ones to supply the present and rapidly increasing demand for good fruit.

It is surprising that intelligent men do not pay more attention to the condition in which their orchards are maintained. There are many farms upon which the farmer receives more annual profit from a single tree of the Rhode Island Greening than from an acre of grain; and yet he does not take the trouble to see that his trees are properly managed or pruned, paying least attention to the most profitable part of the farm. This is a degree of folly which we are persuaded will not last forever in this age of newspapers. H. E. H.—*Rochester, Jan. 14, 1857.*

HORTICULTURAL OPERATIONS FOR FEBRUARY.

The greater portion of this month will be taken up in making preparations for the coming busy month of March.

Hot-bed frames and sashes should be brought out, where not done last month, and washed clean; the broken glass, if any, taken out and replaced by whole squares. Let the putty be made good, in every part; and all carefully painted. I have always observed that where a square of glass is cracked and the putty in bad condition, though thought to be sufficiently strong to last through another season, it is sure to drop out just at the very worst time,—when the young and tender plants are most tender, and when we have the worst weather to contend with; such as cold, cutting, sleety, wet and windy weather, (latter part of March, and beginning of April,) and, consequently, when we have to use the greatest quantity

of heavy wet litter, or garden mats to cover the glass with, at night; the throwing on and pulling off, of which, is usually the cause of these cracked squares being pulled out.

How rarely do we see proper, and sufficient covering for hot-bed frames and pits. Where there is one gardener who has oiled canvass or tarpaulin to cover his glass with, there are an hundred who have nothing better than garden mats or stable litter. However, when we have not tarpaulin or straw mats, we must use the next best thing, which is, perhaps, stable litter. Its advantages, over mats, are that we can put on thicker covering; the straws, being hollow, contain a body of air which acts as a non-conductor, although, when saturated with snow and rain, a very poor one I must confess. Its disadvantages are that we cannot use litter without having a great deal of dust and dirt, which shakes through the litter to the glass, and is sucked in the laps and under the putty, there to absorb and retain water, which causes leakage, and rots out the putty. Mats are clean, and, when dry, can be rolled on and off with little trouble; but in wet weather they absorb every drop of water, that falls upon them, and then lie so close together, and to the glass that they are almost useless by conducting the heat out of the bed.

Another grievance is that they have to be hung up to dry every time they get wet; and come out at night, sometimes frozen as stiff as boards, and all shapes the straightening of which breaks the mats and glass too. With the tarpaulin we can throw on a little dry litter to be covered by it, which keeps the litter dry, and admits of a stratum of air, in (than which there is no better non-conductor known,) between the glass and the tarpaulin. If the tarpaulin be oiled, or tarred, once a year, it will last many years.

About the middle of the month, prepare for making hot-beds; this will be early enough, except where there are brick forcing pits and abundance of manure at command, for it is very difficult to keep up a sufficient heat in a common hot-bed before this time.—Let the manure be well shaken and mixed, and thrown into a heap to ferment. In five or six days turn it again, and, if dry, water it. Let it be in some sheltered place, if covered with boards, it will ferment more regularly.

The pruning of hardy vines should now be attended to, where not done sooner. When left later than this month, they are apt to bleed, and, though it may not be permanently injurious, it cannot do any good, and may as well be avoided.

Gooseberry trees may be pruned. Gooseberries bear upon the young, as well as the old wood. All the little twiggy pieces in the body of the tree, should be cut out to one or two buds in the length which will form permanent fruit spurs. Where the trees are wanted to increase in size, the leading shoots of young wood can be cut back to five or six inches in length. Any decayed branches should be cut clean out, and young ones trained in their places.

Currants may be pruned as above, but they bear mostly upon wood of two years growth or more; all the fruit-bearing spurs, upon the main branches, therefore, must be carefully preserved; to increase them, set out the young wood on the main branches, to one or two buds in length. Currant trees should always be trained on a stem, at least one foot in height, and the main branches kept about one foot

apart, and tied to a stake. The suckers must be all carefully cut away.

Prepare for planting trees by digging the holes whenever it can be done. Let the holes be large and ample for whatever sized trees you intend to plant. If the subsoil is hard, let it be loosened up, as deep as a pick can be sent into the bottom of the hole, and left loose and rough to become mellowed, and pulverised by the action of the weather. Have a good quantity of compost prepared, ready for use in planting. Perhaps the best that can be formed for fruit trees generally, is one-third thoroughly decomposed barn yard manure, with about two-thirds turfy, loomy sods, and a little leaf mould from the woods, all thoroughly incorporated together.

Underdraining should be proceed with when the frost will admit. You will find the benefit of it when planting time comes. Ground will be in working condition a week or two earlier. The root action of plants will commence earlier. They will root deeper into the soil and will be enabled to withstand the drought of summer better. Fruit trees will ripen their wood earlier, and more perfectly in the fall, and consequently will be better enabled to withstand the inclemency of the winter. JOSIAH SALTER.

A QUESTION FOR HORTICULTURISTS.

MR. EDITOR:—For one, I am fond of good melons and I try more or less to raise them, every year, with but quite indifferent success. One year, however, I had better luck as some would term it—with melons, cucumbers, squashes and radishes, than I ever had before or since. Now I am not a believer in luck, if by luck we are to understand blind chance, without any sequence of effect following a cause. No sir. I don't believe we live in a chance world. We are placed in this world to labor and to till the soil, and scheme as we may to be sharp and smart, we have got to work, if mother earth is to reward our labor.

Now about that one year. I purchased a lot in the northern part of this city, which was a part of the commons, and had lain in pasturage for more than 20 years. The soil was a sandy loam about three feet in depth, underlaid by reddish clay hardpan. On the 25th of May, I plowed it with a two horse plow, as deep as possible, (it was not very deep, however); then harrowed it lengthwise of the furrow, being careful not to disturb it. I planted the next day, and it verily seemed as if every kind of seed put into the ground was running a race to outstrip its neighbor. Nicer radishes I never raised; sweeter nutmeg melons, I never tasted; more thrifty and prolific cucumber vines, I would not wish to see; and so on to the end of the chapter, not forgetting the delicious sweet corn, and succotash. By the way Mr. Editor, let me recommend the horticultural bean as the best pole bean, that can be raised by people generally.—Lima beans are good, but unless started in a hot-bed very uncertain—not so with the horticultural. They are good for snaps, and can't be beat for succotash.

Well the next fall I spread on a good coat of horse manure, and the next spring turned it under as before, but now the cut worm ate my cabbage plants and corn, the little striped bug ate up my melon and cucumber vines, my radishes were full of worms, and tough and stringy, and when at last I succeeded by thumb and finger practice, morning and evening, in

getting my vines in tolerable trim, it was all vine and little fruit.

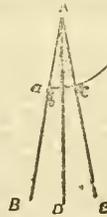
Now, MR. EDITOR, I want to know from yourself, or some of your correspondents, what caused so great a contrast between the fruit producing tendencies of the first and second years. It could not have been exhaustion, for a better growth of leaf and stalk, I never saw, and, also, better celery I never tasted, than I raised the second. How much may I suggest was the flavor owing to my having covered the bottom of the trench with burnt bones, about two inches in depth; then, over that, about three inches in depth of well rotted manure, and then thoroughly spaded in, and pulverized, leaving the trench, when ready, for transplanting, just a foot in depth, and sixteen inches wide.

But about melons; what is there in decomposing turf, that is so much superior to our best compost in promoting a fruiting tendency?

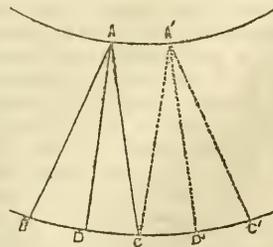
Will some of your correspondents favor me with the reasons, therefore? A LOVER OF GOOD FRUIT. Rochester, N. Y., January, 1857.

A SIMPLE INSTRUMENT FOR LAYING OUT CURVES.

Much difficulty is always experienced in laying out curved walks or roads in gardens, parks, lawns, &c.; this is because the curves are constantly changing not only in direction but in size; of course nothing is easier than to mark the arcs of two parallel circles, but when the radii of the arcs vary as frequently as they do in walks winding about trees, shrubbery, rocks, and other natural obstructions, it becomes a very nice matter to determine these curves with accuracy. The instrument which we here represent,



by the figure A B C D, will be found to be useful in this work, and is so simple that it can be manufactured in a rough manner in a few minutes; it consists of three rods of equal length, united by hinges at one end so that they may be movable. To make a good instrument of this kind, the rods should be made double—having one part to slide over the others, so that they may be lengthened, or shortened, at pleasure. An arm a. b. c., upon which the rods can slide, should be fastened to one of the outside ones, and thumbscrews attached to the two others. To use the instrument let it be opened so that the distances between the points B. D. and D. C. shall be equal, and laying it down on the ground where the curve is to commence, drive stakes at the points A. B. D. C.; now reverse it so that the point C. shall fall on A., and the point D. will then fall at A', where another stake must be placed; again



reverse it, and place A at A', and D will fall at D', and C at C' where other stakes must be placed; now reverse again and proceed in the same manner, as far as desired. To change the arc to that of a greater or less radius close or open the instrument; the length of the radii, being in the

inverse ratio to the distances between the rods, that is the wider they are opened, the smaller will be the circles marked, and visa versa. A little practice will enable any one to use it with much skill. Where it is only wanted for a short time, three strips of wood can be used of the same length as the width of the road or walk, and fastened together by a screw and a small strip nailed across them to hold them in their places.

RUST AND CRACKING OF THE PEAR.

No satisfactory cause has been assigned at any of the meetings where the subject has been discussed for the rust and cracking which injures some varieties of the pear and apple, and particularly the *Virgalieu* or *White Doyenne*, among the former, and the *Autumn Strawberry*, among the latter.

Nor in the published proceedings of Pomological Societies, has any definite cause been stated to which this defect may be attributed.

M. J. BERKLEY, one of the ablest continental writers, on these abstruse branches of Natural Philosophy, presents the following particulars, which we presume refers to the malady in question.

"Species of mould of the family of *Helminthosporium*, or *Cladiosporium*, become dreadful pests on the leaves of pears and apples especially of the former.

The *Cladiosporium dendriticum*, (of Walroth,) arises uniformly beneath the true cuticle, under which its *mycelium*, (or spawn,) radiates in every direction. It exhausts the strength of the leaves and often kills the young twigs, while on the fruit it forms unsightly black patches rendering it unsaleable, and sometimes inducing, or else accompanied by extensive cracking. When once it has attacked a tree, it is very apt to return in succeeding years.

A new progeny raised from the seed of diseased individuals, will exhibit the parental malady."

The same writer recommends as the only probable remedy he knows, the collecting and burning of the infected leaves and shoots, and the application to the buds and remaining portions of a mixture of sulphur, lime and gum tragacanth, the latter to make the mixture permanently adhesive, the former to act on the deposited spores, (seeds.)

No other remedy is known when the malady has been established. We presume this is the rust and cracking so much complained of as infesting our *Virgalieu* pear, by eastern cultivators. Those who have abandoned the cultivation of the *Virgalieu* or *White Doyenne*, working their trees of that variety with others not so subject to the disease; only partially remedy the evil, as the sorts substituted will doubtless become infested if the foregoing statements are correct. The true policy would be to destroy the whole tree, or so to wash it as to destroy all trace of the cryptogamic pest. As the rust and cracking is more prevalent in some localities than others, some predisposing cause must encourage the propagation of this mould, which is either to be sought in the atmospheric peculiarities of the locality, or in the nature of the soil. It is said the more the soil of a district becomes cultivated, or worn out, the more the *Virgalieu*, *St. Michael* or *White Doyenne*, will rust and crack.

Unfortunately for our fruit growers and farmers attention to practical science is not a characteristic of our country. We have only a few energetic botanists whose labors are not appreciated as they should be.

The State Agricultural Society has conferred a great benefit on the farming community by the circulation of Dr. Fitch's essay on insects; what association will call to the aid of the farmer and gardener some able cryptogamic botanist and physiologist? S.

A NEW APPLE TREE WORM.—Our Orchards were, in the year 1852, visited by a new depreidator, similar in form to the common apple tree worm, (*Clisio ampa Americana*.) but differing from it in their general habits. When touched it instantly presents itself in the form of the letter U. Their presence is indicated by the absence of leaves on a single branch, and by a more close inspection, it will be found to contain a small clump of yellowish worms, and often accompanied by a single worm, an inch and a-half in length. This happens the last days of July, or the first in August, and if then destroyed little injury is sustained. About the first of September, they collect in a web, on the body of the tree, and soon disappear. They are also found on the walnut tree.

The writer has not been able to note further changes during its last appearance.

A small white caterpillar, with small black spots on its sides made its appearance in great numbers during the last season, to the detriment of the young corn, and in the summer to the injury of some of our orchards. AN OLD SUBSCRIBER, *Harpersville, Broome Co., N. Y., January, 1857.*

TAR ON FRUIT TREES.

Some of your correspondents talk of putting tar on fruit trees to keep off the mice. It will kill the former, I know by experiment, if put on the bark, and left on. But I should think by being put on old canvass, or rag of any kind, and that put around the tree so as to be taken off in the Spring it would be as easy as any method to prevent the ravages of the vermin.

CHILIAN FORD.

Morristown, St. Law. Co., N. Y.

THE BIG TREE OF CALIFORNIA.

The following description of the Big Tree of California, is from the *Rural Annual and Horticultural Directory*. It will be read with interest:

The "BIG TREE," as the giant of evergreens has been familiarly styled by its Yankee countrymen, has insured for America the reputation of producing, in a circumscribed district of its "gold region," the marvel of arboriculture. It is now many years since uncertain reports of the existence of evergreen trees of an extraordinary size reached European botanists, by means of collectors and travelers in Mexico and Central America. Much discussion arose as to the identity of trees of which only drawings or imperfect specimens had been received. A few years ago, a collector, Mr. LOBE, sent home to the firm by which he was employed, authentic specimens and seeds of a tree which has since proved to be not only hitherto unknown to botanists and arboriculturists, but, as has since been determined, strictly local in its *habitat*, and confined to the San Antonio valley, where the original trees were discovered. And it is with pride and satisfaction we state that, unaided by any grant from Congress or Government, but by individual enterprise, thousands of this new and wonderful tree are now to be found in our own vicinity, raised from

seed obtained from the original specimens. Many have been also exported to Europe, where, despite of reason or common sense, the name of the great British Hero has been conferred, by a scientific botanist, on this giant and noble product of American soil—as if we had no Hero in our history worthy of the commemoration. The "BIG TREE," however called *Wellingtonia gigantea* by LINDLEY, can never be styled so by the American citizen. Some have substituted that of *Washingtonia gigantea*, while others adhere to an older but incorrect title, *Sequoia gigantea*. A brief description is all we can afford of this valuable specimen of California products.

This tree has been known for about thirty years. It was discovered in the District of Sierra Nevada, near the source of the San Antonio river, in 38 deg. of north latitude, at an elevation of nearly 5,000 feet



THE "BIG TREE" OF CALIFORNIA.

above sea level. The branches are pendulous; leaves in three alternate rows, imbricated, appressed, oval lanceolate, with a sharp coriaceous point, color light green; cones oval with scales, each covering seven seeds. The most accurate description was furnished by Mr. W. Lobb, botanical collector, who sent specimens of the branches and cones to England. Some of the specimens he saw, reached the height of three hundred feet, and the trunk measured thirty feet in diameter, at three feet from the surface of the ground; at eighteen feet from the base a section measured fourteen feet in diameter; the bark was from twelve to fifteen inches in thickness; and a section which had been hollowed out was twenty-one feet in diameter, affording sufficient space to seat forty persons and a piano. The age of such a specimen, calculating by the zones of wood, is estimated at three thousand years, or one inch in height for every ten years of its estimated age.

M. NAUDIN, in an elaborate article, in the "*Flore*

des Serres," on the discovery and history of this tree, has the following hints for the Government of its native territory, which we have translated, and deem them worthy insertion here:

"It would seem," says M. NAUDIN, "from the accounts that we have cited, that the great specimens of this tree are not numerous and that the species is even circumscribed within narrow limits. If the government of California had any appreciation of the picturesque beauties of Nature—if it understood its duty towards the Men of Science, Poets and Historians of the future—it would take care not to permit the destruction of these rare and marvellous monuments of the vegetable kingdom, which might one day afford a solution to a question interesting at once to physiologists and geologists—the origin of species, and even that of man himself. Before such considerations all the cupidity of individuals should give way. It is also the duty of men of intelligence in that country to make their fellow citizens understand that the public interest is not exclusively limited to the pursuit of lucre and discovery of gold mines; and that a nation progresses as much and perhaps more by intelligence and knowledge than by material wealth. A government adds honor to itself, by favoring the noble instincts of Science, Art and Poetry, and it fulfils not its mission at the present day, if it neglects to guard the interests of moral order, no longer confined to the people of which it has the care, but extended to mankind."

Such are the ideas which the destruction of some of the noble specimens of the "Great Tree" created in the mind of a French lover of natural productions, and who—living as he does under the domination of an emperor—forgets that the government of California has but a limited authority over the citizen, and dares not dictate what trees shall be cut down, or what shall be left standing, unless, by actual purchase or cession the soil on which they grow belong to it as a body. That, by exerting a wholesome and timely influence on the owners of the soil, such natural curiosities might be preserved, there is no doubt, at least in a society even partially civilized. Our Yankee countrymen much prefer cutting down such trees, and turning them into dollars and cents, either by cutting them up into lumber or fire-wood, or, Barnum-like, exhibiting for a "quarter," to the lovers of the marvellous, in our populous cities, a section of a tree, while, to see the original growing in its native majesty, is worth one hundred fold that sum. Pearls are still cast before swine, notwithstanding the advice of the Great Teacher.

From the great elevation at which the trees have been found growing, and from the low temperature prevailing there, it is hoped the young trees now flourishing in our nurseries will withstand the winter here. In England they have proved hardy, though—obviously from some defect in the management, which the sapient LINDLEY has not yet clearly explained—many plants have become sickly in the nurseries there. The plants at present in the hands of several nurserymen in this country, have been raised from seeds obtained from the original grove in California, collected by travelers from the Northern and Eastern States. The plants—some of which we have seen—are from eighteen inches to two feet high, and beautifully symmetrical in their habit; the foliage is of a glaucous or light bluish green, resembling somewhat a White Cedar, or Red Cedar.

Ladies' Department.

ORIGINAL DOMESTIC RECEIPTS.

TO MAKE AN EXCELLENT YEAST.—Take half a peck of potatoes, and boil them. When done, peel and mash them fine, then add one quart of flour, and mix well with potatoes—add cold water sufficient to make a very thin batter. Stir well, and strain through a colander. Then add a tea cup of seed yeast, and let it rise. When light, take sufficient flour for desired quantity of bread, and wet entirely with the thin yeast, adding a little salt. Do this at evening, and in the morning knead into loaves; let it rise, and bake. The very lightest bread can be made with wheat or rye flour. *The yeast will keep two or three weeks in cold weather.*

TO PRESERVE CORNED BEEF FOR SUMMER USE.—In the month of April, or May, when the brine begins to ferment, take up the beef—empty the brine from the barrel; and wash and dry with a cloth. Then take a tub of water, and wash each piece of meat well, and also dry with a cloth. When all is done, take dry salt and rub thoroughly on each piece, and lay back in the barrel. When all is completed, cover the barrel, and the beef will keep two years or more, as nice as when first packed. Salt beef should be put in warm water the day before using, to extract the salt.

FOR CURING HAMS.—Take of salt 12 lbs.; molasses $\frac{1}{2}$ a gallon; brown sugar 2 lbs.; salt petre $\frac{1}{2}$ lb.—Make the salt petre fine, and mix well with salt, then add of cloves, allspice and black pepper 1 tablespoon full each, pounded fine. Mix all well together, and rub on the hams. The above quantity will cure 175 lbs. of meat. The hams should be taken up once in two weeks, and rubbed with the liquid in the bottom of the tub. Let them lay six weeks in pickle, then smoke with corn cobs.

FOR MAKING VINEGAR.—The cheapest mode of making vinegar is, to mix five quarts of warm rain water, with two quarts of molasses; and four of yeast. Keep in a warm place, and in a few weeks you will have the very best of vinegar.

ORANGE CUSTARDS.—One sweet orange; four spoonsful of sugar; four eggs; one quart milk. Squeeze the juice, and grate the peel. A little rose water is a great addition. Bake or boil.

SWEET POTATO PUDDING.—Boil two large potatoes—mash fine and strain. Add a piece of butter size of an egg; a little salt; a pint of sour milk, or butter milk; a tea cup of sugar; two small tea spoonsful soda dissolved in water. Bake, and serve with cream, or some kind of sauce.

CURE FOR AGUE AND FEVER.—Sulphate Quinine one drachm; water one ounce; elixir vitriol 30 drops. Dose, 30 drops, once in four hours, in *absence of fever*. An excellent remedy.

WHOOPING COUGH.—A tea spoonful of castor oil, to a table spoonful of molasses; a tea spoonful of the mixture to be given whenever the cough is troublesome. It will afford relief at once, and in a few days effects a cure. The same remedy relieves the croup, however violent the attack.

CURE FOR NURSING SORE MOUTH.—Mix carbonate of iron, sixty-five grains; rhubarb, gum and aloes, each twenty-four grains, pulverized; pulverized epecac and castile soap, each, twelve grains; mix well, and take about a grain, or what you can lay on the point of a small pen knife, three times a day, before eating. If diarrhea is produced, reduce the dose. A decoction of blood root is the best mouth wash. Almost invariably a certain cure. Have tried it myself. The patient should make free use of ale or strong beer, as a tonic.

FOR COUGH AND PAIN IN THE CHEST.—Equal parts of hoarhound tops; elecampane roots, and young william roots and tops. Boil until strength is extracted adding boiling water as it decreases. Then strain, and add sufficient sugar to make very sweet. Boil down to a thick syrup. For a *tight* cough add a tea spoonful "tincture of lobelia" to each pint, when cold.

FOR A COUGH.—Two ounces gum arabic; one-half pounds licorice ball; two ounces rock candy, dissolved, two ounces blood root; two ounce water. Mix well; and take a small quantity often.

FOR PILES.—White, or black, oak bark, boiled down, with alum added. Wash the parts frequently. Never known to fail. M. A. T., *Lockport, N. Y.*

GOOSEBERRY PUDDING.—Mash one pint stewed gooseberries; when cold stir in two oz. sugar; add two oz. butter and two of sugar beaten to a cream two oz. grated bread, three eggs, beaten; stir all in in turn; line pudding dish with puff paste, *pour in*, and bake one-half hour.

INDIAN PUDDING.—Two quarts scalded milk, one-half pint meal, one-half tea-cup molasses, salt and spice; bake one-half hour.

PASTE PUDDING.—Make a paste of one egg and flour; boil three quarts milk; shred the paste fine and stir in; when cold, add nine beaten eggs, salt, sugar and nutmeg.

WONDERS.—Two pounds flour, three-quarters lb. sugar, one-half lb. butter, nine eggs; add mace and rose water.

CUP CAKE.—One cup butter, one do. milk, two of sugar, four of flour, 3 eggs, 1 teaspoon cream tartar, one of soda.

ORANGE AND ALMOND CAKE.—One-half lb. puff paste, roll very thin, lay orange marmalade over it one-quarter inch thick, four oz. almonds cut up, mixed with two oz. sugar and whites of two eggs beaten; lay over the marmalade, bake in moderate oven.

SPONGE CAKE.—Three eggs, one cup sugar, one of flour, one teaspoon cream tartar, half do. soda.

MUFFINS.—One quart sour cream, four eggs, four cups flour, one teaspoon soda.

CREAM CAKE.—One pint sour cream, three eggs, one teaspoon soda, one cup sugar, spice.

SPONGE CAKE.—One lb butter, one of sugar, one of flour, one of citron, two teaspoons ess. lemon, one of cream tartar, one-half soda, yolks twenty eggs.

LADY CAKE.—Same as above, only use the whites, instead of yolks.

APPLE PIE.—One quart scalded milk, one pint grated sour apples, two eggs, sugar and spice.—**A FARMER.**—*Clarkstown, Rock Co., N. Y.*

Editor's Table.

JANUARY PREMIUMS.—The competition for January Premiums has resulted as follows:

1. I. W. BRIGGS, West Macedon, N. Y., \$20.
2. JAMES LITTLE, Seneca, C. W., \$15.
3. JOHN L. BURKHOUGH, Pennington, N. J., \$10.
4. SAMUEL GRAY, Reily, Ohio, \$9.
5. JAMES H. HANNING, Morristown, C. W., \$8.
6. JONATHAN MILLER, Berrysburg, Pa., \$7.
7. D. C. HOUSBERGER Rainham Center, C. W., \$6.
8. W. B. EDWARDS, Center Lisle, N. Y., \$5.

The premiums will be immediately paid. The mails of late have been very irregular, and it is just possible that some of our agents may have mailed letters which ought to have reached us in time but have not, and that had their letters been duly received they would have taken a premium. If such should prove the case, we will pay, in addition to the above, the premium to which they would have been entitled had their letters been received. To enable our agents to determine this matter, we would say that Mr. EDWARDS has sent us FIFTY-THREE subscribers; and if any one has sent us more than that number they will please write immediately, and they shall have the Premium to which they are entitled. The above Premiums, however, will be paid whether such delay has or has not occurred.

Premiums for Short Essays.

The time for competing for our Premiums for Short Essays has now (Feb. 2d) expired. We have received six essays on the Management of Sheep; three on the Management of Swine; two on the Management of Horses; three on Butter Making; four on the Cultivation of Winter Wheat; six on the Cultivation of Indian Corn; three on the Cultivation of Onions; two on the Cultivation of Potatoes; two on the Use of Lime as a Manure; four on the Best Means of Destroying Weeds; three on the Best Means of Destroying Mice, Rats, and other Vermin; two on the Management of a Prairie Farm; six on the Best Method of Fencing a Farm; four on the Influence of Agricultural Papers, and the Duty of Farmers to Write for them; nine for the best answer to the question, "Why do Farmers so generally neglect their Gardens? and the best means of rectifying the evil;" three for the best answer to the question, "Is the Cultivation of Fruit on a more extended scale desirable?"

In the Ladies' Department we have received *ten* for the best Dozen Domestic Receipts; *nine* for the best answer to the question, "Is a residence in the Country or City most conducive to high mental culture, beauty of person, health, happiness and usefulness?" *fourteen* for the best answer to the question, "Is it right to ask the women folk to milk the cows during the busy season?" three on Drying Apples, Peaches, Plums and other Fruit; seven for the best answer to the question, "What can mothers and daughters do to make farm life attractive to their sons and brothers, and prevent them from leaving the farm to engage in mercantile or professional pursuits?"

The above essays are in the hands of competent judges. The premiums will be awarded as soon as they make their decision, and as many of the essays as possible published in the March number.

On the following subjects we have received only one essay each; and as it is impossible in such a case to say

which is *best*, we will leave the matter open till the first of April:

- On the Relative Advantages of Employing Horses or Cattle in Farm Labor;
- On the Cultivation of Spring Wheat;
- On Growing Grass Seeds;
- On the Best System of Rotation;
- On the Most Economical Mode of obtaining Fertilizing Matter other than Barn-Yard Manure;
- On any Insects Injurious to the Farmer;
- On the Advantages of System in Farming Operations;
- On Cutting Hay, Corn-Stalks, and other Fodder, for Horses and Cattle;
- On the Management of Permanent Grass Lands;
- On Underdraining;
- On Planting Trees on the Prairies, for Shelter, Fuel and Timber;
- On the Benefits of Agricultural Fairs;
- On the Benefits of Farmers' Clubs, and the Best Plan for their Organization;
- On the Cultivation of Apples;
- On the Cultivation of Plums;
- On the Cultivation of Flowers

For the best reasons why our Agricultural Societies should *not* offer premiums for a public exhibition of Lady Equestrianism.

On the following subjects no essays have been received, and we still continue our offer of a Book of the value of One Dollar for the best article (not to exceed a page of the *Farmer*) on these and the above subjects. We trust our correspondents will give us their views on these important matters. If only one essay has been received on any subject by the first of April, the premium will then be awarded to the writer:

- On the Management of Milch Cows;
- On the Management of Young Stock and Working Cattle;
- On Cheese Making;
- On the Cultivation of Rye;
- On the Cultivation of Barley;
- On the Cultivation of Oats;
- On the Cultivation of Peas;
- On the Cultivation of Beans;
- On the Cultivation of Broom Corn;
- On the Cultivation of Millet;
- On the Cultivation of Crops for Soiling Purposes;
- On Growing Clover Seed;
- On the Cultivation of Turnips, Ruta Bagas, Mangel Wurzel, and other Root Crops;
- On the Management and Application of Barn-Yard Manure;
- On the Use of Unleached Ashes as a Manure;
- On the Use of Leached Ashes as a Manure;
- On the Use of Salt as a Manure;
- On the Use of Peruvian Guano as a Manure;
- On the Use of Superphosphate of Lime as a Manure;
- On the Advantages of Forethought in Farming Operations;
- On Subsoil Plowing;
- On the Advantages of Stirring the Soil in Dry Weather;
- On Irrigating Grass Land;
- On the Best Plants for Hedges—their Management, &c.;
- On the Management of Woodland;

HORTICULTURAL SUBJECTS.—On the Cultivation of Pears;

- On the Cultivation of Peaches;
- On the Cultivation of Small Fruits—Strawberries, Raspberries, Currants, Gooseberries and Blackberries;

On the Cultivation of Cranberries.

The advantages of shelter for Gardens, and the best means of providing it;

On the Management of a Farmer's Garden;

FOR THE LADIES.—For the best reasons why our Agricultural Societies should offer premiums for a public exhibition of Lady Equestrianism.

A SLIGHT MISCONCEPTION.—In an article on Barn-yard Manure, in our last number, we stated that plaster, (sulphate of lime,) in the dry state, would not decompose, or "fix," carbonate of ammonia. One of our contemporaries, edited by a gentleman of considerable scientific reputation, agrees with us on this point, but appears to labor under a misconception as to the cause. He says:

"But it must be recollected that Plaster of Paris does not possess power in a dry state, or when applied to dry manure; only when the sulphuric acid has been set free by water will it act upon ammonia.

Now, plaster is not decomposed by being dissolved in water. The sulphuric acid is not set free. The reason why plaster will convert carbonate of ammonia into sulphate of ammonia when in solution, and will not do so in a dry state, is referable to a chemical law propounded by BERTHOLET, but which we have not space to expound at this time. We allude to the matter merely because the subject is one of practical importance, and one on which there is much difference of opinion; and we fear that the truth of our statement may be questioned by intelligent scientific farmers, if the effect is ascribed to a wrong cause.

We would also remind our contemporary, that the article, "Peat and Peat Charcoal as Absorbents of Ammonia," given in connection with the article in which the above extract occurs, should be credited to the *Genesee Farmer*.

CONSUMPTION OF MEAT.—The cities of New York and London consume, as nearly as possible, the same quantity of meat in proportion to their inhabitants, or about half a pound of meat per day for each person. As compared with London, however, there is much more beef consumed in New York than mutton. The Americans, rather than the English, are entitled to the appellation of "Beef-eaters." South Down mutton commands a higher price than beef in England; and if our mutton was as good as the English, the consumption would be much greater, and the price proportionally higher. "English mutton, brought out by the last steamer," is to be found at many of the principal saloons in Boston and New York. Whether it has ever cropped the sweet herbage of the chalk downs of "Merrie England" or not, we will not undertake to decide.

SOAKING SEED PREVIOUS TO PLANTING.—It is the practice of many to soak cucumber, squash, melon, and other seeds, previous to planting. A correspondent says that "although the seeds sprout quicker, the plants will not be as healthy and vigorous as if the seed was sown without soaking, before a shower." What is the experience of our readers?

FEEDING HOGS.—A correspondent at Greenwich, Ohio, writes us that he killed a lot of hogs last fall, 210 days old, which weighed 256 lbs. each, dressed. They were fed well all summer and fall, and eat eleven bushels of corn each. They were of the "common breed," and our correspondent would like to know "if the Suffolks can beat this."

THE RURAL ANNUAL FOR 1857.—The first edition of the *Rural Annual and Horticultural Directory* for 1857 was exhausted before half our orders were supplied, and many of our friends had to wait longer for the work than they or we desired. As it was unavoidable, however, we trust they will excuse the delay. We think they will find it worth waiting for. Commendatory notices of the work are pouring in upon us from every quarter, and it promises to rival the circulation of the most popular works of the day, in the other departments of literature.

It contains, besides a great variety of matter interesting to every farmer and gardener, articles on Rural Architecture, with several beautiful designs of cottage, suburban, and farm houses, prepared expressly for the *Rural Annual*. On laying out a small Fruit and Kitchen Garden, with a list of the best varieties of fruits, directions for the preparation of the ground, &c., with a fine engraving: On the cultivation of Strawberries, Raspberries, Blackberries, Currants, Gooseberries, &c., with engravings and descriptions of the best varieties, &c.: On the management of Hedges, with illustrations of the best modes of training, &c.: On the Kitchen Garden: On the management of Grapes in cold houses, with engravings showing the best mode of training, &c.: On planting an Apple Orchard, best varieties for different localities, &c.: On the Architecture of Lodges, School Houses, &c., with two beautiful engravings: On building a Stable, with plan and description: On the breeds and management of Poultry—profusely illustrated: On Ornamental Planting, Landscape Gardening, &c., with numerous illustrations: On the Advantages of Shelter, &c. Also, a corrected list of Fruits recommended by the American Pomological Society, with lists of Nurserymen and Agricultural Implement Makers in the United States and Canadas. The whole comprising a work of 144 pages, which for usefulness and beauty should be in the hands of every one interested in Rural Pursuits.

We send it, postage paid, for TWENTY-FIVE CENTS a copy.

In Clubs of Eight, we send the *Genesee Farmer* and *Rural Annual* for FIFTY CENTS the two.

To every one sending us eight subscribers to the *Genesee Farmer*, at the lowest club terms of THIRTY-SEVEN AND A HALF CENTS each, we will send one copy of the *Rural Annual*, postage paid, for his trouble.

PROFITS OF BUTTER MAKING.—We have received a communication from an anonymous correspondent, criticizing "A. S. B.'s" article on "Cows and Butter Making" in the last number, and asking if "Dora" and "Ruby" will knock under to his cow "Jessie;" but he forgets to tell us the amount of butter obtained from "Jessie," the quantity of food consumed, cost of keeping, &c. Without these particulars, we are unable to judge. If our correspondent will give us his name, we will return the article for his correction in these respects, and will then publish it.

AN EGG WITHIN AN EGG.—H. J. BRUNNER, of Nazareth, Pa., says that some 12 years ago a neighbor's hen laid two eggs, as large as a common sized goose egg; inside one of which was contained another of the size of an ordinary hen's egg, the interstices between the shells of the smaller and larger eggs being filled with the white of egg (albumen). The smaller egg was perfect in every respect. After laying the second egg, (which was not examined,) the hen laid down and died.

ANNUAL MEETING OF THE U. S. AGRICULTURAL SOCIETY.—The Fifth Annual Meeting of the United States Agricultural Society was held at the Smithsonian Institute, Washington, January 14th. The receipts of the Society during the past year have been about \$40,000; expenses, almost the same. The next Fair of the Society will be held at Louisville, Ky. Its citizens have raised a guarantee fund of \$30,000. Resolutions were adopted recommending the purchase of Mount Vernon, and the establishment of an Agricultural College and Experimental Farm by the National Government. A great trial of implements (except reapers and mowers, for which some other place will be designated,) is to be held in conjunction with the next Fair at Louisville. Committees were appointed to take the matter in charge; and also other Committees to memorialize Congress in respect to an Agricultural Department; to examine the merits of the Chinese sugar cane; and one to inquire into the cause and cure of the "Hog Cholera," which is making sad work among the swine in some parts of the country. The following officers were elected:

President—MARSHAL P. WILDER, Mass.

Secretary—B. P. POORE, "

Treasurer—B. B. FRENCH, Washington, D. C.

Executive Committee—Gov. KING, N. Y.; GIBSON MALLOREY, Ky.; Dr. ELWYN, Pa.; D. J. BROWNE, D. C.; FREDERICK SMITH, N. H.; Dr. STEVENSON, Ind.

AN INTERESTING FACT.—The recent investigations of Prof. WAY, Chemist to the Royal Agricultural Society of England, have brought out a curious fact, which may throw light upon the *rationale* of some important practices in agriculture. Rain water contains ammonia and nitric acid, and it is from these two substances that the nitrogen of plants is obtained. A series of examinations of the water discharged from underdrains, shows that it contains *less* ammonia and *more* nitric acid than rain water. Rain water filtering through the soil, then, parts with its ammonia, but dissolves out nitric acid from the soil or manures. How is this nitric acid formed in the soil? Probably, says Prof. WAY, from the oxidation of nitrogenous manures; and he recommends a more perfect admixture of manures with the soil as the most likely means to prevent the formation of nitric acid, and the loss of nitrogen from leaching. It appears to us, too, that if the manure was thoroughly decomposed before applying it to the land, it would not only be easier to mix it ultimately with the soil, but there would be less nitric acid formed, and consequently less loss.

BOUND VOLUMES.—In reply to several inquiries, we would say that we can furnish bound volumes of the *Farmer* for the years 1847, '8 and '9, and for 1852, '3, '4, '5 and '6. They are handsomely bound in half sheep. The price is \$1 per volume. If sent by mail, 25 cents additional must be sent to prepay postage. We have a few volumes for 1856, bound in paper, which will be sent, postage paid, for 75 cents a volume. Those who wish them should send early.

CHEESY BUTTER.—If the writer in the last *Farmer*, on butter-making, wishes to avoid the cheesy substance, as he chooses to call it, by allowing milk to stand some time for the cream to rise, he can skim it every day, and thus let it stand as long as he chooses. But, of course, butter will not be as good when cream or milk stands too long. M. S. B.—Aurora, N. Y.

OSAGE ORANGE HEDGES AT THE WEST.—The editor of the *Boston Cultivator*, SANFORD HOWARD, Esq., who made a tour through the Western States last year, was disappointed with the appearance of the osage orange hedges of Illinois and Iowa. He says: "Of many miles of what are called hedges, we scarcely saw a rod that would be considered a fence." This is attributed to careless cultivation; but even where they had been well managed, "there were various dead spots, caused, probably, by the winter." We are sorry to hear such a poor account of the hedges of the West, from such good authority. We still hope, however, that a better system of cultivation will yield more encouraging results. In regard to the dead spots, it would seem that they are a necessary evil in all hedges; even in England it is rare to see any considerable length of hedge without imperfect spots, and yet no one doubts the adaptability of the hawthorn to the climate of England.

THANKS, KIND FRIENDS!—We are under great obligations to the numerous friends of agricultural and horticultural improvement for their disinterested labors in extending the circulation of the *Genesee Farmer*. Up to this date (January 29) we have on our books *more than double* the number of subscribers we had this time last year. We have had to reprint the January number three times, and our paper this month is delayed a few days in consequence of this unexpected demand. We shall spare neither labor nor expense to make the *Farmer* the present year worthy of this great circulation. We must remind our friends, however, that the "old *Genesee Farmer*" has always been "The Practical and Scientific Farmer's Own Paper," and while we make it the *cheapest*, it rests mainly with them to say whether it shall be the *Best* farmer's paper in the country. If they will make it their medium for a free interchange of ideas on the various topics of rural life, our labors will be comparatively light, and the interest and usefulness of the paper greatly increased.

DESIGNS FOR COTTAGES, FARM HOUSES, &c.—H. J. BRUNNER, of Nazareth, Northampton Co., Pa., writes us that the "designs of cottages, farm houses, &c., in the *Genesee Farmer*, have been turned to good use in our neighborhood,—several houses having been built during the past year, and several others now in contemplation to be built, according to plans and designs laid down in your useful journal." This is encouraging, and we shall endeavor to make this department of our paper still more valuable.

SPARE THE BIRDS.—A bill has been introduced into the New York State Senate, which provides that it shall not be lawful for any person to kill or destroy, upon any land not owned by himself, any of the following birds, under a penalty of \$10:

The robin or redbreast, blue bird, swallow, martin, or mosquito hawk, woodpecker, cat bird, high-tailed thrush or brown thrasher, mourning dove, meadow lark or marsh quail, summer red bird, hanging bird, spider bird or wax bird, ground robin, bobolink or rice bird, and sparrow.

CURE FOR WARTS ON CATTLE.—Rub tar on them until they are removed. This is an effectual remedy. B. D.—Jackson, Pa.

TO DESTROY RATS AND MICE.—The best plan I can devise, is to remove everything they can subsist on out of their reach. AMOS CLIFT.—Albion, N. Y.

A GOOD HINT.—Order is said to be Heaven's first law, and would it not be well for every one who tills the soil to note down on paper every item of practice he intends to pursue the coming season—prepare a list of whatever seeds he designs to plant or sow, and the times at which it should be done—note where they may be obtained, and have them ready and labeled—prepare strips of shingle, pointed at one end and smooth on one side, to mark the name of the thing sown with a lead pencil? They will last, as we know from experience, the season through; and when you wish to gather seed from any article, they are very handy as a means of reference. These, and many other similar expedients, your readers will find productive of much convenience and

ORDER.

THE CONNECTICUT BIDDY OUTDONE.—One of my hens (a mixture of the Shanghai and common breeds) laid an egg in September last, which was nearly as large as a goose egg. We kept it several days to show to the neighbors that came in, on account of its uncommon size; it was then broken open to cook, when out dropped another egg of full size. It was then kept several days longer to exhibit, on account of its still greater curiosity. The shells of both were hard, and their contents perfect. Certainly this is an age of wonders and improvements, and the biddys don't mean to be behind the times. J. S. RUBY. —*Gaines Basin.*

The Annual Meeting of the New York State Agricultural Society will be held at Albany, February 11th. There will be an exhibition of fruit, grains, fat meat, &c. The new Rooms of the Society will be dedicated on Thursday, the 12th, and addresses delivered by several gentlemen. It is hoped that there will be a general attendance of farmers, and all friends of agriculture.

POTATO DISEASE.—ALEX. TITUS, of Yorktown, Westchester Co., N. Y., writes us that with him "potatoes that grow nearest the surface of the ground are the ones that rot the most." Does this correspond with the observations of others?

RURAL ANNUAL FOR 1856.—We have still on hand a few copies of the *Rural Annual and Horticultural Directory* for 1856, which will be sent, postage paid, for 25 cents.

Notices of New Books, Periodicals, &c.

IRVING. By the author of "Amy Lee" and "Grace Hall." New York: D. APPLETON & CO. 1857.

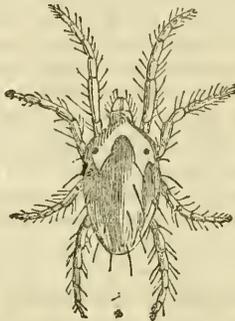
An interesting novel in two volumes, illustrating some of the good and bad features of English aristocratic society, and the injurious tendency of a narrow and exclusive system of education. The author's style is agreeably fluent, but somewhat discursive. Had the work been pruned down to one volume, it would have been more acceptable.

WEBSTER'S COUNTING-HOUSE AND FAMILY DICTIONARY.—Webster's Dictionary needs no commendation. Its great merits are fully appreciated wherever the English language is spoken. The Counting-House and Family edition, recently published by G. & C. MERRIAM, Springfield, Mass., cannot be recommended too highly. For sale by D. M. DEWEY, of this city. Price \$1.50.

Inquiries and Answers.

RED SPIDER IN GREEN HOUSES.—I wish to inquire through the pages of your highly valuable paper for a method of exterminating that pest of the green house, the red spider. The fumes of tobacco have proved very efficacious in destroying the "green fly," but are of no avail for the destruction of the red spider. W. H. ELLIOTT.—*Kenawee, Ill.*

The red spider (*acarus tillarius*) is one of the gardener's greatest pests, though so small as to be scarcely visible to the naked eye. Color sometimes yellowish, at others brown, but often a dull red; on each side of its back is a blackish spot. We annex a cut of one the natural size, (which our engraver has made somewhat too large,) and



RED SPIDER, NATURAL SIZE AND MAGNIFIED.

one as seen through a powerful microscope. The following method of destroying them will prove efficacious in a mixed collection of green house plants:

Take half a peck of quick lime in lumps, dip the lime into water until it is pretty well soaked; then place it in a tub and put upon the lime one pound of sulphur. Allow it to stand in the green house until it has done steaming; keep the house shut up close while steaming. Then add three gallons of soap-suds, or water with soft soap in it; let it stand until quite clear. Then to half a gallon of the clear liquid add one gallon of clean water, and syringe the plants all over, and especially under their leaves. Repeat this two or three evenings. Repeated syringing will keep them away.

CURRANT BUSH WORM.—I would beg to call your attention to a green worm, which proves very destructive to our currant bushes in this section. It makes its appearance early in June. In the first place it is very small; it eats the leaves, and in about a month the bushes are completely stripped of their leaves, at which time the worms are about an inch in length. If you, or any of your readers, would be so kind as to inform us how to prevent the ravages of this destructive little worm, you would no doubt confer a great favor on many of your readers in this community. D. C. HOUSBERGER.—*Rainham Center, C. W.*

The description of the appearance and habits of this worm, given by our correspondent, is so general that we are unable to decide definitely what it is. In this vicinity, the currant bush has no such enemy—in fact, few of any sort. LOUDON mentions the grub of a small saw-fly (*Nematodes ribesii*) as being very destructive to the gooseberry and currant in some parts of Great Britain; and as large quantities of these plants are annually imported into this country, it is probable that the grub is here also, although

it may not be the one mentioned in the inquiry. The following is LONDON'S description—but as there is a difference in climates, the dates mentioned will not apply here: "The grub is of a green color, shagreened with minute black tubercles, which it loses at its moult. Early in March, if the weather is favorable, the first flies issue from their chrysalis, a few inches below the soil, at the foot of the bushes. Soon afterwards, the females deposit upon the under surface of many of the leaves, along the ribs of each leaf, a series of eggs, which appear like strings of small, pellucid, delicate, oblong beads. A single fly will fill up the ribs of many leaves; and as several generations are produced in one season, the destruction of a single fly at an early period, is the prevention of some thousands of voracious successors. The following times of hatching, &c., may be relied upon as accurate: On the 9th of April the eggs were laid; on the 19th they were hatched; and if the temperature is mild the caterpillars grow rapidly, and from their number soon destroy the foliage of the chosen bush. They usually continue in the caterpillar state about ten days; when, dropping to the earth, they penetrate below the surface, and change into a small brown chrysalis; in which dormant state they remain from fourteen to seventeen days, and then come forth as flies, which in a day or two lay their respective quantities of eggs." The remedies recommended, are diligently killing the flies in early spring, and collecting the egg-bearing leaves and burning them. After the worms are hatched, we should think dusting the plants with ashes, when the dew is on, would be beneficial in preventing their ravages. Our correspondent would do well, the coming season, to study closely the habits of this enemy, and, if possible, discover some method of destroying them, and communicate to us the result of his investigations.

(H. B. WHITE.) HORSE DISTEMPER.—If your horse is but slightly affected, he will probably recover without the aid of medical treatment. If he has a bad cough, with considerable discharge of mucous from the nostrils, energetic treatment should be resorted to immediately. If the pulse is strong as well as quick, it is well to bleed. The throat should be well stimulated, externally, with tincture of cantharides (Spanish flies). If the bowels are costive, two or three drachms of aloes may be given; but otherwise, the following ball may be resorted to at once, and administered night and morning, for several days:

Salt Petre, - - - - - 2 drachms.
Tartarized Antimony, - - - 1 drachm.
Digitalis, powdered, (Foxglove), 1 scruple.
Linseed meal, - - - - - 2 drachms.

To be made into a ball with Barbadoes tar. Bran mashes, carrots, and other soft food, should be given; and if the horse is quite sick, oatmeal or linseed gruel.

UNDERDRAINING.—I fear you will think me troublesome, but I want some information about thorough draining. I see the drainers are at issue about draining slopes: some run across, others perpendicular, to the slope. On a very moderate slope—say two or three feet to the hundred yards—on stiff, impervious clay and subsoil, which is best?

What difference is made here, or has practice shown any to be necessary, in the size and distance of the openings, in consequence of our heavier rains and greater heat?

I see that Mr. MEEHAN allows as a task in "honest"

i. e. clear of stone—clays, 22½ yards of five foot cutting, averaging four feet, to each laborer. With drains 26 feet apart, that gives to each hand, it seems, only 2 perches per day, since 3½ yards only in breadth are drained by each ditch. This seems dreadfully slow.

I am only operating for experiment, on a garden and one or two plots, and I shall drain according to the Essex plan, as given by Mr. PUSEY, in WILSON'S Rural Cyclopaedia, page 92—article, Draining.

Has the difference in evaporation here and in England ever been determined? It would seem that a greater degree of evaporation would justify a shallower system of drains. *—Virginia.

Will our esteemed friend, Mr. JOHNSTON, of Geneva, or some others who have the requisite experience, answer the above?

(JAMES WILLIAMS.) MACHINE FOR SAWING WOOD.—Mr. E. D. HALLOCK, of this city, has invented and is manufacturing a machine which, we think, will be just the thing you wish. It is a drag and circular machine, combined—the drag being used to saw up the bodies of the large trees, while the circular is used for sawing the limbs and small trees. It can be driven by any of the ordinary Horse Powers. For further information, see Mr. HALLOCK'S advertisement, in this number.

(HENRY M. SELDEN, Haddam Neck, Ct.) YELLOW LOCUST SEED.—You can probably get Yellow Locust seed from THOMAS MEEHAN, Germantown, Philadelphia, Pa.

(N. J. BLAKSLEE.) Dr. HARRIS' Treatise on Insects is out of print, and cannot be had.

TAN-BARK AS MANURE.—Can tanners' spent tan-bark be converted into manure? What is the best method of treating or preparing it ready for use? A. G. H.

ADVERTISEMENTS,

To secure insertion in the FARMER, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. TERMS—Two Dollars for every hundred words, each insertion, PAID IN ADVANCE.

PEACH TREES.

WE have on hand, for spring sales, a large stock of the above, consisting of a few of the best varieties, which we offer as follows: Yearling Trees, 1st size, \$70 per 1000.

" " 2d " \$50 per 1000.

For general assortment of Nursery Stock see advertisement and Catalogues.

ELLWANGER & BARRY,
Mt. Hope Nurseries, Rochester, N. Y.

January 20, 1857

By a typographical error in the Spring edition of our wholesale Catalogue, Peach trees were designated as "two years old" instead of one year, as intended. feb 1—1t E. & B.

FRUIT TREE SCIONS FOR SALE.

200 Scions of Choice Apple, ten kinds, twenty of each, including King and Primate, for \$1. Also, ten kinds of Cherries, including Kirtland's varieties, fifteen of each, for \$1. Also, ten kinds of Pears, fifteen of each kind, for \$1. Also, ten kinds of Plums, ten of each, for \$1, Willow Cuttings, \$1.50 per 1000. Horse Chestnut Seedlings \$10 per 1000.

W. T. & E. SMITH, Geneva, N. Y.

Feb. 1—1t*

NEW CHINESE POTATO.

DIOSCOREA BATATAS.—Roots from 4 to 9 inches long, at \$3 per dozen, and small Seed Tubers (can be sent by mail) at \$1 per dozen, or \$7 per 100, with Description and Directions for Culture.

J. M. THORBURN & Co.
15 John St., New York.

THORBURN'S WHOLESALE PRICED LISTS

OF VEGETABLE, Field, Tree and Flower Seeds for 1857, will be mailed to Dealers, enclosing a 3 cent stamp.

J. M. THORBURN & Co.,
15 John St., New York.

feb—1t

FRUIT AND ORNAMENTAL TREES.

WILLWANGER & BARRY, PROPRIETORS OF Mr. HOPE'S NURSERIES, Rochester, N. Y. solicit the attention of Nurserymen, Planters and Dealers to the extensive stock now on their Grounds, which they are prepared to offer for the ensuing Spring Trade.

Their Nurseries were established eighteen years ago, and now occupy 40 acres of land, closely planted. The stock now growing is the most varied and extensive ever offered in this country, including—

- Standard Apples for Orchards;
- Dwarf Apples on Paradise and Doucain stocks;
- Standard Pears on free stocks 1 and 2 years;
- Dwarf and Half Standard Pears on Quince Stocks, 1 and 2 years from bud;
- Standard Cherries on Mazzard Stocks, 1 and 2 years from bud.
- Dwarf do. on Mahaleb " " "
- Plums, Dwarf,
- Peaches, Apricots, Nectarines, Quinces, &c.
- Grapes, Hardy Native and Foreign varieties;
- Strawberries, Gooseberries, Currants, Raspberries, Rhubarb and Asparagus.

The collection of bearing Specimen Trees is the largest in the United States. Besides, the proprietors devote their entire time and attention to the business, and they are thus enabled to guarantee the correctness of articles sent out.

THE ORNAMENTAL DEPARTMENT

Is equally complete, and comprises

ORNAMENTAL DECIDUOUS TREES of all kinds, including the most elegant Weeping Trees for Lawns and Cemeteries.

EVERGREEN TREES of all the most desirable species, and of all ages and sizes. More than a million of trees are in a saleable state, and are offered low, in quantities.

EVERGREEN AND DECIDUOUS FLOWERING SHRUBS, including almost everything suitable for the climate of the United States.

ROSES—Upwards of three hundred of the most beautiful varieties, carefully selected during many years culture and experiment.

PEONIES—About eighty superb varieties, including many new and very distinct sorts.

PHLOXES—Seventy-five select and beautiful sorts, all of recent introduction.

CHRYSANTHEMUMS—Fifty of the finest Pomponé or Daisy varieties, newly introduced.

CATALOGUES.

The following Catalogues will be sent gratis to all who apply and enclose a stamp to pre pay postage:—

- No. 1.—A Descriptive Catalogue of Fruits.
- No. 2.—A Descriptive Catalogue of Ornamental Trees, Shrubs, Roses, &c., &c.
- No. 3.—A Catalogue of Dahlias, Verbenas, Petunias, and select green house and bedding plants.
- No. 4.—A Wholesale-priced Catalogue for Nurserymen and Dealers. feb—1t

TO FARMERS AND GARDENERS,

THE Subscribers offer for sale 40,000 barrels of their New and Improved **POUDETTE**, manufactured from the night-soil of New-York city, in lots to suit purchasers. This article (greatly improved within the last two years) has been in the market for eighteen years, and still defies competition as a manure for Corn and Garden Vegetables, being *Cheaper, more powerful than any other*, and at the same time *free from disagreeable odor*. Two barrels (\$2 worth) will manure an acre of corn in the hill, will save two-thirds in labor, will cause it to come up quicker, to grow faster, ripen earlier, and will bring a larger crop on poor ground than any other fertilizer, and is also a preventive of the cut worm; also, it does not injure the seed to be put in contact with it.

The L. M. Co. point to their long-standing reputation, and the large capital (\$100,000) invested in their business, as a guarantee that the article they make shall always be of such quality as to command a ready sale.

- Price, delivered in the city free of charge and other expense—
- | | |
|-----------------------|--------|
| One barrel, - - - - - | \$2.00 |
| Two " - - - - - | 3.50 |
| Five " - - - - - | 8.00 |
| Six " - - - - - | 9.50 |

And at the rate of \$1.50 per bbl. for any quantity over 6 bbls.

A Pamphlet, containing every information, will be sent (FREE) to any one applying for the same. Our address is—

THE LODI MANUFACTURING CO.,

feb 1—4t Office, 60 Cordland St., New York.

FOR SCHOOL EXHIBITIONS.

THE EXHIBITION SPEAKER AND GYMNASTIC BOOK, illustrated with Seventy Engravings; contains Plays, Farces, Tableaux, Tragedies, Dialogues, Comic and Humorous Pieces, Sentimental Speeches, &c., &c. The action is all described and written out so that Teachers and Scholars have no difficulty in performing them well on the rostrum. The Gymnastics and Callisthenics are of great importance to Teachers and Pupils in Schools and Academies. Remit Eighty-seven cents in stamps, and you will get the book by mail, free of postage. Address

D. M. DEWEY,
Rochester, N. Y.

feb 1—2t

EVERYBODY SHOULD HAVE

A COPY OF THE

Rural Annual and Horticultural Directory

For 1857.

IT contains a valuable article on Rural Architecture, accompanied by beautiful designs of Farm Houses, Cottages, Suburban Residences, &c. Also, practical treatises on the management of Fruit, Flower and Kitchen Gardens; Cultivation of Grapes, Strawberries, Raspberries, Blackberries, Gooseberries, Currants, &c.; Plan for laying out a Fruit Garden and Ornamental Grounds, with the best Location for Fruit Trees, Vegetables, &c., together with useful articles on the Rearing and Management of Poultry, and various other subjects of interest to every lover of rural life. It contains, also, a very full and correct List of Nurserymen in the United States and Canada; a List of Agricultural Implement Makers, &c., together with a List of the Fruits Recommended by the American Pomological Society as corrected at its last meeting held at Rochester September 1856. It is a work of 141 pages, illustrated with eighty engravings, and is alike attractive and useful, containing as much matter and more information than many dollar books.

This beautiful and valuable work will be sent, postage paid, to any address, on the receipt of 25 cents in postage stamps.

JOSEPH HARRIS,

Pub. of Genesee Farmer, } ROCHESTER, N. Y.
and Rural Annual. }

NEARLY READY—WITH SUGAR CANE SEED GRATIS!

Chinese Sugar Cane, & Sugar Making.

ITS HISTORY, CULTURE, AND ADAPTATION TO THE SOIL, CLIMATE AND ECONOMY OF THE UNITED STATES,

With an account of the Various processes of manufacturing SUGAR.

Drawn from Authentic Sources, by CHARLES F. STANBURY, A.M., late Commiss'r at the Exhibition of the Industry of All Nations, at London. Price Twenty-five cents.

Published by C. M. SAXTON & Co., 140 Fulton St., New-York. To persons enclosing 25 cents and a three-cent P. O. Stamp to us, we will send the above book and Seed enough to Plant two rods square feb 1—1t C. M. SAXTON & Co., 140 Fulton St., New-York.

CHINESE SUGAR CANE SEED.

THE Subscribers have made arrangements for, and have now on hand a moderate supply of the seed of the above plant, well ripened, and may be relied on as GENUINE.

Sufficient to plant about one-fifth of an acre in drills 4 feet by 18 inches, put up in strong linen packages, sent by mail, post paid, on the receipt of One Dollar, or a proportionate quantity by express, at purchaser's expense.

Order early to secure the seed. Also, a full assortment New and Fresh GARDEN SEEDS, imported and American growth.

Field Seeds and Grain of the most desirable kinds. Flower Seeds, the finest variety. Full Catalogues, gratis on application.

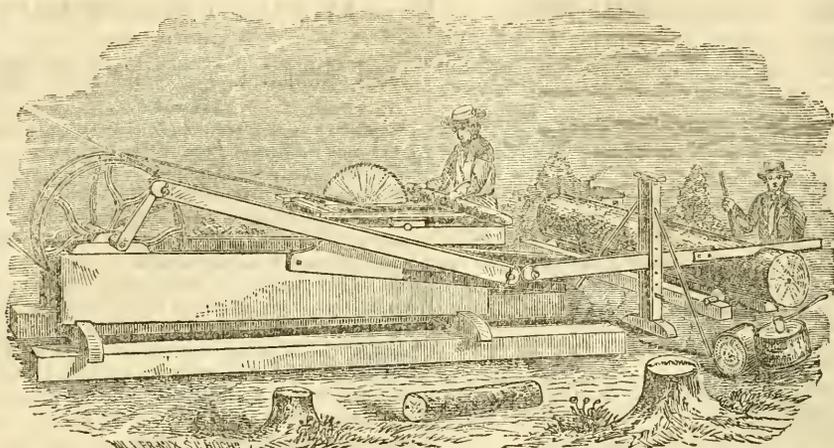
HENRY D. EMERY & Co., feb 1—2t No. 204 Lake St., Chicago, I.I.

SUGAR CANE SEED.

EMERY BROTHERS have, at much expense and trouble, obtained a supply of Genuine Seed of the Chinese SUGAR CANE, or "*Sorghum Saccharatum*," successfully grown, fully matured, and sure to vegetate, from Mr. R. PETERS, of Georgia, which they will supply in strong linen packages, with full directions for its culture, for ONE DOLLAR, each containing sufficient quantity for one-fifth of an acre. All orders should be accompanied with TWELVE CENTS, or Stamps if to be sent by mail. Pamphlets containing a compilation of reliable information, experiments and success of the plant since its introduction in this country, furnished gratis (post-paid) upon receipt of a three cent postage stamp.

EMERY BROTHERS, Proprietors Alb. Agricultural Works, 52 State St. Albany. feb 1—2t

LINNEAN GARDENS AND NURSERIES, FLUSHING, N. Y. Founded 1743. WM. R. PRINCE & Co. will send to applicants their Descriptive Catalogues of Fruit and Ornamental Trees, Roses, Bulbs, Seeds, &c.



HALLOCK'S COMBINED CROSS-CUT AND CIRCULAR SAW MILL.

PATENT APPLIED FOR.

This Machine received the First Premium at the New York State Fair at Elmira, 1855, and again at the Society's last Fair, held at Watertown, Oct. 1856.

THE above cut represents a new and useful Machine recently perfected by the subscriber. It is made strong and durable, and is very simply constructed, requiring little skill to operate it, and is not liable to get out of order. It can be driven by any of the ordinary Horse Powers used in threshing. The saws can be both used at one time, or separately, as may be desired. In sawing wood the limbs and small trees can be cut by the circular saw, while the cross-cut is sawing the bodies of the larger trees: it is useful in sawing barrel heading, stave and shingle bolts, slitting fence stuff, boring caps, and a variety of other purposes for which such saws are employed. Within the last year some important improvements have been made—such as strengthening the castings, attaching a balance wheel to the circular saw, fitting the main shafts to receive augers for boring caps. He also furnishes a band with the combined Mill, not included heretofore, and as now manufactured, can be fully recommended and warranted to be durable and substantial. It has been thoroughly tested—about fifty of them having been sold within the last year, which have given entire satisfaction. With the recent improvements, it will be found superior to any like machinery. The Combined Machine has one circular saw for cutting cord wood, limbs, poles, &c.; and one cross-cut or drag-saw, for sawing logs into stove-wood or other lengths; the single Machine has only one cross-cut or drag saw; the double Machine has two drag saws, which are made to order, to cut any desired length. The prices of the Improved Machines are as follows:

Combined Machine, with one circular and one drag saw,.....	\$65 00
Single Cross-Cut, with one drag saw,.....	40 00
Double Cross-Cut, with two drag saws,.....	55 00
Cap, Auger and Slitting arrangements, extra.	

The Combined Saw Mill is capable of cutting from 30 to 40 cords of stove wood per day, if properly driven. It is warranted to be well made, of good materials, and to work as represented.

WEBSTER, Jan. 4, 1856.

MR. E. D. HALLOCK—Dear Sir:—The Cross-Cut and Circular Saw Mill Combined, which I purchased from you, works to my entire satisfaction, and I can cheerfully recommend it as a very useful and labor-saving machine. It can be operated with three or four horses on the sweep power, in running either saw separately; and five or six horses will furnish sufficient power to run both at the same time, sawing wood as fast as the same number of men can furnish it to the machine.

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SHERMAN FERRIS.

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T. C. PETERS, Darien, N. Y.

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D. CLARK.

Union, Sept. 1, 1856.

Harlem Leeds Co., C. W. Oct. 1, 1856.

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E. W. SHELDON.

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The circulation of the *Genesee Farmer* during the past year has been nearly double what it was in 1855. Encouraged by this success, we have determined to make great improvements in the present volume, and to spare neither labor nor expense in our efforts to make this Pioneer Agricultural Journal still more worthy of that extensive patronage it has so long enjoyed.

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The large circulation of the *Genesee Farmer* is mainly due to the voluntary efforts of the friends of agricultural improvement in all parts of the country. We cannot reward them. The consciousness of their disinterested labors must be their recompense. Wishing to do what we can, however, we offer the following

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1. To every person who sends **EIGHT** Subscribers, (*at our lowest terms of thirty-seven and a half cents each*), we will send, postage paid, a copy of our beautiful twenty-five cent book the *Rural Annual* for 1857.

2. To every person who sends us **SIXTEEN** subscribers, (*at our lowest club terms of thirty-seven and a half cents each*), one extra copy of the *Genesee Farmer*, and one copy of the *Rural Annual*.

3. To every person sending us **TWENTY-FOUR** subscribers, as above, two copies of the *Rural Annual*, and one extra copy of the *Farmer*, or any agricultural work valued at 50 cents, postage paid.

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6. For **FORTY-EIGHT**, five copies of the *Rural Annual* and one extra copy of the *Farmer*, or any agricultural book valued at \$1.25, postage paid, or five extra copies of the *Farmer*.

For larger numbers, books or papers given in the same proportion.

To save expense to our friends, we pay the postage on all these works, and persons entitled will state what they wish sent, and make their selections when they send orders; or if their list is not complete, if wished, we will delay sending until the club is full.

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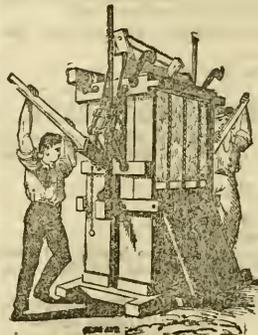
Every Subscriber to the *Farmer* should have a copy of the *Rural Annual*. In clubs of eight, we send the *Farmer* for one year, and a copy of the *Rural Annual* for fifty cents. In other words, for **FOUR DOLLARS** we will send *eight copies* of the *Farmer* for one year, and eight copies of the *Rural Annual*. For **EIGHT DOLLARS** we will send *sixteen copies* of the *Genesee Farmer* and *sixteen copies* of the *Rural Annual*, and one extra copy of each for the person who gets up the Club.

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Contents of this Number.

Shall we have to abandon Wheat Growing in West. N. York?..	41
Items suggested by the January number.....	48
The Number of Pounds in a Bushel.....	44
Feed of Poultry.....	44
Plowing Land for Corn.....	45
A Marsh and its Products.....	45
Cultivation of Potatoes.....	46
Potatoes on Clover Sod.....	46
Cultivation of Potatoes without use of the Hand Hoe.....	47
Wintering Calves.....	47
Agricultural Reading.....	47
Winter Barley.....	48
Agricultural Papers, and the Duty of Farmers to Write for them	48
Experiments with the Chinese Sugar Cane.....	48
Oa Raising Onions.....	49
Docking Horses a Barbarous Practice.....	49
Piles in Pigs.....	49
Another "Chapter from Experience".....	50
Productiveness of Headlands.....	50
Disease in the Feet of Cattle.....	50
The Sheep Rack.....	50
Care of stock in Winter.....	51
Cultivation of Beans.....	51
Racks for Feeding Sheep.....	51
Headropes for Cattle.....	51
Seed Corn.....	51
Smithfield Club Cattle Show.....	51
Experiments on Sowing a Mixture of Different Varieties of	
Wheat.....	52
Notes for the Month, by S. W.....	53
Cheap Board Fence.....	53
A Cheap Fence.....	53
Condition Powders for Horses.....	53
Devon Bull Puritan.....	54
A Mark of Progress.....	54
Quarter-ill in Cattle.....	54
To Keep Meat Fresh and Sweet.....	54

HORTICULTURAL DEPARTMENT.

Annual Meeting of the Western New York Fruit-Growers' Association.....	55
Tomato Plants.....	56
Select Pears on the Quince Stock.....	57
Re-grafting old Apple Trees.....	58
Horticultural Operations for February.....	59
A Question for Horticulturists.....	60
A Simple Instrument for Laying out Curves.....	60
Rust and Cracking of the Pear.....	61
A new Apple Tree Worm.....	61
Tar on Fruit Trees.....	61
The "Big Tree" of California.....	61

LADIES' DEPARTMENT.

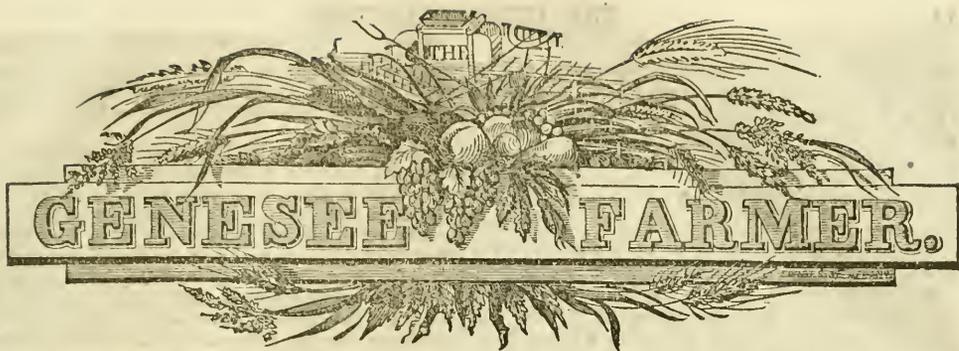
Original Domestic Receipts.....	63
---------------------------------	----

EDITOR'S TABLE.

January Premiums.....	64
Premiums for Short Essays.....	64
A slight Misconception.....	65
Consumption of heat.....	65
Soaking Seed Prevents to Planting.....	65
Feeding Hogs.....	65
The Rural Annual for 1857.....	65
Profits of Butter Making.....	65
An Egg within an Egg.....	66
Annual Meeting of the U. S. Agricultural Society.....	66
Bound Volumes of the Farmer.....	66
Cheesy Butter.....	66
Osage Orange Hedges at the West.....	66
Thanks Kind Friends.....	66
Designs for Cottages, Farm Houses, &c.....	66
Spare the Birds.....	66
Cure for Warts on Cattle.....	66
To Destroy Rats and Mice.....	66
A Good Hint.....	67
The Connecticut Biddy Outdone.....	67
To Secure Male or Female Progeny at Will.....	67
Potato Disease.....	67
Rural Annual for 1856.....	67
Notices of New Books, &c.....	67
Inquiries and Answers.....	67

ILLUSTRATIONS.

Dwarf Pear Tree.....	57
Instrument for Laying out Curves.....	60
The "Big Tree" of California.....	62
Devon Bull Puritan.....	64
Red Spider, Natural Size and Magnified.....	67



HINTS ON SPRING WORK.

DRAWING OUT MANURE.—The first favorable opportunity should be seized to draw out the manure from the barn yard. To what crops, at what time, in what condition, and in what manner, manure should be applied, must be determined by circumstances. The loss from spreading manure on the soil and leaving it exposed, is far less at any season of the year than many able writers have supposed; and early in the spring, when we may reasonably expect considerable rain, the loss, if any, is very trifling.

CLOVER FOR SOILING PURPOSES.—The high price of labor renders the general introduction of the system of soiling adopted with such advantage in some parts of England and the Continent, of questionable economy with us. Nevertheless, every farmer will find it to his advantage to have at least enough green food to feed his horses and cattle at noon, when at hard spring and summer work. For this purpose, all things considered, we know of nothing better than red clover. If you have any young clover near the barn, draw on to it and spread, as soon as possible, a few loads of well rotted manure. This will give the clover an early start, and force it rapidly forward. A bushel of plaster to the acre, also, will generally be beneficial. This will furnish excellent green food as early as any other crop; it does not impoverish the land, and the clover can afterwards be allowed to go to seed with advantage.

MANURING CLOVER SOD FOR POTATOES, CORN, &c.—It is the opinion of many of our best practical farmers, that there is no better preparation for potatoes and corn than a one or two year old clover sod, plowed immediately before planting, turning under a good coat of young clover. For corn, this method is found beneficial, not only in furnishing organic matter for the plants, but also in providing a more palatable food for the wire worms, which feast on the young clover and leave the corn alone. It may be questioned, however, whether providing an abundance of food for the worms will not tend to their increased multiplication. We have had no experience on this point. If it is intended to manure the corn, there can be no doubt that it may be applied with considerable advantage on the clover sod early in the spring. It will greatly increase the growth of the clover early in the season, and there will be much more to turn under, or to eat off by cattle and sheep if desired. If it is intended to use plaster on the corn, we believe it would do quite as much good sown broadcast on the clover at this time, as if

applied in the usual way on the hills soon after the young corn is out of the ground.

SOWING CLOVER SEED.—In England, clover is usually sown with barley. In the wheat growing sections of this country, nearly all our clover is sown upon winter wheat in the spring. It is frequently sown upon the snow, towards the latter part of March, and is seldom injured by the frosts which sometimes occur after it is sown. We prefer, however, to wait till the ground is sufficiently dry to roll or harrow. Make it a rule to sow all your wheat land with clover. You cannot grow too much of this fertilizing crop. All the barley land should also be sown with clover, unless you intend to sow wheat on it as soon as the barley is off. If you plant corn on barley stubble, we think it will pay to sow clover on the barley, for the purpose of turning under as a manure. The quantity of clover seed sown per acre varies from eight to fourteen pounds. Ten pounds is usually quite enough, though we are decidedly in favor of plenty of seed—grow your own, and scatter it with a liberal hand.

ROLLING, HARROWING, AND SOWING WHEAT.—On soils where the wheat plant is apt to be thrown partially out of the ground by the frosts of winter, there can be no doubt that rolling it in the spring is decidedly advantageous. We must say, however, that we have seen more marked beneficial results from harrowing wheat in the spring than from rolling it. The practice of hoeing wheat in the spring is quite common in England, and some farmers have adopted the practice with advantage in this country. Labor is higher here than in England, but we have not the slightest hesitation in saying that few things would pay better than hoeing wheat in the spring. Of course it would be necessary to sow the wheat in drills, from twelve to fourteen inches apart. In this connection we may quote a passage from MORRIS'S *Cyclopedia of Agriculture*—the most recent and reliable work on British agriculture extant: "On all soft soils which throw up a profuse growth of weeds in winter and spring, the broadcast system of sowing wheat is always precarious, and drilling should always be preferred. There is no advantage, however, in drilling wheat on any kind of land, unless the system is followed up by either horse-hoeing or hand-hoeing in spring, as weeds grow fully faster in the vacant spaces between the rows than where the seed has been sown broadcast, and the plants are standing somewhat evenly on the surface." This opinion is worthy of consideration. If we cannot afford to hoe our wheat, we might at least harrow it; and we be-

lieve drilling, in conjunction with harrowing, will be much better than sowing broadcast. GARRETT'S Horse Hoe (a cut of which we gave in our last volume) is used to a considerable extent in England for hoeing wheat. It will get over ten acres a day, on level fields free from stones. Hand-hoeing in England costs from 75 cents to \$2 per acre, according to the nature of the land, the hoe used, &c. The Dutch or scuffle hoe, is much the most expeditious and effective implement when the land is not too hard or foul.

SOWING PLASTER.—It will expedite spring work to sow plaster before the busy season of plowing and sowing commences. Some farmers in Western New York are in the habit of sowing plaster on their winter wheat, for the benefit it has on the young clover. The plaster, however, has a tendency, it is said, to retard the ripening of the wheat, and the practice, therefore, cannot be recommended in districts affected with the wheat midge. Where plaster can be obtained for less than \$5 per ton, a bushel per acre may usually be sown with much benefit on all the clover land. An easy and expeditious way of sowing plaster is to take a one horse wagon, and place a half barrel or wash-tub at the hind end; into this put the plaster. The sower seats himself on a board laid across the box, with his back to the horse. A boy drives the horse at a moderate pace, and the man scatters the plaster from sixteen to twenty feet in breadth.

PLOWING.—It is desirable to plow as early as possible, but it is a great mistake to commence before the soil is in good working condition. Land plowed while wet can never be got into fine tilth. For winter wheat this is not of such great importance, as the frosts of winter mellow the ground, and winter wheat requires a somewhat rough "pasture;" but for the growth of maximum spring crops, it is absolutely essential to have the land thoroughly pulverized and mellow. On this account, the practice of flapping over wide furrows is poor economy. Better plow an acre a day, in a thorough manner, seven inches deep and ten inches wide, than three acres in the balking way adopted by some farmers. It is next to impossible to make a good seed bed on land plowed in this manner.

FENCES.—If any new fence is to be made, it should be attended to this month, and the old fences should be examined and repaired. This work should not be delayed.

FUEL FOR SUMMER.—If not already done, saw up and store away in the wood-shed a sufficient quantity of fuel to last at least through the summer. Black-ash, basswood, elm, &c., split up fine and well seasoned, may be used in summer; reserve the hard wood for winter.

FRAUDS IN ARTIFICIAL MANURES.

Prof. S. W. JOHNSON, of Yale College, recently delivered a lecture on "Frauds in Manure," before the Connecticut State Agricultural Society, from which we make a few extracts, as given in the *Homestead*:

"The conclusion being arrived at, that our farmers do, and will continue to use artificial fertilizers, the lecturer approached the question, 'Can we command the supplies we need without danger of fraud?' In answer, he replied, 'The farmer is entirely at the mercy of the manufacturer, or dealer. The tempta-

tions to dishonesty are very strong on the one hand, and on the other the ignorant blunders of the manufacturer make abundant place for the farmer's money to leak away.'

"A fraud is selling to the farmer an adulterated or damaged fertilizer of established name, or imposing upon him worthless or inferior fertilizers under names calculated to deceive, and at exorbitant prices.' The points being granted, that where there is a chance there will be men found to deceive, and that where accurate knowledge is not necessary in a business, it will not be employed, Mr. Johnson proceeded to state the extent to which the manufacture and sale of fraudulent manures had been carried in England, France, and Germany, especially in the first named country. We cannot do justice to these extracts without giving them entire; they showed, however, a depth and ingenuity of villainy hardly conceivable without a knowledge of the facts. As we Yankees are not apt to acknowledge our inferiority to the English in anything we shall probably not have to wait long before a development of American ingenuity in this line will show our equality, even supposing that proof of no such frauds can now be shown. He said, 'The readers of the agricultural papers know the history of the Chilean guano fraud, which Joseph Harris, Esq., now of the *Genesee Farmer*, detected and traced to its source with so much fearlessness and ability. The result of my own numerous analyses of manures, which have been published in the *Homestead*, during 1856, show undeniably that there are yet among us men who think the farmer fair game for their plucking; and if any are disposed to excuse dealers generally from intention to defraud, the matter becomes perfectly plain, when certain of these who have never denied the accuracy of these results, thus virtually admitting their justness, covertly try to intimidate agricultural editors from copying them.'

"In England there are large manufactories of a substance called the 'The Article,' which under this name is sold to dealers, wherewith to adulterate guano.—And besides, guano is adulterated in many other ways. Mr. Nesbit estimates the lowest sum of which the English farmer is defrauded in guano alone at £100,000 per annum.

"Manufacturers get their wares analysed and the chemists state their analyses in such a way as to mislead the buyer. * * * * *

"Not only is it impossible often, to judge by analyses as they are stated, but a sample of a fertilizer sent to the chemist, the analysis of which, arranged so as to favor the dealer as much as possible, is published, may be a very different substance from that sent to market. * * * * *

"The manufacture of manures has but just commenced; companies are forming all over the country. In Boston, New York and Philadelphia, companies have been recently formed with capitals of \$100,000 each, for the conversion of slaughter-house refuse, blood, etc., into manure. The speaker went on to say and to show, that it is for the farmers by a united effort now to dictate to the traders, least by the creeping in of a multitude of 'tricks of the trade,' the matter gets beyond their control. We should say, 'we know what we want, and you must fulfill your promises—we will be humbugged neither by names or by prices—good goods at fair prices we want, and these only will we have.' This stand we may now take, by having such manures as are in market extensively analyzed. He went on to show how these samples should be taken from different lots sold to farmers, and at different times to test the uniformity of manufacture, etc. Chemical Analysis is a much surer test than the application on the field for reasons already specified,

and in the long run on a soil, and with a crop adapted to the use of any particular fertilizer, it will agree perfectly with practical results. In fact, under any circumstances which would give any value to practical results, *chemical analysis will give the same in a few days time.*"

ITEMS SUGGESTED BY THE FEBRUARY NUMBER.

LAST MONTH'S *Farmer* seems to me one of the most valuable numbers yet issued. Most of the articles are of a practical character, and not the least in importance is the leader on the question of abandoning

WHEAT GROWING IN WESTERN NEW YORK.—Very nearly had I come to the conclusion that "it did not pay" to grow wheat, but another year's experience convinces me that it will prove profitable under certain circumstances. What these circumstances are, your article well indicates. It is a fact which every farmer should "take to heart," that *rich, well drained soils hasten the maturity of crops.* In corn, this is often observed, but it is no less true of other grains. Sow only those lands *best adapted* to wheat, putting them at first in the *best condition* for the crop, and selecting early maturing varieties, and the general product will be such, *in spite of the midge*, as to pay well for the outlay. We must have wheat, and *good wheat*, in Western New York, and I believe that it can yet be grown profitably. Last season, our crop averaged fifteen bushels; the midge injuring it probably about five bushels per acre. Let every farmer study your article, and sow just as much wheat as he can on *right soil*—as to fertility, character and drainage—in season, and in good order, *and no more.*

A MARSH AND ITS PRODUCTS.—This calls for no special comments at my hands, only I would suggest to "B. F." that *the mud* thrown from the bottom of the ditches is one of the most valuable "products" of his marsh. If he will take pains to spread it around—not leave it, as is too often the case, on the banks of the ditch—he will find it of the very highest value for any crop, and there will be a marked difference in the yield of the ground to which it is applied, if well mixed with it, for several years.

POTATOES, ETC.—Here are three good bits of experience in raising potatoes—dull indeed must the reader be, if he cannot profit from them all. I prefer growing "potatoes on clover sod," for I can do so with the least expense and trouble.

AGRICULTURAL READING.—An interested reader of agricultural papers is always getting ahead of his neighbors who do not read. But it is a fact, not to be disputed, that some who *read* make a very poor use of their learning. Their practice lacks common sense, and so results in a failure many times, while the man of practical sense succeeds with only observation to guide him. How much better might he do with the added observation of hundreds as sensible as he, which a good paper would bring before him?

DOCKING HORSES.—"A barbarous practice," surely, and one which ought to be reformed altogether. That, and the tight check-rein, are unnecessary inflictions on this valuable animal.

RE-GRAFTING OLD APPLE TREES.—It is too often thought that all one has to do to renovate and renew an old apple orchard, is to cut back and re-graft it to new varieties. But this is not so. Well does "H. E. H." remark: "The result is simply to cause what

life there is in the whole tree to be expended in a 'course of sprouts,' which in another year become more feeble than the old limbs were, and the tree, galvanized into life for a time, falls into incurable decline." *Manuring and cultivation* are required; plenty of the one, and the other of a thorough character.

LIMA BEANS.—One of your Rochester correspondents says: "Lima beans" are good, but unless started in a hot-bed very uncertain." I never had much difficulty in growing Lima beans in my garden, since the first few years. But I save my own seed, and carefully save the earliest ripe for planting. Three years since, I started some early on pieces of inverted sod, and when warm weather came the third and fourth leaves started. They were planted out, and at the same time a few additional hills of dry beans, and the one ripened beans as soon as the other. As to the Horticultural bean, I never tried it. For a dwarf bean, the China Red-eye is excellent and early.

THE PREMIUM ESSAYS.—The March number promises to be one filled with articles from new pens, called out by your liberal offer. I anticipate a rare treat from their perusal, and will not extend my "Items" farther, that you may have the room for better matter. B.

Niagara Co., N. Y.

NOTES FOR THE MONTH BY S. W.

BLOOD HORSES.—It would seem that there is much diversity of opinion among the magnates at the Annual Meeting of our State Agricultural Society at Albany, where, just now, the breeders of bovine animals are death upon the trial of fast horses at our County Fairs! Verily, they contrive to manage these things more profitably, if not better, in Vermont, where fast, blood horses are the great paying *staple* that puts millions in the pockets of Vermont farmers, while our New York farmers, vulgarly speaking, have to "dance in the hog-trough." Since the advent of railroads, fast horses have been growing more and more into favor, at enormously increased prices, and the canny Vermont Yankees have not been slow in reaping the golden harvest. It is well known that fat, sleek horses and serious coachmen are no longer tolerated in the thorough-bred city of Boston, and that even quiet families there, must now have fast horses, even at exorbitant prices; and why should our New York farmers be discouraged from competing with Vermont for the trade?

CHINESE SUGAR CANE.—The New York *Tribune* recommends the South African variety of the Sorghum as better for syrup or sugar than that from North China. So far from this, the Cafriarian plant is earlier than the variety contributed by M. MARTIGNY from China, and it is said to be better for its cereal and forage product, but less rich in saccharine than the Chinese. See *Bulletin d'Acclimatation* of the 9th of September, page 451.

A QUESTION FOR HORTICULTURISTS.—Your Rochester correspondent plowed a piece of virgin soil that had lain twenty years a village common; the esculents he got from it the first year astounded him by their rapid growth. His mistake the second year was in applying that crude horse manure; this friable loam did not need its mechanical effects, as it might, had it been tenacious clay; and its chemical effects were injurious to all delicate plants, from their very

incipiency, as it disturbed that happy equilibrium of organic matter which nature leaves in her best virgin soils. Crude, unfermented manure, if I mistake not, destroys what BERZELIUS calls the "electro-chemical relation of bodies," and the proportions with which they combine with each other. Unfermented manure is worth more intrinsically than that which is fermented, but it is not so readily available; hence, I trench mine in deeply for those gross feeders, sweet corn, mangel wurzel, &c., planting cucumbers and cabbages on the same ground next year without manure. If cabbage plants are set out early on such a soil, every cabbage will head well, without a single exception, and many of them will have to be turned down in early fall to prevent the head from cracking open. Cucumbers and melons will do nearly as well, but I can say with your correspondent that the maximum crop of cucumbers I ever got was among large oak stumps, on a pure virgin soil of vegetable mould. Hence, it is safe to say that the analytical chemist is not yet born whose receipt for soil ingredients can equal Nature's mechanical and chemical combinations, when she is supplied with the means in the debris of her own organism.

SHALL WE ABANDON WHEAT GROWING IN WESTERN NEW YORK?—Your February leader was to the point on this subject. Your plea for more nitrogen, as the indispensable renovator of this cereal, than the plowing in of green clover can give, is well sustained by experiments in this best of wheat-growing counties. Here is an old Pennsylvania *Deutsche* farmer, who has paid for two or three large farms from the avails of wheat and clover seed, sold from his two hundred acre clay farm on the Cayuga Lake shore. I asked him why he could not get the same bright, plump wheat he did twenty-five years ago.—Strange to say, instead of charging his failure to the *wecrit*, he replied that he had depended too much on manuring with green clover, because this system answered so well at first he thought it would last always; hence, he kept no other animals than four heavy plow-horses, two or three cows, a few sheep, and hogs to make his family pork, on his two hundred acre farm. When his wheat began to deteriorate, it was too late—his habits had been too well confirmed for him to turn stock farmer all at once, and he is now too old. He now admits that he always kept too few sheep; and that had he kept more stock, plowed in less green clover and pastured it sometimes instead, his wheat crops would not have thus sadly deteriorated. I well remember the time when this man exchanged his beautiful ridge farm of friable clay loam, only one hundred acres, for this clay farm of two hundred acres. Some shiftless farmers thought he had made a hard bargain, but the German knew what he was about. He set two steel-coated PEAcock plows to work in one large field, plowing that virgin soil which his predecessor had only harrowed over, and then the interminable dragging and rolling. That quiet farm, which seemed to enjoy a perpetual Sunday before, now seemed to me in a fair way to be plowed and harrowed and rolled to death; but at harvest the wheat came off, not in hundreds, but in thousands of bushels, and then the green clover was turned under in full bloom, while other large fields were cut before wheat harvest for hay, and again in the fall for seed. That this fine surface drained farm now fails to produce even medium crops of inferior wheat, only gives significance

to the old Scotch adage, "No cattle, no manure—no manure, no corn."

A PLEA FOR LIMA BEANS.—Your correspondent recommends the Horticultural bean as the best pole bean. Without disputing the fact, I must say that the Lima bean is the greatest bearer and the best pole bean I have ever cultivated, and as early as any other pole bean; yet, like a tropical plant, it bears early and late, and to have early beans you must save for seed the earliest ripe and the largest pods. Pinch off the vines after they have reached the top of an eight foot pole. A few of the later product may be killed by an October frost, but the yield without them is legion. Along this outlet they may be planted by the 20th of May, but farther back a week later. Plant shallow. S. W.

Waterloo, N. Y.

CORRECTION—PLASTER FOR CLOVER, &c.

EDITORS GENESEE FARMER.—I notice you have made a great mistake in my article in the February number. You say I plastered every *seventh* year; it should have said *every year*. Plaster, I consider, has done a great deal of good on my land. It was the first thing that enabled me to raise good crops. Plaster gave me plenty of clover; clover hay made good cattle, excellent sheep, good manure, and this made good corn and wheat, and plenty of straw, and this kept increasing my manure, and still increasing my crops, or, at least, keeping them up when the crops of those who did not take the same course were failing. I sow all my grass land with plaster nearly every year, and it gives me abundance of grass, which not being too closely fed off, enriches, at very little expense, the land for grain crops. Thirty years ago I said I would sow plaster if it cost forty dollars a ton, and I would do so still. I never pay over four dollars, and generally but three, per ton, and yet, strange to say, many farmers never sow a bushel!

The true way is to sow plaster on all the grass land every year. By so doing you are feeding for grain. At least all the grass and clover land that is dry should be dressed with plaster; on wet or very damp land, it has little or no effect. Thirty-five years ago, a very worthy neighbor told me I should ultimately ruin my land if I sowed plaster; but I find he was mistaken—it continually increases in fertility.

When I said Mr. WRIGHT should not plow up sub-soil in spring for corn, I did not wish to be understood as opposing deep plowing. When I want to deepen my soil, I do it when I fallow,—and that I can best do after corn, being less draft than breaking up a sod. I have noticed for some twelve years that the plows are generally made for easy draft, in place of doing justice to the land; that is, they are made rather to please the plowman than to make good crops. *The land-side is made to run a good depth, but the right hand side of the share runs quite shallow.* It makes the plowed land look smooth, but it is a great injustice to the crops. It makes the plows sell well to those who do not look under the furrow. I suppose you have seen ribbing done before sowing peas, in order that they might be thoroughly covered. I have done it for both peas and wheat; but, thanks to large wheel cultivators, we can loosen the surface at one-fifth the labor. Now, many plows in use are ribbing the land under the furrow. This fault should be remedied without loss of time. The first time I

noticed this was in the Trial of plows at the State Fair at Poughkeepsie, in 1844; but I have always felt a reluctance to come out against it; being something new, I expected to have many to oppose me; but you cannot have a very easy draft, and do justice to the soil. In spring, go into a field where you see a team plowing stiff sod with ease, turn up a few pieces of the furrows, and I think you will find it ribbed under them.

I cannot answer "Virginia" about draining, for I cannot tell what he wants.

We are busy getting out clover seed—have already got one hundred bushels, and expect fifty or sixty more. Draining pays in clover as well as in wheat; it does wonders for both.

Tell the farmers in Monroe county to drain and manure, and they will not have to give up wheat raising. When I was draining against the freezing out of wheat, I little thought that I was draining against the wheat midge, but such has proved to be the case. On some black muck soils, however, I find that draining is not a sure preventive against the midge, but I think clay or sand put on the surface, after draining, would help it. JOHN JOHNSTON.

Near Geneva, N. Y.

A FEW FACTS FOR THE GENESEE FARMER.

MESSRS. EDITORS:—In response to your call for facts, I will attempt to pen a few which have fallen under my observation in my *brief* experience in agricultural matters, which you can use as you think best.

The *first fact* I will notice, and one which may not be of much consequence in *itself*, but give more significance to some *other facts*, is the *fact* of my "whereabouts." I "hail from" Northern Pennsylvania, a hilly country, with a cold climate, where winter prevails about six months in the year. There is quite a variety of soil within a few miles circumference, from sand and gravel to heavy clay and loam. The soil most common in this section, and with which my *facts* are mainly connected, is a heavy, clayey loam, mixed with stones and gravel, and resting on a *subsoil*, very hard and impervious to water, and usually called "hard-pan." This hard-pan varies in depth from one to two feet from the surface. Underdraining has been tried a *very little* here, but *enough* to convince those who *have* tried it of the great benefit resulting from it—rendering the soil more *tillable and productive*, by draining off the surplus water held by the hard-pan, and which must otherwise pass off by the *slow* process of evaporation.

My neighbor G., influenced by the high reputation and flattering recommendations of the subsoil plow, a few years since purchased the "animal," and has used it on his land, which is of the same "hard-pan" aforesaid. His neighbor B. considers it a failure, and thinks that G.'s crops are growing *less* instead of *more* where the subsoil plow is used, the advocates of said plow to the contrary notwithstanding. Will those who recommend the "subsoil plow" be kind enough to state the *kind of soil* on which it is used? I believe it will not work equally well on *all soils*. Will any one give their experience in the use of it on the "hard-pan land" that I have mentioned?

On the use of ashes, leached and unleached, I can speak with confidence, having seen very encouraging

results from their use on grass. On a meadow of the aforesaid soil, which had been in grass several years and nearly run out, leached ashes were spread on in the fall at the rate of about forty bushels to the acre. The next season the hay crop on that part treated with ashes was *more than double* what it was on the rest of the field, according to the extent; and the season following the effects of the ashes were nearly as great—the grass growing more luxuriantly, and keeping green longer than the rest. *Unleached* ashes were tried in *smaller* quantities, with similar effect. For reclaiming grass land that has been cropped for years, I think there is no manure, accessible to *all* farmers, that is as beneficial as *wood ashes*, as they contain, to a great extent, those elements which have been exhausted from the soil by the growing plants. More anon. JUVENIS.

Jackson, Pa.

[REMARKS.—We are much obliged to our correspondent for the above facts, and hope to hear from him frequently. We have never known subsoil plowing *injurious*; but we have in several instances seen diminished crops on land that was plowed unusually deep for the first time. The Michigan double plow is frequently called a subsoil plow, but it is a misnomer. The true subsoil plow follows in the furrow made by an ordinary plow, and breaks up the subsoil without bringing any of it to the surface. The Michigan double plow, on the other hand, brings the subsoil to the surface. This, though generally beneficial, is sometimes injurious for a few years. Will our correspondents, in writing on this subject, please bear this distinction in mind, and inform us which of these two plows is used?—Eds.]

ERGOT THE CAUSE OF FOUL IN THE FEET.

MESSRS. EDITORS:—In the February number of your useful paper, at page 50, C. FORD makes an inquiry concerning a "Disease in the Feet of Cattle," and asks, "Do any of your correspondents know anything about it?"

I have formerly known much of this disease, but of late years, since our farmers have paid more attention to the rotation of crops, there has been comparatively little of it in Western New York. I have visited many herds of cattle where this disease prevailed, and in some instances where the whole herd was affected, and in every instance have been able, by examining the mow, or stack from which the cattle were fed, to point out the cause, which has been no other than the *ergot*, or *smut*, upon *speargrass*. The speargrass so affected was cut, in most instances, from fields that had been in grass many years. In some years the grass produces more of this smut than in others, on the same land. Farmers are hardly aware of the injury done to their crops and stock by the *Cryptogamous* plants, most of which are poisonous, and some very injurious to crops, as rust on wheat, smut on spring rye, wheat and oats, rust or disease on potatoes, &c; and in some instances, I have known the health of families injured from the use of food which contained parts of those plants. I was once consulted by a family where every member was complaining of pain in the feet and limbs. I was convinced that some part of their food was the cause, and therefore inquired into and examined all articles of their diet, and found that they were making use

of spring rye for bread; and on examining the rye, before ground, found a large portion of *ergot*, or spurred rye, in it, and on inquiry found they had taken no pains to separate it before grinding. They afterwards separated the ergot, and all recovered, although they continued to use the rye for bread.

I once raised a fine crop of spring rye, which had much ergot upon it. I had it drawn to the barn in dry weather, when much of it shelled off and dropped upon the barn floor. After the rye was all in the barn, the floor was cleaned up, and the rye and ergot which dropped upon the floor was cleaned from dust and put into the swill barrel, without my knowledge. The next morning my hogs were fed from the barrel; towards evening I noticed the hogs were all lying down, and seemed to have nearly lost the use of their limbs. On inquiring into the cause, I found the ergot in the barrel from which they were fed.

If Mr. FORD would avoid the disease in cattle that he complains of, let him pay proper attention to his rotation of crops; and should he find any piece of speargrass with ergot upon it in his mowing grounds, he had better allow it to remain upon the land for manure than put it in his barn to feed to stock.

New Haven. G..

A DOZEN RECEIPTS WORTH SAVING.

An esteemed correspondent sends us the following receipts. They cannot be allowed to compete for our Premium for the Best Dozen Domestic Receipts, and we accordingly publish them as an ordinary communication:

SCRATCHES ON HORSES.—Rub the part affected with plaster of Paris, once a day, until a cure is effected; or, wash the part effected clean with castile soap suds, and oil it well with curriers' gurry every other day. In either case, keep the horse out of the mud.

GRAFTING WAX.—One part beeswax, two parts tallow, four parts rosin. Mix together, and work it like shoe-maker's wax.

CURE FOR THE STING OF A BEE.—Saleratus, wet with water; or fine salt applied in the same way.

TO CURE HORSE DISTEMPER.—Tar, fed with a paddle.

FOR BOTS OR BELLYACHE IN HORSES.—Half pint new milk, half pint molasses, one table-spoonful saleratus; or the following may be used: half pint vinegar, half pint soft soap, half pint gin, half pint molasses. Put them together and shake them well, and pour down while foaming.

FOR CURING HAMS.—Half pint molasses, quarter pound sugar, three ounces saltpetre, two ounces saleratus, one quart salt, to each pail of water. Make enough to cover the meat.

LINIMENT FOR WOUNDS OR BRUISES ON HORSES OR CATTLE.—Half pint alcohol, one ounce oil spikenard, one ounce British oil, one ounce oil gannum, one ounce spirits turpentine, one ounce camphor gum, one ounce soap, made fine. Put all in a bottle, and cork tight.

FOR COLIC IN HORSES.—Tie a small piece of tobacco on his bit, and exercise him moderately.

TO MAKE YELLOW BUTTER IN WINTER.—Feed carrots; or grate two ounces for each quart of cream—put it in water, and strain it in the cream.

TO KEEP BUGS FROM VINES.—Mix a table-spoonful of spirits of turpentine with a quart of plaster; put it in the hill every other day, as long as necessary. Or what is better, coop a hen with young chickens; the chickens will soon destroy the destroyers.

TO MAKE AN EXCELLENT SALVE.—Take alum, castile soap, and camphor gum, of each a lump as large as a walnut; pulverize them well, and mix with a gill of honey, cold; then melt a lump of beeswax and a lump of rosin, the size of a hen's egg, together, add them to the first, and stir until cold.

ANOTHER PROFITABLE FLOCK OF SHEEP.

MESSRS EDITORS:—I am decidedly opposed to large stories about crops, stock or any thing else; but seeing an article in your January Number, headed a "Profitable Flock of Sheep," I thought perhaps it might interest many of your readers to see the advantage of good markets, and also whether "any good thing could come out of Jersey," I give at present the following example. In the fall of 1854, Mr. GARRET LEMING, of Monmouth Co. N. J., purchased sixteen ewes from a drove of western or native sheep, for \$2 50 a head; he put a pure blooded South Down buck with them; in the spring of 1855 they produced twelve lambs, which were sold for \$105 in June; the sixteen ewes averaged a little over one dollar per head for wool; in September these ewes were worth \$4.50 per head.

Lambs sold for.....	\$105 00
Wool.....	16 00
September ewes worth.....	72 00

First cost, ewes.....	\$193 00
	40 00

Profit.....	\$153 00
Gain per head.....	9 56

Gain per head \$9.56 against a little over \$4 in Mr. SMITH's flock.

To show that this was not an extreme case, he last spring had

20 lambs from 16 ewes which sold for.....	\$100 00
Wool.....	18 00
Ewes sold for.....	72 00

	\$188 00
First cost.....	40 00

Profit.....	\$148 00
Gain per head.....	9 25

Now this gain was in eleven months, whereas Mr. SMITH's were kept sixteen months. They ran to a stack of second crop clover hay through the winter, besides which they were fed about one pint of meal apiece for about three months.

I may send you other examples, but this must answer for the present.

P. S.—These lambs were sold to butchers, not for stock, but meat. J. C. TAYLOR.

Holmdel, N. J.

PLOWING AND HARROWING LAND.

EDITORS OF GENESEE FARMER:—Have any of your numerous correspondents tested the virtue of harrowing land that has been plowed in the early part of October, with a view to be plowed in the spring again?

In plowing land there are two objects to be gained—to destroy weeds, and to turn up new portions of soil, and it is a question whether the soil thus turned up in a rough or lumpy state, would be better if left

in that condition to the action of the winter frosts, or pulverized thoroughly with the harrow, with a view to have it ready at the earliest moment for spring operations. With what little knowledge of farming I possess, with heavy soils, I would prefer the former, and with tight soils, the latter mode of treatment.

In the December number of the *Genesee Farmer*, Mr. J. C. ADAMS, of Seymour, N. Y., makes some remarks regarding plowing, which might very profitably be taken notice of by some farmers, although it is a very rare thing in this country to see what he describes. He says, "leave about six furrows wide for a single team, and more for a double team." Would Mr. ADAMS enlighten us as to the width of his furrows, for it is certain, a horse cannot turn on much less than six feet, and then the plow would naturally be three or four feet behind. Also to draw a furrow and return in the same track, appears to me a waste of time and labor.

The benighted Canadians, when they are about to plow a field, if the headlands are not already marked out, proceed the first thing to mark them out not less than fifteen feet wide, and when the body of the field is finished, plow the headlands in the same manner as any other of the ridges of the field.

ANDREW WILSON.

Augusta, near Prescott, C. W.

CULTIVATION OF POTATOES.

HAUL out and spread your manure about the first of April; then take a plow and run a furrow about the middle of your patch, from end to end; drop your potatoes into that furrow, about ten or twelve inches apart, and then turn it over and cover the potatoes with it; then run the plow on each side, throwing the furrows towards each other, and drop potatoes in each furrow, and each furrow covering a row of potatoes, until your ground is all planted; then cover with pine shats, three or four inches deep, and your work is done until digging time, when you remove the shats before digging. I can raise more potatoes per acre by this method than by any other, and with a great deal less labor. The shats keeping the ground moist and cool, the potatoes flourish and grow during the dry, hot weather of summer.

Laurel, Delaware. W.

HISTORY OF MARL AS A FERTILIZER.

THE use of marl as a fertilizer appears to have been known from the earliest ages. It is spoken of by the early Roman authors, but does not seem to have been used in Italy. Pliny mentions it as having been "found out in Britain and Gaul. * * * It is a certain richness of earth, like the kernels in animal bodies that are increased by fatness." (What does he mean by this?) Marl, he says was known to the Greeks, "for is there anything," he adds, "that has not been tried by them? They call the marl-like white clay *leucargillon*, which they use in the lands of Megara, but only where they are moist and cold." But if the Romans had not discovered marl in Italy, they were aware, as Varro and others informs us, of its value in husbandry. "When I marched an army," says Varro, "to the Rhine, in Transalpine Gaul, I passed through some countries where I saw the fields manured with white fossil clay." This seems to have been what would now be understood by us as marl. This mineral manure was used by the ancient inhab-

itants of England before the time of Pliny. A statute, passed in the year 1225 (10 Henry III.), gives every man leave to sink a marl-pit in his own ground without being fined; a proof of an early practice of improving land by means of marl. There are leases on record, granted in the reigns of Edward I. and II., which compel the tenants to make use of marl. In the first English treatise on husbandry by Sir A. Fitzherbert, entitled *The Book of Husbandry*, A. D. 1523, lime, marl, and fallowing are strongly recommended; and in *The Book of Surveyinge*, by the same author, and at the same date, lime and marl are mentioned as common manures. In a treatise on rural economy, written in the reign of Elizabeth, marl is said to have been discovered by Cole, a Frenchman, in the twelfth century. The historian prized it in his day, for he says, "It will carry barlie, wheat, and peas continually for twentie years without dung." This clay-marl is described as being of a "blewe collar, sometimes redd," fat and clammy, more adapted for loose dry land than moist, where "lyme rather serveth than this." It was considered much more durable than sand or lime, for the old adage was, "that a man doth sand for himselfe, lyme for his sonne, and marl for his grandchilde." Farmers were then mistaken, however, in expecting that it could supersede the use of dung: they sold their hay and straw, but found that no second marling would restore the quickly exhausted virtue of their land, until it had been repeatedly manured with dung; so that Barnaby Googe, in the middle of the sixteenth century, cites an old saying, that "lime and marl are good for the father, but bad for the son."—The white chalk-marl used in Norfolk, England, appears to have been in use for centuries, from the size of the oak trees growing in the old marl-pits, while the use of clay-marl seems to be of much later date.

COMPOSITION OF FAT—The fat of animals is a mixture of several chemical organic compounds, which are all distinguished by containing a very large proportion of carbon, united with hydrogen and oxygen, and by the absence of nitrogen and inorganic matters, which occur in almost all other parts of the animal body.

In the more liquid animal fat *elaien*, and in the more solid, margarine or stearine preponderates. Train oil, oil of almonds, and rape-oil, consist principally of *elaien*; butter, lard, human fat, principally of margarine; and stearine, the hardest of the three, is found in larger quantities in *suet* than in the softer fats.

The same constituents which are found in the animal fats, exist in the vegetable oils and fatty matters. Thus, both animal and vegetable oils and fats contain carbon, hydrogen, and oxygen only.

LIME ON BEANS—Leguminous crops of all kinds are greatly benefitted by lime—whether beans, peas, or vetches, as it not only increases the bulk of straw, but also greatly improves the quality of the grain.—Peas grown on newly-limed land are excellent boilers—a point worthy the attention of those who grow these for culinary purposes. Some farmers in England spread hot-lime over their beans when two or three inches above the surface, and afterwards work it into the land by means of the horse or hand hoe.

PLASTER (sulphate of lime) has a greater effect on leguminous plants, such as clover, peas, &c., than on such plants as wheat, barley, and the common grains.

Genesee Farmer Prize Essays.

ON THE MANAGEMENT OF SHEEP.

WINTER.—In the first place, there must be provided sufficient sheds and yards to accommodate all the sheep comfortably—with good running water, easily accessible. The sheds should be enclosed tight, and the feeding racks be placed in the sheds, for two reasons: first, that the sheep may have dry hay at all times, without being exposed to winds and storms; and second, that the hay may be saved, as it is a fact that full one-fourth more hay is required if it is fed to sheep out of doors. If corn is not worth more than one dollar per bushel, it will pay to feed all store sheep a half gill each per day; and lambs should have as much as that, (a gill each would be better,) or its equivalent in some other grain, no matter what it costs. Towards spring, commence feeding the ewes with roots cut fine—or what is better, clover rowen—to induce a secretion of milk sufficient for the young lambs. Clover rowen will produce as much milk as grass—so that, by providing plenty of it, the ewes can drop their lambs in March, and they will be much larger the next fall, and consequently worth much more, than lambs dropped in April or May. In a large flock of ewes, there are always some that drop dead lambs; but if the sheds are tight and well littered, the loss of lambs will be trifling. As soon as the lamb has dropped, see to it that he gets on his feet and sucks the dam immediately. If he has not strength of his own, he must be assisted. If the dam is healthy, he will seldom require assistance more than once.

SPRING.—Great care must be taken with sheep in the spring. They should be driven to shelter from every cold storm; grain must be given to them until the pastures get good; they must have salt once a week, during the whole summer, and once in two weeks during the winter. About the first of June in this latitude, or in the South in April or May, according to the climate, the sheep must be washed in running water until clean, recollecting that the water must be warm enough to make the men, standing in it to wash the sheep, sweat at their work; if colder, it is abusing both men and sheep. As soon as dry, or in about one week, they must be shorn by good hands, who do not get angry and handle them roughly while shearing them. The fleece should be folded up, flesh side out, very neatly, and packed in close, clean bins or boxes, until disposed of. The ram lambs must be emasculated, and all the lambs should have their tails cut off, at least as soon as they are four weeks old, as they bleed but little, and it does not hurt them so much as when they are older. Before turning out to grass in the spring, all the sheep should be tagged—that is, have all the wool on each side of, and under the tail, and some distance down between the hind legs, sheared close—to keep them from getting dirty and sickly. After the sheep are shorn, they should be marked with the owner's name, and put back to their pastures. They should be changed from one pasture to another as often as once a month. About the first of August, take the lambs from the ewes, and put them into good pasture, that they may not get poor. If you wish your lambs to come in March, put the ram with your ewes in Octo-

ber, (the average gestation of the ewe being one hundred and fifty-two days.) As soon as he has given a ewe one leap she should be thrown out, as more than that injures both the parent and the offspring. Use the best ram you can get, and the lambs will be good. He should be at least four or five years old—or if younger than this, or over ten years old, his lambs will be weak and puny. He should have all the grain he can eat, or he will get poor. As soon as he has served all the ewes, put him in a pasture alone; and it is better that he be kept by himself the whole year. Never use the same ram more than two seasons. Never sell the best ewes at any price. Whenever you buy a ram, buy the best, whatever it costs, and the flock will improve in quality, will be hardy and profitable.

FOR MARKING SHEEP.—Put into a pan a quarter of a pound of lampblack, two ounces of Venetian red, and linseed oil enough to make a good paint. Mark either with a stamp or brush.

TO CURE THE FOOT-ROT.—Put into a quart bottle a quarter of a pound of blue vitriol, one ounce of verdigris, and fill up with chamber-ley. Put a quill through the cork, turn the sheep on its back in a trough, open the hoof and scrape out clean with a knife all the diseased flesh, put on a few drops of the above mixture, and a cure is effected. If there are but two or three lame ones in a flock, put some of this mixture in the feet of all the sheep in the flock—with this mixture, an ounce of prevention is worth more than a pound of cure.

TO CURE THE STRETCHES.—Administer a table-spoonful of pulverized saltpetre immediately, or the sheep will soon be past all cure.

TO RESUSCITATE LAMBS WHEN CHILLED.—Give a tea-spoonful of Thomsonian No. 6 in some warm milk, a little at a time, and wrap him in warm flannel.
Westfield, N. Y. D. A. A. NICHOLS.

ON THE MANAGEMENT OF HORSES.

The colts should be kept tame. The field in which they are kept should be surrounded by a good fence, or they may acquire unruly habits, and much time be lost in hunting them when strayed from the pasture. The first and second winters keep them in a warm stable; if of brick or stone, it must be well ventilated from the top. Feed with good hay, and some bran, turnips or carrots, but not on grain, either whole or crushed, for it is binding, and will make tender-footed if not crippled horses. The third winter, if large and strong, the colt may be harnessed and driven before a light sleigh, to get it tame and used to drawing. The fourth winter work it, but not too hard, and do not forget to feed well, but not too much grain. With this treatment, colts will, by this time, make good serviceable horses. Water often, and but little at a time. In handling, be mild, but not timid. Do not drive too fast, nor load too heavy; groom well, and bed at night, to prevent rolling in the stable and getting fast; many a good horse has been lost in consequence of neglect in this respect, after being driven in the storm or till bathed in perspiration.

Canada West.

J. LEE.

ON THE MANAGEMENT OF SWINE.

TAKE a pig eight weeks old, that was dropped the first of March, and feed it nearly what it will eat—milk, slop, and a little corn. About the first of No-

ember, turn it in with the boar; note the time. After that, feed it two-thirds as much as if fattening. She should not be confined in a small place. A week before she drops her pigs, give plenty of litter, and feed all she will eat, especially when she begins to build her nest. Give all the slop she will eat. After farrowing, do not feed anything under twenty-four hours, and then about three quarts of lukewarm slop. Feed sparing for ten days, after which give a little corn, and all the slop she will eat. As soon as the grass grows, turn the sow and pigs into a good pasture of clover and timothy, with running water. Turn your milk and dish-water into a cask with bran and shorts, and let it ferment; feed this regularly twice a day, morning and evening, and not oftener. As soon as corn begins to ripen, feed all they will eat, and no more. When the ground freezes they should be provided with a warm pen, and slaughtered about the first of January.

I usually slaughter when the hogs are about ten months old, and they dress from 250 lbs. to 300 lbs. I have just slaughtered two that were two hundred and seventy-five days old; one weighed 290 lbs., and the other 306 lbs. They were well fed, but nothing extra.

M. R. BRITEN.

Spring Prairie, Wis.

CULTIVATION OF WINTER WHEAT.

[We have been unable to decide which of the two following essays is the best, and therefore award the premium to each of them.]

Two methods suggest themselves to my mind:—First, take a piece of land that has laid in clover two or three years, and graze the first crop with stock, let the second crop grow up, manure the land in the fall with all the manure you can spare, putting most on the poorer places, then later in the fall or early winter plow under the manure and clover in the following manner: Let one team go first and turn over the sod, and let a second team go behind and throw the soil upon the sod. The first plow will throw the sod and manure to the bottom of the furrow, and the second will bury them several inches deep. Plow the whole field in the same manner. In the spring, plant the field with corn, and give it good and clean culture through the summer. As early as possible in the fall cut the corn near the ground and remove it from the field, if possible, or if not, shock it up, and plow the ground in the manner above stated. The second plowing will enable you to plow deeper than the first, and to mix the manure more thoroughly with the land. Harrow until the soil is well pulverized; then sow five or six pecks of seed wheat to the acre, and turn it under about three inches; then harrow, and the work is done.

The second method is to take a piece of land, sod is the best, and manure, and plow it in May or June, in the same manner as above. In all dry weather during the summer, when it cannot be injured by tramping, turn the cattle and sheep on it at night, until the latter end of August, when it should be well cross plowed and harrowed; then about the middle of September plow it again and sow about the first of October, in the manner above stated.

About the first of October is the best time to sow

wheat in this latitude, north of this, the middle of September.

The first method I think has greatly the preference to the second. It requires but little more labor, you get a crop of clover to feed down, and a crop of clover to turn under the first season; a crop of corn of sixty to seventy-five bushels to the acre the second year, with but little labor and nearly or quite as good a crop of wheat the third year as if the field had laid fallow; and if you want it, your field is ready set in clover, which will be sufficiently thick from the seed previously turned under. Thus you may continue in rotation any length of time—clover two years, corn, manured on clover sod the previous year, followed by wheat. Our land will improve under this rotation.

The deep culture above described has a wonderful effect on the wheat and corn crops, and on the soil; it gives a good loose soil for the plants to grow in, the best protection from drouth, and draws the water from the surface in wet weather, consequently prevents, in some measure, the throwing out of the roots and winter killing.

The best remedy against rust that I know of is to furnish the plant with the necessary food, which enables it to come up thick and grow up quickly upon the land. This food can be more cheaply and easily furnished here, by plowing under clover, and such manure as we can obtain at home, than in any other way. Larger crops may be obtained by more expensive culture and manures than by the above method, but I am confident for general cultivation, and in a rotation of crops, it cannot be excelled. If the land is wet and water is liable to stand on it, sow in lands of convenient width, in a suitable direction for the water to run off, leaving the lands open in the middle. The head lands should be left open that the water may pass off easily.

I am told by an extensive cultivator of wheat, that to take recently slacked lime and mix it with water to the consistency of thin white-wash and wash seed wheat in it, that it will entirely prevent the smut.—He has practiced it for years, and not a particle of smut is to be found in his wheat.

A. G. MULINS.

Cheshers Store, Anderson Co., Ky.

CULTIVATION OF WINTER WHEAT.

WINTER wheat in Western New York is the bread and money crop of the farm. Its culture is a subject of more importance to the farmers at the present time than any other that pertains to their occupation. All classes in the community are interested in its production, and are affected more or less by the pecuniary loss that results by its failure. The greatest enemy the farmers have ever had to contend with in raising wheat is the fly which attacks the head; all other flies or worms are harmless in comparison. There are towns in Monroe county where the destruction of the wheat crop is so certain, that its cultivation has been almost entirely abandoned. The evil is not a partial one. What is true in regard to such localities will soon be so in regard to all others where wheat is grown. It will eventually reach every farm in the wheat growing districts of the country, and the profitable cultivation of the wheat crop will be at an end. In view of these facts, it becomes the farmers to be awake to the discovery of some remedy, and ready to use any means by which this evil can be prevented.

The application of lime to the heads of the wheat has been thoroughly tried, and the result proves that it is only casting dust in one's own eyes. The only remedy I have seen suggested, that has much promise of success, is to plow the wheat field after harvest.— This, when the work is well done, I believe will be effectual. At harvest time, before the grain is drawn from the field, the greater part of the worms descend to the ground where, according to a Scotch writer, they burrow to the depth of about half an inch.— From this time they are in a dormant state, until changed into a fly, when they arise into the air, and are ready to re-produce and perpetuate their race by making a deposite in the heads of the wheat—which in due time becomes a worm that destroys the grain. If the land should be thoroughly plowed the larva would get buried so deep that it could not receive the amount of heat and air necessary to its transformation, and consequently it would be destroyed. The worms that might get carried with the grain to the barn, would probably be destroyed in the manure. If more convenient for the farmer, and he did not wish to sow winter rye, the plowing might be omitted until spring. The rule should be to *plow the land deeply any time before the fly leaves the ground.* With winter or spring rye or barley should be sown clover seed, and plaster the succeeding year. This gives a heavy growth of clover, which, in the month of June, should be plowed under for wheat. By this course there is a crop every third year. If it should be considered an object to raise wheat every second year on the same land, some broad-leaved annual plant should be grown, to be plowed under for manure; and for this purpose, perhaps, there is nothing better than the ruta бага or Swedish turnip.

In adopting this system of rotation, it is supposed that the soil is in good condition at the commencement, and capable of producing remunerating crops of wheat by the green crop. If not, the farmer ought to know it and apply such manure as experience has taught him is the best. If compost or decomposed barn-yard manure is used, six loads to the acre is ordinarily sufficient. This should be spread directly and evenly from the wagon at seed-time, and then the manure and seed can, with the gang-plow, be buried together.

Notwithstanding the danger from the Hessian fly, wheat should be sown as early as from the last day of August to the sixth or seventh of September. More wheat has been lost by late sowing than by the Hessian fly. When a green crop is plowed in for wheat, it should not be turned back again to the surface by deep plowing, but the land should be superficially worked with the cultivator or gang-plow. More or less wheat is yearly destroyed by snow—which drifts by the fence running north and south on the west side of the wheat-fields. If a wire fence can be made economically any where on a farm, it ought to be placed on such lines.

In order to carry out successfully the plan proposed, for the destruction of the wheat-fly, it would be necessary that there should be a concert of effort amongst the farmers. If the wheat-growers of Monroe county would meet and pledge themselves not to leave any land unplowed, on which they had raised wheat, the result would be the exemption of their fields from the ravages of the fly, and good crops of wheat as in former years.

JOSEPH ALLEN.

Adams' Basin, Monroe Co., N. Y.

CULTIVATION OF INDIAN CORN.

I HAVE made three successful experiments in the cultivation of Indian Corn. The first was on a peice of about four acres, that had lain as an old slashing and pasture; and never been plowed, and but recently cleared off. The soil was a dark, marly-clay, mixed with sand and gravel. I commenced breaking it up the first of July, and put the plow about six inches deep. I then harrowed it lengthway's of the furrows, and on the first of August, harrowed it again, across the furrow, and cross plowed it eight inches deep, and on the 10th of September, harrowed and cross plowed it again ten inches deep, intending to sow it with wheat. On the day set for sowing, it commenced raining, and continued so wet that I gave up the idea of sowing it, and concluded to sow it with spring wheat. It lay all winter in seven paced lands with deep dead furrows. Early the next spring, I cross plowed it full ten inches deep, but was again prevented sowing it with wheat in consequence of the heavy spring rains. I then concluded to try corn, and, on the 2d day of June, I commenced to plow it for the fifth and last time, ten inches deep, and harrowed it fine, and furrowed it lightly, with a one-horse plow, three feet apart, and planted in rows, two feet apart, the other way, without furrowing across, putting four grains in each hill, of a large eight-rowed yellow variety.

Ten days afterwards I harrowed it lengthways with two horses, and a three cornered harrow, taking out the forward teeth, so as to pass on each side of the corn plants. One week after this, I went between the rows with a one-horse plow turning the furrow to the hill, and on the 4th of July, I passed through the rows with a cultivator and leveled down the furrows. Then, with a hoe in hand, I went through it, and carefully removed every weed that was to be seen, and leaving the earth as even as possible. At this time the stalks had began to joint at, or near the root,—after which I consider it injurious to plow or cultivate among the corn, as the roots extend from hill to hill. At the setting of the ears, I passed over the field, and removed every weed by hand that could be found. The produce was 118½ bushels of shelled corn per acre.

The second experiment was on three and-a-half acres of nearly the same character of soil as the first. It had been plowed ten inches deep and sown with wheat, producing a crop of 35 bushels per acre. I then took off a good crop of clover and timothy hay, and in the fall covered it evenly over with yard and stable manure, which, together with a good growth of after-grass, I turned under ten inches deep. This was in the month of October. The following spring, I harrowed and cultivated it till it was quite mellow, and then cross plowed it about five inches deep, being careful not to disturb the sod underneath; and, after smoothing the furrows down with a harrow, furrowed it lightly four feet apart, north and south, and three feet east and west, and planted it the 24th day of May, one acre with the *Red Cob Ohio Dent*, and the other two acres and-a-half with the *Twelve Rowed Dutton*. When the plants were well out of the ground, I sowed broadcast over the field a compost prepared as follows: fifteen bushels of dry hen manure; fifteen bushels of good unleached ashes; five bushels of plaster; and three bushels of fine dry salt, mixed well together and made fine.

As soon as the rows could be plainly seen, I passed over them with the three cornered harrow in the manner before described.

From the acre planted with the Ohio variety I harvested 130 bushels of ears of sound corn, of which, three half bushels of ears, would give a bushel of shelled corn, making nearly 87 bushels of shelled corn per acre. The Dutton yielded about the same number of bushels of ears per acre as the Ohio variety, but not as many bushels of shelled corn.

The third experiment was on five acres of land from which I had taken a crop of wheat *straw*—the midge having destroyed nearly all the grain. About the middle of May, I spread out on the land a good coat of manure, and plowed it under, full ten inches deep, together with a good start of young clover that was sown the previous spring. I then harrowed it till it was finely pulverized, which required far less labor than in the former case, where the land was plowed in the fall. The land was then furrowed and planted with the same varieties, harrowed and cultivated, and top dressed, as in the second experiment. The yield was *five bushels per acre more than* in the previous trial with fall plowing, and which required more attention than this.

S. DAVIDSON.

Greece, N. Y.

ON THE CULTIVATION OF POTATOES.

THE cultivation of the potatoe has, for the last few years, become of vast importance to those farmers who are situated near a market, and has proved very remunerative. So important has it become, that time spent in the investigation of best methods of cultivation, and best varieties, is well and profitably spent. There exists a very great diversity of opinions in regard to the manner of cultivation, quantity of seed used, time of planting, and the varieties most profitable. Almost every kind of soil will produce a—large or small—crop. The soils, however, which are best adapted for the cultivation of potatoes are sand loam, chestnut loam, and gravelly loam. Dry land is the surest to produce a crop of sound potatoes.

To prepare a field for a good crop of potatoes, select a sandy loam, seeded with clover, which was mowed, or pastured the year previous if such is on the farm, and plow it twelve inches deep, about the middle of May; by that time the clover will have started well, and it will furnish a good coat of manure to turn under. After plowing is done, roll with a heavy roller, and then harrow thoroughly; after which, mark out the field with a small corn plow, in straight rows, both ways, about three feet apart, and as deep as the plow will run and not disturb the sod. The field is then ready for planting which should be done immediately. The potatoes may be cut a few days before planting, to save time. About six or eight bushels to the acre should be planted. Cut a middling sized potatoe into four pieces, and put two pieces in a hill. Drop them by hand, and cover with a hoe three or four inches deep.

Before the potatoes break through the ground, harrow the field thoroughly with a light harrow to destroy all the weeds that may have started, which will greatly facilitate the first hoeing, and disturb the potatoes but very little.

For the first hoeing use the corn cultivator both ways between the rows, and if the weeds are not to

be feared, let them grow a few days longer and cultivate again, and follow with the hoe, putting a very little dirt up to the potatoes, and leaving a flat hill. The second hoeing, use a shovel plow, or a horse hoe, which will throw up the dirt on each side of the hills, and leave a perfect hill and very little to be done with the hoe. After this the ground should be kept clean from weeds, and if very dry weather, the horse cultivator should be used between the rows as before.

The kinds to plant for fine quality and that command the highest price in market, are Mexicans, Purple Mercers, Carters, and Blue and White Pink Eyed. For early potatoes, White Mountain Junes, and Early Junes. For late crop, Long Johns, English Whites, Flesh Colored and Round Pink Eyed.

Some farmers plant in drills, and it is a very good method, and may produce larger crops than planting in hills. For drills, mark the ground one way three and-a-half feet apart, and about four or five inches deep, and drop the potatoes, one piece in a place, about a foot apart; two good eyes in a set is enough, and if the ground is rich, one eye is sufficient. They may be covered very expeditiously and well with a small plow; and just before they come up the ground should be harrowed, as before described. After cultivation, the same as when planted in hills.

Late planting is almost sure to produce the largest crops; but early planting is the best preventive of the disease. I have raised Early Junes for twenty years, and never knew them diseased. My experience, since the rot commenced, has been that early planting, on dry ground, gives the soundest crops. The Purple Mercer, with me, are the most liable to decay.

Many new varieties of potatoes have been, and are being introduced, and some of them may prove a valuable acquisition to our already well tried stock, and others, like the Rohan may run well for a season and then sink never more to rise. The Fluke Kidney lately brought from Europe, and circulated through the Patent Office, and by the New York State Agricultural Society, two years since, bids fair to be popular, and should be placed on the list that "promise well." I received a few tubers from B. P. JOHNSON, Secretary of the State Agricultural Society, two years since, and the first year they were not fairly dealt by, and were quite small, but I planted them again with better success, though they received no better care, and this spring I mean to plant and care for them, the best I know how, and see what they will do.

I have another variety, which promises well, that I obtained at the State Fair, and from two potatoes planted, I dug a bushel of fine large potatoes. They are called the Oregon. I intend to try them another season, and if they meet my expectation, you shall hear from me. Every new variety should be well tried before recommending to the public. No new kind should be recommended unless, on trial, it proves to be superior to some of the old varieties; nothing is gained by multiplying varieties unless superior, and then five or six are as many as will be profitable to plant. The same variety does not always do as well one year as another, and for this reason it is better to plant more than one variety.

Harvest as late in the fall as frost will permit, and if buried in pits cover well with straw, and a little dirt, then another coat of straw, and, finally, a heavy coat of earth.

E. S. HAYWARD.

Brighton, Monroe County, N. Y.

CULTIVATION OF ONIONS.

A good crop of Onions may be grown with as much certainty as corn, if rightly managed, but to do this three things are necessary; first, the ground must be rich, made so by a plentiful supply of hog manure; second, the Onion seed must be sown early, say last of March, or first of April; and thirdly, they must be hoed often, and kept free from weeds. The seed should be soaked twelve hours in rain water; the water should then be turned off, and the seeds kept moist until they sprout, which will be in two to four days, according to the temperature. If you wish them to sprout soon, place them on a mantle piece where they will feel the warmth of the fire. In case it should rain, and make your soil so wet that it can not be worked, and the seeds are likely to sprout too much, put them in the cellar or some cool place. In this way you can manage to have them sprouted just as you may require. Next prepare your ground by plowing, harrowing and rolling, until it is very fine and clear of lumps. Then lay off your beds three feet wide, raised slightly in the middle; mark the rows across the beds with a rake having teeth twelve inches apart for the purpose. The seed should then be sown with the thumb and finger, and covered with the hand. Nothing now remains to insure a good crop, but sunshine and showers, and diligent culture, keeping them clean of weeds, and stirring the ground often with the hoe.

HORATIO MARTIN.

Greenbush, Iowa.

ON THE MANAGEMENT OF A PRAIRIE FARM.

IN compliance with a request, in the January number of the *Farmer*, I will endeavor to give you my *modus operandi*, with five years experience in the State of Illinois, in the management of a prairie farm.

BUILDINGS AND FENCES.—Taking it in the natural state, the first thing after purchasing, is building a house, and other necessary out buildings, the details of which the circumstances and taste of the owner, himself, will suggest. The next thing to be taken into consideration, is fencing. As timber is scarce and difficult to be procured, the most economical mode is to get good White Oak, or Walnut posts, and set upon the boundary line of the farm, according to the length of the boards; supposing them to be Pine, expressly for this purpose, fourteen and sixteen feet is the most desirable length, putting two posts to the panel, and as hogs are not suffered to run at large, three boards, six inches wide, nailed to the posts, will turn all stock; even two boards will answer a good purpose. The fence should be set outside of the line five or six feet, so as to leave room to set a hedge in the line, the following spring, after breaking.

BREAKING.—The best method of breaking prairie sod, is to get three yoke of cattle, and with a sixteen or eighteen inch plow, one man and team will break from two to two-and-a-half acres per day, which, if hired done, will cost, at the present prices of breaking, two dollars and fifty cents per acre, and board for hand and team. The plow should not go deeper than two or three inches, as the shallower the furrow the sooner the sod will rot. While breaking is going on a boy should follow the plow, and, in every third furrow, drop three to five grains of corn, which without any further attention, if it should be a good

growing season, will make a fair crop of corn. When breaking is done, the cattle will do to fat the coming winter.

FALL CROP.—In the fall, a portion of the newly broken land should be sown, with good clean winter wheat. The best way of preparing the ground for this crop, is to take a common scouring plow and run lengthwise with the furrows, a little deeper than broken the first time.

ORCHARDS, &c.—Arrangements should be made for setting out an orchard the following spring, and for planting hedges, groves, &c. As soon as the frost is out of the ground, in the spring, an orchard should be planted with fruit trees, of the best varieties to be obtained, and suitable shade trees ought to be planted about the house.

HEDGES.—The next operation demanding immediate attention is setting out hedge, for a living fence; the ground where the hedge is to grow should be well worked, the fall previous, by plowing a ridge four feet wide; in the spring, say the month of April, take the center of the ridge, for the line of the hedge, and with a team of horses, run a straight furrow, six or eight inches deep. I would recommend the Osage Orange, as it is hardier, and will make a fence quicker than the Thorn. The plants can be purchased in this vicinity for two and-a-half dollars per thousand. Set the plants up against the landside of the furrow that has been made, and as the roots are straight, they may be pressed a little deeper down; then, with a hoe, draw the dirt up to them, packing them with the foot. There are differences of opinion about the distance plants should be set; my distance is ten inches apart, or twenty plants to the rod—this, I think, is plenty close enough; if properly treated they will make a tight wall, and a barrier against all stock, hogs included, but the latter should not be turned into the field without ringing.

GROVES.—Planting groves has been too much neglected, by the farmers of Illinois; there is nothing so much adorns a prairie farm as a good locust grove, and no time should be lost in commencing it; in ten or twelve years from the seed, it will furnish material for fencing and building, which will always be required on the farm.

VEGETABLE GARDEN.—By no means neglect fencing a suitable piece of ground for a garden, at least half an acre; a whole acre would be none too much. My motto is, more vegetables, and less hog and hominy.

SECOND YEAR.—SPRING CROPS.—Now comes the year for the first full crop of all kinds of grain.—What land is not wanted for corn, this season, should be well prepared for spring wheat and oats, by being well plowed before sowing, if not plowed in the fall previous; by fall plowing there is the advantage of sowing a little earlier, which is always desirable.

STOCK, SHEDS, &c.—The next thing is the management of stock; when you have prairie range, your cattle will enjoy the privilege of roaming over them, but if not, of course suitable fields must be provided. In winter provide a good yard, and shelter from wind and storm; the latter are not frequent, notwithstanding cattle should be sheltered; it is too much the prevailing custom, of farmers generally, to let their cattle run at large, over the whole farm, without providing any shelter at all, for which they cannot be too severely censured. They who have not the means to erect large commodious sheds, can put up forked sticks, covered with slough grass, to form a

thatch; if carefully done this will turn water for several years; good pens should also be provided, for hogs, which can be done in the manner described above; with a plank floor under the sheds or hovels, the fowls will have a good warm roost.

ROTATION OF CROPS.—The proper rotation of crops is too much neglected by the farmers of Illinois; after corn, spring wheat and oats should be sown, and the land seeded down with clover; after it has lain two or three years in pasture, then in the summer, turn it under, and sow it with winter wheat, two bushels per acre; plant corn on clover sod or wheat stubble, always manuring your corn ground, as far as it goes.

J. H. ANTHONY.

West Jersey, Stark County, Ill.

ON THE BEST METHOD OF FENCING A FARM.

HAVING accurately surveyed your farm, determined the number and size of your lots, and established the lines of your fences, prepare the ground by plowing and harrowing thoroughly a strip at least one rod in width, and totally exterminating all brush, briars, and noxious weeds therefrom. The advantage of seeding this strip to grass need not be commented upon.

The kind of fence to be built will depend principally upon the plenty of any particular kind of material, and will vary accordingly in different localities. Efficiency and durability are the requisites of a good fence; beauty is desirable, but the expense of building and repairing is the chief consideration. In a new country where timber is a nuisance, rails will be most advantageously used. Rail fences should be at least four and a half feet high when settled, and when made of ash, oak, chestnut, or other desirable timber, and not shaded, will last twenty to thirty years. I consider the Virginia or common worm fence the most desirable style. The corners should be slightly raised from the ground, on stones or blocks, and if locked with the crooked and otherwise inferior rails, it withstands the force of wind and animals with great efficiency. When timber becomes scarce, the good rails remaining may be put up into a straight fence, by the aid of toggles and stakes. I should have it two feet wide at bottom, five rails under the stakes, and so narrow at top that the fifth rails will lie close together at the joints. One light rail with one end under one pair of stakes, and the other over the next pair, and another light rail over all, completes the fence. The size of the toggles increases the height of the fence, and toward the top where large cracks are admissible, may be six or eight inches thick. The strength of this fence depends upon the stability of the stakes, which for the sake of durability should be set top end down.

Where timber is so scarce as to render it of pecuniary importance, and still plenty enough to be the cheapest fencing material, it will be most economically used in the shape of posts and boards. The posts should be of cedar, chestnut, swamp oak, or some other durable wood, from four to six inches thick, and at least two feet, (top end always) in the ground. Four boards, six inches wide, by leaving suitable spaces, make a fence four feet high, which will be found fully equal in efficiency to a rail fence four and a half feet high.

Of course no judicious farmer will waste timber in fencing, and till fields covered with stone. Make stone fences wide. Much better have one three feet

high, and thick enough to hold posts for a board top, than have the same weight of stone carried up four feet high, and so thin as to be in constant danger of tumbling down.

If you have no stone "lying around loose," little or no timber, or would save what you have for other purposes, plant hedges. When you have a decaying fence, and would have a perpetual one, plant a hedge by the side of it. In fact wherever you will need a fence a few years hence, plant a hedge. The desirable qualities of a hedge plant are, 1st. Adaptability to soil and climate. 2d. Quick, thick, and thorny growth. 3d. Disinclination to spread by sprouting. 4th. The plant should be so distasteful to animals that they will not browse it. I would suggest a trial of the Sweet Briar.

SOLON COOLEY.

Four Towns, Oakland Co., Mich.

DESTROYING RATS, MICE AND OTHER VERMIN.

In looking over your Premium List in *Genesee Farmer*, I see you ask for the best means of destroying Rats, Mice and other vermin. The following plan I have adopted several times with perfect success: Take one quart of barley-meal, (Indian meal will do,) half a pint molasses, two eggs, a small piece of butter, a little salt, and enough sour milk or water to make it soft, if necessary, and three drops of oil of caraway; let this be well mixed into a cake and baked. When the cake is cold, take a piece, (first rubbing a drop or two of caraway oil upon your fingers that the rats may not smell them,) and rub it into fine crumbs upon a dish or platter. Place the dish in some out-house or quiet part of the premises where the rats frequent, and allow nothing to disturb it. The rats will soon find it; they may not eat much the first night or two, but as soon as they find that it does not hurt them they will eat it with avidity. Repeat this five or six evenings about the same hours each time. And when they have all been collected together and have great confidence in the food and the man who feeds them, give them a good dose of arsenic in the last meal. All those, if any, which do not get any will leave the place immediately.

If it be desired to catch them alive, use the same means, but without the poison, and spread the cake on a board of a larger size than the dish, so as to give them more trouble to collect it, for it will be observed wherever they can get a mouthful they will run away to eat it. To prevent that, give them as much trouble as you can without frightening them. Choose a quiet room or cellar, where they frequent; stop up all the holes but one, and over that fix a little sliding door or something that can be pulled down over the hole easily; let a string be attached to this and carried to the opposite corner of the room, at which corner hang a robe or horse blanket, that a man may stand behind; let this hang there all the time; feed them five or six evenings, always rubbing a drop or two of the oil of caraway upon your fingers and upon the soles of your boots before breaking the cake and going into the room; a few drops should also be put on the robe. The last evening, stand quietly behind the robe and when they are all in the room, let the slide down over the hole. The best way of catching them, is to have another hole in readiness where you can set a cage trap upon the opposite side and drive them into it.

JOSIAH SALTER.

Rochester, N. Y.

ON BUTTER MAKING.

The milk room should be built on the north side of the dairy house, digging two or three feet into the ground, and stoning up with a double wall, well pointed with lime mortar. The bottom should be plastered with water lime cement, such as is used for cisterns; distance between the bottom and upper floor not less than ten feet, the sides ceiled up and filled in with dry tan bark; two or three latticed windows near the sill to let in light and air; the temperature to range from 55 to 60 degrees, regulated by fire in cold, and ice in warm weather, by wrapping a chunk in a piece of carpet and placing in the milk room.—The room, churn, pans, and pails, to be kept strictly neat and clean; the milk to be strained as soon as drawn from the cows in ten quart tin pans set on the bottom of the milk room in warm weather, and on racks in cold. The milk should stand until it coagulates, when the cream should be taken off and churned in a common dash churn, with any power preferred. I prefer dog power, which is generally used in this country. Cream should not stand over twenty-four hours before it is churned;—in fact the quicker it is churned after it is taken off the better. The temperature of the cream in the churn should be about 55 degrees. As soon as the butter separates, draw off the butter-milk and wash the butter with pure cold water until it runs off perfectly clear; then work in thoroughly three-fourths of an ounce of first rate Ashton salt to each pound of butter, and immediately pack solid, in from fifty to one hundred pound tubs, according to the size of the dairy.—When the tub is full, cut a piece of white cotton cloth the size of the cover, wet in brine, and tuck it down snug over the butter; cover the cloth with salt at least half an inch thick, moistened with water, so as to form a paste, put the cover on tight and place the package in another tub, with two inches of salt in the bottom and one inch space around the sides with two inches at the top; fill in with salt, and cover tight so as to exclude all air. Set the tubs in a cool, dry cellar, and I will warrant it to keep any desirable length of time as fresh and good as when first made.

H. H. TAYLOR.

East Rodman, Jefferson Co, N. Y.

ON THE INFLUENCE OF AGRICULTURAL PAPERS—AND REASONS WHY FARMERS SHOULD WRITE FOR THEM.

THERE is no occupation that tends more to the permanent wealth and happiness of a nation, or to the real beauty of a country, than that of properly directed agriculture. This wealth consists mainly in the products of the soil, and in the soil itself; and that beauty of farm scenery which "delights the eye" must proceed from the plans and operations of the farmer being laid and carried out in a tasteful—yet skillful and economical manner. To do all this the farmer must have knowledge, and he cannot obtain this knowledge from his own experience, because that would require too much time and capital. He should therefore, profit by the experience of others; and this he can do the most cheaply by reading the agricultural papers. In these, when they are properly conducted, he will find recorded the experiments, the hints, and the practical results of his brother farmers, as well as carefully prepared editorials. It is chiefly in this way that the agricultural press is causing such an

increased interest to be taken in farming operations in this country. In the first place, the farm journal has elevated the farmer's calling to an honorable position, and made it more respected. It has clothed it with the dignity of a science, and thus will soon make it the most delightful pursuit that man can engage in. By increasing the amount of independence and competency among that class which is sometimes called the "bone and sinew of the country," by adding to the intellectual enjoyments of country life, and promoting the moral virtues—by all these, has the agricultural journal produced a greater amount of practical, worldly good than any other class of journals published.

From what has been remarked above, it is easily inferred that the farmer should write for the farmer's paper. But more particular reasons may be given why he should do so. One of the best is, that the intelligent farmer knows better what to write than the mere theorist. The agricultural community will have more confidence in a paper liberally supported by the writings of farmers, simply because it will be supposed they have the best means of knowing what they write about. Such a belief will cause the agricultural paper to circulate more extensively through the country, and therefore will do more good. Farmers are sometimes slow to adopt new plans on farming—too much in that extreme—and they are the more so if the new idea or theory does not proceed from the experience of a practical man of their own craft.

The farmer should labor to elevate and honor his calling; and hence, if he can therein impart any item of beneficial knowledge, it becomes his duty to do so. Let no selfish view ever induce him to withhold what would assist his "fellow lords of the soil." He should remember that it is a principle in political economy that "a benefit to one is a benefit to all." Let him then write for his own paper—write frequently and carefully—avoiding every thing not properly authenticated by evidence carried far enough, calculated to lead astray. He can also suggest, he can make inquiries, and he can even speculate on some subjects, but they should be known as speculations.

And thus, in these various ways, reciprocal benefits will be received; and he will be adding something to the common stock of that agricultural knowledge which will tend to push forward the high avocation of the farmer near and more near its goal of perfection.

P. P.

Mountain Home, Va.

THE BEST MEANS OF DESTROYING WEEDS.

Plow deep, about the last week in May, or earlier, if you can; harrow until the surface is fine and smooth; then use the cultivator frequently and thoroughly, till the 1st of July; cross-plow and sow buck-wheat, (well rolled in plaster.) One half a bushel to the acre is sufficient if the land is in proper condition. Plow again the following spring, after a liberal application of barn yard manure. Sow with oats and seed down with an early variety of clover, (commonly called the Medium Clover, among us.) If your weeds withstand this treatment, they must be more tenacious of life than any we have to deal with, namely, Canada Thistles, White Daisy, Wild Pans, &c. If, however, they are not all killed, the kind of clover referred to will require mowing before they have matured their seeds. I have tested this

remedy to my entire satisfaction, and never had occasion to repeat the cropping to accomplish my purpose; b it to provide against any possible failure of this treatment, mow the clover two years in succession, and then crop again with Buckwheat and Oats, as before, not forgetting the manure if the soil requires it. By this means you produce paying crops, without injury to the land, and destroy the weeds at the same time.

M. G.

Middleburgh, N. Y.

LIME AS A MANURE.

I have used lime as a manure in various ways.—For low land the best way is to sprinkle it broadcast while the vegetation is in a green state, at the rate of forty or fifty bushels to the acre; but if I cannot use it before the frost kills the vegetation, I wait until the land is plowed in the spring, when I sprinkle it on the plowed ground, in about the same quantity as before. Last year I tried it both ways, and the result was my crop was increased at least four fold in each instance, but that used on the vegetation was best;—the soil a low black sand.

W.

Laurel, Delaware.

IS THE CULTIVATION OF FRUIT ON A MORE EXTENDED SCALE DESIRABLE?

At the present time, apples, in this city, are worth from one dollar to one dollar and twenty five cents per bushel; in Chicago they readily command from seven to eight dollars per barrel; in New York from three to five dollars per barrel, and in the greater part of Canada they cannot be had at any price, and undoubtedly the same is true of very many localities throughout the Union, without referring to the new States at the west, which comparatively speaking, are entirely destitute of fruit, except such as is indigenous. In localities where there is a tolerable supply, it is usually of the very poorest kinds, grown on seedling trees, and such as no one who has been in the habit of using good fruit would deign to touch. Peaches, during the last ten years have averaged a dollar per basket, (three pecks) in this market; in the plentiful seasons the price of good peaches has not been less than fifty cents a basket, and that only for a few days when there was the largest quantity in the market, and both at the commencement and at the close of those seasons they have commanded from one dollar and fifty cents to three dollars per basket. In the fall of 1855, when the prices of peaches in this city went down to seventy-five cents and fifty cents per basket, an extensive fruit grower in this section contracted his entire crop in the city of Buffalo for one dollar and sixty-two and a half cents, and at the different ports in the Canadas, they brought from two dollars to two dollars and fifty cents. At that time an experienced and intelligent orchardist, affirmed that the large crop he then had, with the low prices, was full as profitable as the smaller crops with higher prices, as often was the case.

Last fall Catawba and Isabella grapes sold in the Chicago market, at fifty cents per pound; in Toronto, Kingston, Montreal, &c., at twenty-five and thirty cents; in New York from fifteen to twenty cents; while at three or four cents a pound, no crop can be more remunerative than these.

To pears we need scarcely allude; the sight of a good pear is of such seldom occurrence, that when it does happen, we gaze with a sort of strange curiosity,

as to its origin and qualities and its precise relation to other members of the pomological family. The prices at which pears sell, are almost fabulous; from five to ten dollars a bushel, and often more, according to quality, being common prices for good fruit. Ten cents is a common retail price for a good pear in this city, and in New York or Boston they go current at twenty-five cents, *American coin*; while, in Chicago a first rate article is sold, two for a dollar.

At the late meeting of the Fruit Growers' Association of Western New York, Mr. FLOWER of Syracuse, stated that a gentleman near that city had sold eight hundred dollars worth of grapes from half an acre of ground. Mr. AINSWORTH, of Bloomfield, stated that he had cultivated the grape pretty largely and with entire success; that he got a fair crop the third year after planting, and that at present prices the cultivator can depend upon from \$500 to \$800 per acre profit. Mr. HODGE remarked that there could be no question about making pear culture pay; a tree in his vicinity bore forty bushels last season, and another belonging to his brother, bore twenty bushels, which were sold at two dollars per bushel; it was an inferior variety. In his address before the American Pomological Society, held in this city last September, the President, the Hon. MARSHALL P. WILDER, says: "A gentleman in the eastern part of Massachusetts planted in the years 1848 and 1849, as many dwarf pear trees as he could set on an acre of land, at the distance of eight by twelve feet, and between these rows he planted quince bushes. In the fifth year from planting, he gathered one hundred and twenty bushels of pears, and sixty bushels of quinces. Of the former, he sold seventy bushels at five to six dollars per bushel; and he now informs me that he has lost only three per cent. of the original trees, and that the remainder are in healthful condition."

Most persons will, no doubt, consider these statements slightly exaggerated, but if they will take the trouble to make the proper inquiry, they can verify them for themselves. Without mentioning other varieties of fruit which, under certain circumstances, are not less worthy the attention of the cultivator, we cannot but conclude from the above facts, that the cultivation of no crops, in a pecuniary point of view, can be more desirable than our hardy fruit.

Many object to planting orchards because it is so long, they say, before anything can be realized that they are discouraged from making the attempt, and they thus pass a life time, long enough to bring into bearing a dozen orchards, without raising enough fruit to supply their own families, or even themselves. Again, for many years past, there has been in the minds of many a fear that the markets would be overstocked with fruit, but we certainly have not yet arrived at that point, and from all indications are further from it now than we were ten years ago; prices of all kinds of fruit run higher now than then; the demand has multiplied in a more rapid ratio than the supply; the increased circulation of agricultural and horticultural literature, and the establishment, all over the country, of societies for the exhibition of fruit, and other farm and garden products, has created a discriminating and appreciative taste in the public mind for good fruit; a barrel of Northern Spy, or Norton's Melon Apple, will sell as quick as offered in the market at five dollars, while, a few years ago, when an apple was an apple and nothing more, it would bring scarcely more than one of common fruit.

Too large a proportion of the fruit now grown, is such as quickly decays, and is, consequently, rushed into the market, reducing the prices, and not giving as satisfactory results to the cultivator, as would accrue from an orchard of suitably selected varieties. Many of the best sorts of apples and pears now grown may be kept until April and fully retain their flavor, in fact, some varieties are not in perfection until that time; the Pomme Grise and Russets we all know can be kept until harvest apples are ripe, yet after the first of January, in the greatest fruit growing vicinities, the supply of apples begins to fail, and by the first of April, they are nearly or quite out of the market. Those making new plantations should look to this point, and make such a selection of varieties as would enable them to have a constant supply the year round, and they will find it greatly to their advantage.

The cultivation of the smaller fruits, raspberries, strawberries, currants, gooseberries, &c., is very generally neglected, and almost entirely, I must say, through carelessness; where is the locality in the United States, or the Canadas, where, with the exception of gooseberries, they may not be grown in perfection, and that with little labor or time bestowed upon them. Yet, how many of our farming population have only enough of these fruits, to make them long for more, without the possibility being supplied, and how many more never taste them for years. By some, to grow a strawberry is considered an incomprehensible horticultural feat, while if they would only try their hands at it, they would find it a little easier than raising potatoes.

It seems unnecessary, at this time, to refer to the wholesomeness of ripe fruit, as an article of diet; we all know how necessary it is to a healthy, and regular condition of the physical system, especially in the warm season. Other cogent reasons may be urged for a more general attention to fruit culture; as food for stock, apples deserve more attention than they have yet received, and when their value is more widely known they will be largely used for this purpose.—Let farmers and others then, plant more trees and cultivate them well; they must be fed if you would have them feed you; plant none but the best varieties and such as you know are well adapted to your particular locality, and you will have the satisfaction of seeing your orchards bending with beautiful fruit, and feeling your pockets heavier for your enterprise.

Rochester, N. Y.

PYRUS.

WHY DO FARMERS SO GENERALLY NEGLECT THEIR GARDENS? AND THE BEST MEANS OF RECTIFYING THE EVIL.

Why do farmers so generally neglect their gardens? No particular answer would, in all cases reply to this question, and there are several reasons that are prominent in my mind. With some, I think it is an inordinate thirst for worldly gain; they are in haste to become rich; gold glistens in their eyes, and as the garden brings but little of it to their coffers, (unless they live near a market, where garden products find a ready sale,) they deem its cultivation beneath their notice. They consider the time thus spent wasted, and can even sneer at their neighbor, who devotes time and attention to his garden. They relish the luxuries derived from this source, as well as other men. And those who will scarcely raise a hill of beans, or cucumbers, will devour with gusto the luxuries of the

garden, when provided by others; and will suffer their children even to make depredations upon their neighbors' premises, with impunity.

Another cause often is, want of system in their business operations. They do not consider the work of the garden as coming within the routine of their daily labor; no provision is made for this, in their plan of operations, if indeed they have any plan, but consider it a work to engage their leisure moments, when no other business presses. But leisure moments with the thorough farmer are few, and when his business is not planned and executed systematically, it is generally thrown into confusion. One thing crowds upon another, and in the hurry and bustle, the garden is neglected. It may be planted, perhaps in the spring, but its cultivation is neglected, until the weeds and grass overrun the vegetables. A few spasmodic efforts are made to subdue them, when he gives up, and concludes, as Farmer Slapdash does respecting fruit culture, that gardening is a humbug.

Indolence is often a cause, why men neglect their gardens. The process of weeding onions, or carrots, or flower beds, is too toilsome. It is more congenial to their feelings to spend their time in lounging in the shade, in conning over the newspaper, or in idle gossip, with their neighbor. Again the labour is on too small a scale to suit their dignity; if their wife or children will do the labour, they will readily enjoy the luxuries obtained by them, but cannot soil their own hands with the dirty work.

The want of a refined rural taste, is another reason why horticulture is neglected. Some men have but little appreciation of the beauties of nature or art; a lovely landscape has no charms for them, and a garden neatly laid out, and properly cultivated, possesses but little more attraction than a patch of Canada thistles, or dwarf elders; they despise it, as well as the neat gravel walk, bordered with shrubbery and flowers; they often look with pity and contempt upon the man who engages in such business; they can eat and drink, and sleep, they say, as well without them, and so can the swine that would render such a scene, all deformity and desolation, could they gain access to it. Such I deem some of the principal reasons why gardening is so much neglected.

The cause of the evil being pointed out, the remedy is readily suggested. Whatever will tend to counteract this thirst for wealth, and lead men rightly to appreciate the great object of existence, will lead them to act in accordance with its design, and to acquire and enjoy the blessings a wise Providence has placed within their reach. In order also to prosper in all our affairs, business must be planned and executed systematically. The garden must be included in the plan of farm operations; time must be set apart for its cultivation, as well as for planting and hoeing corn, or sowing wheat, and the cultivation must be done as thoroughly. No part of the farm pays better when properly cared for, than the garden; it may not afford as many dollars perhaps as other crops, but it affords much that renders a family comfortable, and this is of more importance than to hoard money for posterity to quarrel about.

A more general dissemination of intelligence among the farming population, particularly intelligence respecting agriculture and horticulture, would tend to remedy this evil; the man of intelligence is more generally a man of refined taste, and seeks to have things comfortable and pleasant around him; this knowledge

may be spread by the circulation of well managed agricultural papers, and every man who desires improvement in this respect, should lend his influence in circulating such works, especially among the rising generation; children should be early led to notice and admire the beautiful, and also to acquire a taste for gardening. Impressions may be made in childhood, that will be lasting as life, and that cannot be easily counteracted by habits and dispositions acquired in later years. A taste may thus be formed that will lead to practical results, and prove a blessing to community.

HUBERT.

ON DRYING APPLES, PEACHES, PLUMS AND OTHER FRUIT.

AMONG the good things which can not be considered merely as luxuries, but which our habits, if not our natures, have rendered necessary to a high degree of health, fruit is not unimportant. The art of preserving it by drying, may to some persons appear too simple to require the explanation of any process; nevertheless few housekeepers are so well skilled in these matters, that they may not learn something of value and interest, by the experience and practices of others.

Fruit, of different kinds, evidently requires different treatment. Apples should be pared, and those of medium size cut in eight or ten pieces, and dried quickly, by the fire; cutting them finer makes more surface to be rised, and the more water that is used for this purpose, the more is the flavor washed away.

Peaches may be dried in a similar manner. Pears and gooseberries, (the latter before they are very ripe,) are better stewed tender in one fifth their weight of sugar and a little water, and dried after the liquor is boiled thick and poured over them. Cherries should be stoned and scalded in their own juice, without sugar, and dried slowly. The method of drying plums in the sun after opening and stoning them, without scalding or sugar, probably cannot be surpassed.—Strawberries, raspberries and currants, retain most of their original flavor when mashed with one-fourth or one-fifth their weight of sugar, and dried as quickly as possible without scalding them. Pumpkin should be stewed till quite dry, sifted and spread on buttered plates, and when partially dried, broken fine, that it may soak quickly in milk when wanted for use.

Gansevoorts, Saratoga Co., N. Y. H. M. D.

WHAT CAN MOTHERS AND DAUGHTERS DO TO MAKE FARM LIFE ATTRACTIVE TO THEIR SONS AND BROTHERS, AND PREVENT THEM FROM LEAVING THE FARM TO ENGAGE IN MERCANTILE OR PROFESSIONAL PURSUITS?

LABOR is not exactly like virtue, "its own reward;" and where can a farmer enjoy the fruits of his labors except in a happy, well ordered home.—There he should find himself surrounded by those best of all ornaments, cheerful human faces. There is seldom a farm so small and poor, but these may be cultivated with great success, if woman could only be made to feel the great necessity and duty of it. In order to attach young men to farm life, mothers and sisters should first of all love it themselves: as it is always impossible to inculcate a sentiment we do not ourselves feel. If a young man sees his

mother and sisters pining for city or village life, lamenting the want of opportunities for display, despairing, instead of developing the resources within their reach, he will certainly feel the spirit to be very infectious.

Cheerfulness, order, and cleanliness, go far towards making home happy, and let there be added to these a well spread table. Mr. GREELY was more than half right lately in his severe comments on country cooking; I hope it has provoked an agitation of the subject which will be useful. The stereotyped dish of baked beans is well enough, also the boiled dinner, but variety is not studied; day after day brings the same dishes upon the table, till the appetite is cloyed; an agreeable surprise is never thought of, and any thing new seldom attempted. Many young ladies seem to think indifference in regard to food is a mark of refinement; I shall caution my boys to avoid such young ladies. Farmers' daughters, I have generally observed, have greater advantages for improvement, and are apt to possess more refined tastes than their brothers. [Let me beg of them to exert their influence in elevating the character and manners of the young farmers. "O! don't come into the parlor boys, with your dirty boots! you have been among the horses, don't come so near!" I have heard such things said; and seen young men actually driven from the companionship of their sisters, and made to feel that their occupation rendered them disgusting to them and their young friends. It is easy to imagine the consequences likely to arise. I know young farmers, whose slippers are always at hand when their work is done, whose cotton overalls and frocks are easily slipped off, and they are in as fit condition to enjoy a book or pleasant conversation, as a lawyer from his office. Personal appearance has a very great influence upon manners; when a young man feels conscious that he looks like a gentleman, he is much more likely to endeavor to merit the name of one. The work of a farm is fatiguing, while the mind is in a measure unemployed; consequently, the appliances for finding relaxation, and mental activity should always be at hand. A well lighted table, with books and papers, presents an agreeable inducement to spend an evening profitably. There is perhaps no class of men, to whom a love of reading is more essential than to farmers. Vanity of mind is an intolerable evil; it is frequently the enemy from which men fly when they rush into dissipation. The uneasiness it engenders, is frequently mistaken by farmers' boys for a taste of other pursuits, and the true comforts and independence of a farmer's life is forsaken for all the uncertainties of a profession.

Mothers and sisters can do much in forming a love of reading, by reading aloud to boys before they have sufficient scholarship to enjoy a book by themselves. Time would be much better spent in this manner than in embroidery and crochet work, which adds nothing to the comfort of the family. They are pursuits eminently selfish, and there are few farmers' girls who can afford the time for them. Rural life loses half its attractions when there are no out of door embellishments, no shrubbery, no flowers, and only the coarser vegetables in the gardens. The apology is often made for the lack of every thing beautiful about the house, that "our boys don't care for such things, they won't do anything about the yard and garden." Now, the

fact is, "our boys," have no time to do it; they work hard enough without, and though they would be willing to lend a spare moment, they will not do it all, or even commence it.

It is an appropriate employment for woman, even if they have considerable housework to do, they would find the change of employment very beneficial to both mind and body, and after working out of doors an hour or two, they would not be half so apt to ask the tired boy to bring their wood or water, as they would after sitting the same time, diligently employed on some useless needle work. While the men of a family, labor for the general good, in providing the necessaries and comforts of life, women should also labor for its embellishment, not only preserving their own beauty, but making everything about their home beautiful and attractive. There is no fear but the men would appreciate the improvement, let it be ever so small, and every sacrifice of merely selfish pleasures would meet an abundant reward.

A MOTHER.

IS IT RIGHT TO ASK THE WOMEN FOLKS TO DO THE MILKING DURING THE BUSY SEASON?*

UNDOUBTEDLY it is; but it is not always safe to do it. It is not only right, but very reasonable to make such a request of your wife, or daughter,—certainly in a busy time of the year, and one cannot very well ask it at any other time, in this section, for let him do it under any circumstances, and ever so meekly, he will have a busy season, and a very warm one too, right away. The subject is "open to both sexes," and my wife already—for I am a married man, of course—is quite prepared to show the impropriety of the whole thing, and wishes to write out an argument at length, but is prevented from doing so, because she is confined to a single page in the *Genesee Farmer*, and if she once begins to talk it up, she won't get through till after the "cows have come," and it would not be decided who should milk them. When we say it is right for the women to sometimes milk the cows, and are told by them that it is highly improper, we still feel it to be right, without going into an argument to prove it if we could, and are like the small boy, who, when he was one day asked by the minister who was visiting at his father's house, if he could tell him how many were two times two, replied that it made four. But the parson wanted it explained, and asked him how he knew it was so. The boy said he *did* know it, and that was enough. Still the good man insisted upon an explanation, or a reason for it, when the boy, out of patience, said pretty sharply, "Because I *do* know it, and so do you, you d—!—h old fool. You only want to talk to hear yourself talk." Whether the women talk against milking to hear themselves talk or not is of no consequence, so long as they are unwilling to perform so reasonable a task—if it is not a duty.

More seriously, and with all reason, let us show the justness of our cause. We have in view just now, the man in haying or harvest time—the busy season,

if ever—going forth to the field at the earliest dawn of the morning, to return only at the approach of night, to find ten, twenty or thirty cows—in this dairying country—to be milked, ready and lowing at his very door; he, wearied by the heavy labors of a mid-summer's day, and just asking for a little assistance about milking, finds his wife busy with company, his girls enjoying themselves about the house, and not one of them so much as giving so interesting a subject, a single thought, and every one of them afraid of their shadows, made in the milking yard, if they should by accident get in there. O, for the good old times when our daughters were wont to go forth morning and evening, with flushed and rosy cheeks, through the pastures and green meadows, amid daisies and many other beautiful flowers, and with soft and willing hands, almost charming the milk into the neat milk pails!

But after all we can say, I rather expect the women will have their own way, and I will close by relating an incident that came under my own observation, by which the cows themselves are shown to be sometimes qualified to decide the question.

Many years ago, we owned a cow—the brindle cow—that by some means got in the habit of being milked by the women, and by the women folks alone. But after a while, when sewing, quilting, missionary and many other societies began to come into fashion, the women would sometimes be gone, and at such times old "Brin" would have to go without milking. But after a while longer, as the men could not get near her, and the women would be gone oftener and oftener, we thought to try an experiment; an older brother went and put on an entire suit, for all the world like a woman's dress, and it was nothing else, and proceeded to milking this truly woman's cow, but it would not all do, for old "Brin," who, at first did not discover the fraud, as soon as the man in disguise began his milking operations, gave a sudden start, and with a still more sudden kick, sent our humble imitator of female fashions almost half way across the yard, with the milk pail, milk, and all mixed up with this novel attire from head to foot.

This story will finish the subject, and your humble servant will now wait with some interest to see who will get the dollar book. E. A. B.—*Oxford, N. Y.*

IS IT RIGHT TO ASK THE WOMEN FOLKS TO MILK THE COWS DURING THE BUSY SEASON?*

We answer no. The province of female superintendency, is bounded, as we conceive, by the line which separates the inside from the outside of a farm-house; and in this position, the labor of woman is bounded by the same line. Appropriate labor is a duty no less imperious in its claims on the woman, than on the man; but upon each in their proper sphere. The attentive, economical, and industrious wife, fulfilling best her design,—a help-meet,—so highly commended by the wise man, in the great directory of human life, is not commended for clearing away the forest, splitting rails, and erecting buildings, thus converting the wilderness into rich pasture and meadows, that she might have an opportunity of keeping many cows, and milking them with her own hands, and so bless the world. No, she performs her work, and establishes her reputation inside the line. But the question is, "Is it right to ask the women folks to milk the cows during the busy

* We have received a great number of answers to this question. After much hesitation, we have selected out two, one in favor of the practice and the other against it, and award a premium of a dollar book to each of them. We shall endeavor to make room next month for some portions of the other essays on this subject, all of which are very good—especially those written by the ladies. It may be worthy of remark that nearly all the ladies who have written take the affirmative side of the question.—Eds.

season?" Say in seed time, and in harvest. Well, here lies the principle alongside the answer to the following question. Is it right to violate the Sabbath in haying time, and in harvest? We answer 10. The prohibition is found in that same great directory; and written there for the good of all. Vary the question a little, and say the Sabbath is the only sunny day in the seven. Then what? Why, then, it is also our duty to obey, since there is no proviso, for such an emergency. Just so in respect to asking the women to milk the cows because the appropriate work of the man demands his special attention. The question implies that this work does not properly belong to the woman. And if so, then it is right that she should not do it. Not being accustomed to milking, she is both awkward and timid, and should never either for man's ease or convenience be asked to approach the equally timid cow, and thus endanger the welfare of both. The principle that would prompt us to ask the women folks to milk the cows in the busy season, would oblige them to milk them, if the weather should be very stormy, or extremely cold. Shame on the man that ASKS a woman to milk the cows. If she wishes to milk, under certain circumstances, let her,—this does not belong to the question. D. S. WOOD.—*Saline, Mich.*

IS A RESIDENCE IN THE COUNTRY OR CITY MOST CONDUCTIVE TO HIGH MENTAL CULTURE, BEAUTY OF PERSON, HEALTH, HAPPINESS AND USEFULNESS?

To determine this question, it will be necessary to examine the advantages, and disadvantages, which each locality offers, and form a comparison between them. A residence in the city allows us a better opportunity of attending scientific and literary lectures, and of access to extensive and valuable libraries; but compare these privileges, valuable as they are, with the bad and unwholesome influences by which one is constantly surrounded in the city, and I fear that the argument would be little in its favor. Novels, the theatre, parties, and a thousand other pleasures, would be apt to draw the inclination with a stronger cord than solid literary works, and the consideration of the vice and wickedness into which one is in danger of being drawn is enough to cause every one who would wish to become a scholar to seek the country.

Now, what can be found in the country to debar any from possessing a highly cultivated mind? To be sure he cannot always hear the gifted discourse from the lips of the orator, but he can read it. In this age of progression, any kind of documents can be received, from every part of the country in a few days. So this may be considered as little or no detriment in obtaining information of this character. It is also the same in regard to books; anything published can be procured with little trouble, and at a cheapness, which need not prevent the poorest from possessing it. So to the political affairs of the world, newspapers, and periodicals can furnish the resident of the country all these as cheaply as the denizen of the city.

Some may say, that if there are so many superior advantages in the country, why are not our farmers better educated? In reply, we would say, it is because in a majority of cases, the moment a youth has finished a course of studies, (and often sooner,) he despires the, so thought, degrading labor of the

farm, he must study a profession; he must no longer be seen using the plow or scythe. Do you wonder then why farmers do not place a higher estimate upon education? but the farmers of the present day are beginning to see the true dignity of their profession, beginning to know the results of thorough scientific farming, and their sons are seeing it too. They are discovering that they can use their education in improving the soil, and in making known the results of their experience through agricultural journals, instead of compounding medicine, or studying law.

We are sure, that as a general thing, the real personal beauty to be found in the city, is not equal to that of our rustic country youths; rosy cheeks, bright eyes, plenty of exercise, and an abundance of good humor and happiness, will give a glow to the cheek, which all the rouge in the world cannot imitate.

It is almost unnecessary to speak of health as regards the country, or city. Every argument that can be advanced, is decidedly in favor of the country; there you breathe the pure, fresh air of heaven, which invigorates your constitution, giving to every member of your body, new life and energy. You do not inhale the smoky, dusty air, which is necessarily present in the city. Compare the rosy cheeked country boy, his muscles strong and firm from constant exercise; his step elastic and quick; his eyes radiant with joy, with the pale, sickly youth who inhabits the city, and you will easily discern the difference between the two localities, in reference to health.

Happiness! The object of all men's pursuit! Where shall we be most sure to gain it, if not among the lovely and beautiful works of an all wise Creator. The ambitious and aspiring seek the wild and picturesque scenery of Switzerland, climbing the rugged steeps of Mount Blanc, or sail over the still, placid waters of Lake Geneva, or again turn their steps towards the vine-clad hills of France, or the well known mountains of rustic Scotland to enjoy the grand and beautiful scenes presented by nature. The quiet and unassuming, seek the retirement of a country home, away from the noisy bustling thoroughfares, and there reach the desired goal. They do not seek the crowded streets of the city, where man lives in unsocial intercourse with man, where the people of one square know nothing of those of another.

Go, then dear friends to the country, if you wish to find happiness—that priceless boon; there man is joined to man by the tenderest ties that bind the human family together, sympathising in affliction, rejoicing in prosperity, and in the enjoyment of each other's society, they peacefully close their eyes in death, surrounded by warm hearted friends. A celebrated writer has said truly, "If a man would eat, drink, and be forgotten, let his dwelling place be in the city; if he would live, love and be remembered, let him speed to the glens of the mountains."

There is no good reason, why the people of the country cannot be as useful to their fellow men as those, who reside in the city. The farmer can give of his "substance" to the needy and destitute of the large cities, and when he beholds his well filled barns, and granaries, he can

"Remember the poor
When it bitterly bloweth,
And fearfully snoweth."

Yes, he can render his name memorable for his good deeds, and his exemplary life. E. A. H.



Horticultural Department.

ANNUAL MEETING OF THE WESTERN NEW YORK FRUIT-GROWERS' ASSOCIATION.

[Continued from last number.]

Mr. J. B. JOHNSON said Mr. McKAY had 1½ acres of grapes, one acre of which had been set out but recently. He sold the crop this year for \$1200.—The vines were one rod apart each way, making 160 per acre. At the time they were planted he placed a large quantity of the carcasses of animals under the vines. His grapes ripened perfectly and became quite black. The soil was gravelly with a clay subsoil, situated in a valley with a warm exposure. Attributed much of his success to close pruning.

Mr. FLOWER, of Onondaga Co., said grapes were raised very easily around Syracuse. One gentleman had sold the produce from half an acre for \$800—Had known the fruit on one vine to sell for \$12. Cultivated the Isabella principally. The Catawba did not always ripen well.

Mr. AINSWORTH, of Bloomfield, said Mr. McKAY pruned very closely both summer and winter, and thus exposed the sun to the light and air. In reply to an observation, he said the leaves should not be cut off. He, Mr. A., cultivated grapes pretty extensively; thought from \$500 to \$800 per acre might be depended on. He trained his vines on trellis from five to six feet in height; had always found the grapes better near the ground than high up; the best grapes were found about half way up the trellis. His vines were planted seven feet one way and fifteen feet the other. The first year he allowed two vines to run in opposite directions horizontally under the trellis. In the spring cut them back to within two buds and when they broke he pinched off one of them, throwing all the force into one vine, which he trained perpendicularly. Pruned generally two or three times more during the summer, keeping off all extra vines, but allowing plenty of leaves to elaborate the sap for the fruit. In November of each year he cut away nearly all the old wood. People generally do not prune enough; they allow too many useless vines to grow, which exhaust the plant. The ground should not be cropped, but should be thoroughly cultivated once a week. The manure should be put on in the fall and plowed in in the spring. Deep culture was desirable. He obtained from two to three bushels of grapes from each vine.

Mr. H. E. HOOKER thought a sheltered location absolutely necessary. He had never seen a ripe grape which grew in an exposed situation; shelter was necessary in the winter and spring.

Col. HODGE thought that high manuring, especially with carcasses, was more necessary than with any other crop. A friend of his kept a slaughter house, and every year he opened the ground around his vines and poured in a quantity of blood, and found more benefit from it than from any amount of barn-yard manure.

TOP GRAFTING OLD ORCHARDS.

COL. HODGE, of Buffalo, said that if the trees were old, far advanced in life, and had commenced decay, he would by all means cut them down. But if they were young and vigorous, he would graft them. A friend of his had an orchard—some of the trees were old and mossy, many of them had commenced decaying and the fruit was gnarled and poor. An itinerant grafter came and grafted them, using his own grafts, and setting many of them twenty feet above the ground. In a few years, when the grafts grew, his trees looked so bad and ill-shapen that he became discouraged and cut them down. He dug up the stumps, thoroughly broke up the ground, manured it and planted out a young orchard, and, in a few years obtained a fine orchard of handsome trees. In 1848 a neighbor of his planted 100 apple trees; a year ago last fall, he picked from the orchard 127 barrels.—Some of the Baldwin trees yielded three barrels to the tree.

Mr. LUTHER BARBER, of East Bloomfield, had followed top grafting extensively for more than twenty years. Soon after he commenced grafting, he adopted a different method from the one in general use, and his experience fully confirmed him in the belief that it was by far the best. It was to saw off the limbs of the trees low down—no matter if they were six or eight or ten inches in diameter, and then insert a row of grafts around the limb about an inch apart. *This should be done early in the spring before the sap starts at all, or it will not succeed as well.* He did not saw off all the top the first year, but left a portion to help sustain the tree for a year or two. Of the grafts which were put in thick, a few of them soon took the lead and made the future top of the tree. One great advantage of inserting so many is, that it keeps the whole limb alive and does not form any dead spots on the sides of the limbs. These grafts, by getting the whole force of the tree, grew rapidly and very soon formed a good top. He had known three barrels of apples to be picked from trees so grafted in three years grafting. He had never experienced any ill results from this method, or discovered that it injured the tree in the least. He ought to say, however, that he always used kinds which grow rapidly in preference to the slower growing sorts, as they supplied a top much sooner. He found it always revived an old orchard to put a flourishing young top on it. He had known trees grafted in this manner, to bear good crops of apples for twenty-five years past. He once saved a pear tree which had apparently been killed by the fire blight, by sawing it off below the disease, and putting in several grafts—the tree revived and lived a long time. He sometimes cut his stocks during the winter, and grafted them early in the spring, before the snow went off.

Mr. H. E. HOOKER, of Rochester, said that in his father's garden a pear tree was struck with the blight—seeing no other way of saving it, he sawed off the trunk, some five or six inches in diameter, and insert-

of several Bartlett grafts, which grew and made a good top. But he would not follow the plan in apple orchards unless the trees were very thrifty. Another method is to bud the sprouts which are thrown up around the larger limbs, which soon make good tops. The great difficulty in top grafting old trees, was that it always made more or less unsound and rotten wood where the limbs were cut off.

Mr. B. FISHER, of Rochester, thought there could be no general rule for grafting old trees—if they were young, and had been properly pruned, there would be no difficulty; if they were old and diseased, he would not do it. There was one other consideration,—after the first three or four years, the young trees were growing better each year, while the old trees were growing worse continually.

Mr. MAXWELL, said there were a number of old apple trees near Geneva, planted in the olden time, by the Indians. As the story goes, these trees were cut down by Gen. SULLIVAN, on his expedition to drive the Indians from this section of the country. They show signs of having been cut down, as many of them have two trunks. These trees were grafted fifteen years since, and are now bearing profitable crops of fruit.

Mr. BARRY thought the method adopted by Mr. BARBER was a good one, and perfectly consistent with the laws of vegetable physiology. Still he would not advise persons to re-graft old trees that had commenced to decay, except in special cases, as for instance when a person takes possession of a farm destitute of fruit, if there were a few old apple trees on the premises he would re-graft them, as good fruit could be obtained in this way earlier than by planting out new trees.

WINTER PEARS.

Mr. BARRY being called upon, remarked that the cultivation of Winter Pears eminently deserved the attention of the farmers of Western New York.—They could be grown as easily as Autumn Pears.—Formerly he was of the opinion that there was great difficulty in ripening them, but latterly he had found that they could be kept and ripened nearly as well as apples. The great point was to get well grown, fully matured fruit. It was impossible to ripen imperfectly matured specimens. Last autumn they packed their pears in barrels, in the same manner as they did their apples, and they kept and ripened up beautifully. People were now going into the cultivation of the Lawrence quite largely; he thought this somewhat a mistake; the Lawrence, although a very fine pear, ripened about Christmas. He thought a succession of winter pears which would ripen throughout the winter, much preferable; among other fine kinds he would recommend the Winter Nelis and the Easter Beurre. They had fine specimens of the Easter Beurre on exhibition, which had received only the treatment of apples.

Col. HODGE apprehended that the principle difficulty in the cultivation of winter pears, was in not selecting good varieties. Many kinds were fine flavored but poor bearers. He now only cultivated a few kinds, which were the Vicar of Winkfield, Easter Beurre, Lawrence, Glout Moreau, and Winter Nelis. He had no doubt that they might be made a very profitable article of cultivation, and that he practiced what he preached. But to succeed we must cultivate

the ground thoroughly—as well as we would corn or potatoes.

Mr. BARRY thought that we of Western New York had unusual facilities for raising Winter Pears, for our numerous railways afforded the best markets with ease. There was no difficulty in packing them for market. He would add that *winter pears are not so good on young trees as on old ones*; for instance, the Glout Moreau did not bear perfect specimens, even on the quince, till eight or ten years old.

Mr. H. E. HOOKER agreed with Mr. BARRY in the statement that it was absolutely necessary to have large and good specimens to succeed in ripening them. He thought that we were not, as yet, prepared to recommend a list of varieties to farmers. He was cultivating the Lawrence and Winter Nelis. He thought a very general knowledge of fruits would be absolutely necessary before we of Monroe County could hope to succeed perfectly in the cultivation of Winter Pears and other fruit.

There was some desultory remarks in regard to the cultivation of pears on the quince stock. Mr. R. R. SCOTT remarked that the bulk of the fine pears exhibited at the different Agricultural and Horticultural Fairs, and which were so generally admired were grown on the quince, and the greater proportion of pears which found their way to market from this section, were grown on dwarf trees.

Col. HODGE said that several kinds of pears succeeded well on quince—for instance the Glout Moreau and Louise Bonne of Jersey. But we have been trying to raise too many kinds, many of which will after a few years dwindle out and die. The proper kinds on the quince for garden culture will do well, but he thought that the pear on its own stock would be the kind to be principally depended upon.

THE EUROPEAN LINDEN.

THE best botanical authorities divide the genus *Tilia* of the natural order *Tiliaceæ* into two species, *Tilia Europea*, or the common Lime tree, or Linden, and *Tilia Americana*, or the common American basswood tree. We annex a beautiful cut of the former species. The American Basswood is of a more robust habit, with larger leaves than the European tree. The latter is much more fragrant than our common Basswood, and makes a very fine pyramidal tree. There are several beautiful specimens growing in this vicinity, and there is no tree that is more suitable for planting along the streets in cities, the heat reflected from the pavements and buildings increasing the fragrance of the blossoms. It is a rapid growing, vigorous, plant, well balanced tree, with a great number of lateral branches of an easy and graceful habit. It likes a rich, sheltered soil, and should not be planted on dry, poor soils in exposed situations. It is better adapted for avenues, than almost any other tree.

The Linden was known to the Greeks and Romans. THEOPHRASTUS states that the leaves are sweet, and used as fodder for most kinds of cattle. It was highly esteemed by the Romans as a shade tree, and for the numerous uses to which its wood might be applied. EVELYN commends the Linden for its "unparalleled beauty" for walks, and because "it will grow in almost all grounds, lasts long, soon heals its wounds when pruned, affects uprightness, stoutly resists a storm, and seldom becomes hollow." He alludes to the large trees "at Basil and that at



THE EUROPEAN LINDEN.

Augsburg, under whose shade they often feast and celebrate their weddings; because they are all noted for their reverend antiquity; that at Basil branching out one hundred paces in diameter from a stem of about twenty feet in circle, under which the German emperors have sometimes eaten; and to such trees, it seems, they paid divine honors, as the nearest emblems of eternity." At Neustadt in Wirtemberg, there is a prodigious Linden tree.— It is said by EVELYN to have had, in his time, a trunk above twenty-seven feet in circumference, and the diameter of the space covered by its branches to have been 493 feet. It was "set about with divers columns and monuments of stone (32 in number, and formerly above 100 more,) which several princes and noble persons have adorned, and which, as so many pillars, serve alike to support the umbrageous and venerable boughs." He adds copies of many of the inscriptions on the columns, the oldest of which is dated 1550; and the column on which it is inscribed supports one of the largest limbs, at a considerable distance from the tree, which must have been of enormous size over three hundred years ago. In the wars which have desolated the country since the time of EVELYN, this tree suffered severely, but it is still in existence.

The name LANNÆUS, the great Swedish botanist, is taken from an ancient Linden tree, of great mag-

nitude, which grew near his dwelling, *linn* being the Swedish name of the lime tree, or linden.

Honey produced by the linden blossoms, is considered superior to all other kinds for its delicacy.

"The bee
Sits on the bloom, extracting liquid sweets deliciously."

Who that has seen noble specimens of the American Linden, or Basswood trees, fall one after the other before the ruthless axe of the hardy, unpoetic pioneer, does not recall to memory the passage in "LANDON'S CONVERSATIONS: "Old trees in their living state are the only things that money cannot command. Rivers leave their beds, run into cities, and traverse mountains for it; obelisks and arches, palaces and temples, amphitheatres and pyramids, rise up like exhalations at its bidding: even the free spirit of man, the only thing great on earth, couches and covers in its presence; it passes away and vanishes before venerable trees. What a sweet odor is there! Whence comes it? Sweeter it appears to me and stronger, than the pine itself. I imagine, said he, from the linden. Yes, certainly. O, DON PRIPINO, cried I, the French, who abhor whatever is old, and whatever is great, have spared it. The Austrians, who sell their fortunes and their armies; nay, sometimes their daughters, have not sold it. Must it fall? O, who upon earth could ever cut down a linden?"

HORTICULTURAL OPERATIONS FOR MARCH.

This is the commencement of the busy season. The most important work to be done now, as soon as the severity of the weather is past, will be to make up the hot-beds, for early cucumbers, lettuce, radishes, potatoes, &c. If the manure has been prepared as recommended last month, it will be in fine condition for making up at once.

Select a spot as much sheltered from cold winds as possible, yet exposed to the sun. Let the manure be well mixed, when the bed is being made, and beaten down with the back of the fork, and, if dry, watered. The manure should not be trodden down as is sometimes recommended, for the bed is then apt to heat unevenly and one part will be too hot while another remains scarcely warm. The bed should be made one foot larger every way, than the frame that is to stand upon it. When done, place the frame upon the bed, shut it up close and cover it well at night. In a few days the heat will be up well, and if there be not much rank, smelling steam, the earth can be put in at once. Cover the bed three or four inches deep with light, rich, garden soil, then put about a bushel under the center of each sash, making a hill about nine inches high. When it is nicely warmed through, sow a few seeds of cucumber upon the top of each hill. Bury them half an inch deep, if three grow in each hill it will be enough. When the young roots are seen protruding through the hill, they must be covered with more earth, but the earth must be warmed in the bed before it is applied to the tender roots.

Some seeds of tomatoes, purple egg-plant, celery, peppers, &c., can be sown in boxes and placed in the hot-bed until they are in the way of the cucumbers when they can be removed to some other frame to harden off before planting out in the open ground.—The heat of the bed should be about 60° by night, and from 75° to 85° by day with sun. If the warmth declines too soon, it will have to be made good with linings—that is, a bank of hot manure all around the bed and covered with boards, to keep off cold winds and rain. Water when dry, with water of the temperature of the bed. Give a little air on all favorable opportunities, but be careful that no cutting wind blows upon the plants.

Another bed can be made, managed in the same way, for a few early lettuce and radish. The soil will want to be about six inches deep. The radish (*Scarlet*, *Short-top*, or *Early Oval*) should be sown and covered about half an inch deep, and *Early Cabbage* lettuce about an eighth of an inch. The best way will be to sow them on an even surface, and cover them to that depth with fine earth.

Sow a little winter mustard and peppergrass, to use before the lettuce will be ready. When the mustard is three inches high and has but two leaves, it is fit for use. It will be ready in five or six days from time of sowing.

FORWARDING EARLY PEAS.—If room and time can be spared, sow a dozen or two of pots with early peas, these will not require any heat, but can be placed in a cold frame and covered with the glasses until they are up. Protect them from frost by covering the frame at night with litter. The best way to sow them is to put a piece of potshred over the hole of the pot, then fill the pot with earth to within one inch of the top, sow the peas thickly round the edge of the pot

and cover them half an inch with earth. When the frosty nights have past, and the earth is warmed up a little, choose a warm, sunny location, manure and dig it deeply. Raise the earth up into little hills four inches high and eighteen inches apart, and plant one pot of peas in the centre of each hill. Turn it out without breaking the roots, and plant the ball entire. Stick them as soon as planted, and protect in cold nights with a little litter straw.

HARDY GARDEN VEGETABLES.—AS SOON as the frost is out of the ground, let manure be wheeled on to all vacant ground and deeply spaded in. Leave the ground rough from the spade to pulverize, and be in readiness for early sowing of hardy vegetables. Towards the end of the month, in some favorable places, the seeds of many hardy garden vegetables may be sown; such as *Early Kent* peas, *Round Seeded* spinach, *Shorthorn* carrot, *Extra Curled* parsley, onions, salsify, parsnep, potatoes, &c. If the season and soil be wet at time of sowing, let the seeds be lightly covered. If a light, sandy soil, and the weather dry, such seeds as carrot, onion, parsnep, &c., should be lightly covered and gently trod in, just so as to press the soil upon the seeds, for if the soil be loose, and drying winds prevail, they may never vegetate.

NEW BEDS OF ASPARAGUS AND RHUBARB MAY BE MADE.—FOR Asparagus, the ground should be trenched eighteen inches or two feet in depth, and nine inches or a foot of good manure worked in the bottom of the bed, for this is the only time you will have an opportunity of manuring the bottom of the bed. The most convenient size for asparagus beds in gardens is about five feet wide and any length. Plant four rows in a bed, one foot apart, the plants nine inches apart in the row, and buried two inches below the surface. Plants of one or two years old are best, or sow seed and thin out to the proper distance.

RHUBARB may be planted in hills four feet apart. Dig a hole two feet deep and two feet wide, and fill it full of good, rich compost, or mix plenty of manure with the soil which came out of the hole; fill in, and plant in the centre, the crown an inch below the surface. Rhubarb has large leaves and large roots, and is what is called a gross feeder, and unless it has very rich soil to grow in will not half develop itself.

RASPBERRY beds may be made row, as soon as the ground is in condition. A light, loamy soil, highly manured suits them best. Plant four canes in a hill, and the hills four feet apart each way. Cut them down to within a foot of the ground, and allow them to bear no fruit the first year. Pinch out every flower as soon as seen. Drive a stake in the centre of each hill and tie the young ones loosely to the stake as they grow. *Fastolf*, *Hudson River Antwerp*, and *Brinkley's Orange*, are considered among the best varieties.

STRAWBERRIES.—Spread well decomposed manure between the plants, and lightly fork it in without disturbing their roots. Prepare for making new plantations, by digging the ground a foot or eighteen inches deep, incorporating plenty of manure. Plant in rows two feet apart, and one foot apart in the row. In very small gardens they may be planted at half this distance, but they will be more trouble to keep clean and will not do so well after the first year. A rather stiff loamy soil will grow the largest fruit. *Large Early Scarlet*, *Burr's New Pine*, *Hovey's Seedling*, and *Hooker*, are of the best varieties.

COLD GRAPERIES.—The buds of the vines will show signs of bursting toward the end of the month, retard them as much as possible by keeping the vines shaded and the house ventilated on all mild occasions.

Rochester, N. Y.

JOSIAH SALTER.

LOCATION OF ORCHARDS.

ALL the best writers upon fruit growing, agree that the location of trees has much to do with their productiveness and the flavor and beauty of the fruit.—The experience of cultivators also confirms the opinion that much of the value of a fruit tree depends upon *where* it is planted as well as upon the cultivation it receives. The planter of trees, therefore, may well stop to consider whether he has a proper place to plant before he proceeds to buy and spend time and labor upon something which will never remunerate him.

There are now many orchards of old trees which have never been, and never will be worth the labor bestowed upon them.

The reason for the ill success of these plantations is sought for sometimes in the climate, the aspect of the ground to the sun, or the exposure to winds; and in each of these considerations there is much to instruct, and much that is worthy of consideration in choosing a location; but by far the most potent difficulty—and generally one of the most difficult to overcome—is the nature of the *sub soil*. There are many orchards now growing upon a fertile surface soil, but with a sub-soil of mingled clay and stone, so hard and impenetrable to water that wet remains about the roots for such a length of time that no good fruit is ever produced.—*A good tree must have a dry, permeable sub-soil, if it is ever to become profitable.*

After much examination and observation, we have thought that among all the drawbacks upon successful fruit culture, in this vicinity at least, no cause is so destructive of every good quality in fruit trees, as the want of a proper under drainage.

Want of good under drainage, often exists where it is not suspected by a superficial observer. It is often the case that extensive slopes, having various inclinations, all of them sufficient, if good channels existed, to carry off water rapidly, are nevertheless ruined for fruit growing, and indeed for almost all farming purposes, by the fact, that whilst the surface for a foot or more in depth, is mellow and porous, the soil beneath is hard-pan of the most impervious sort. The surface becomes saturated and remains full of cold water, until, by gradual evaporation, or by slowly soaking along from the high to the lower land, it becomes firm enough for the plow—too late, however, to be available for fruit trees. Unless some remedy is found, such land will always remain unfit for orchards.

Thus it frequently happens that the man who believes he has a fine hill for an orchard, has by no means as good a site as he imagines; hills having as often as bad sub-soils as flat lands or valleys, and if the sub-soil be bad, the fact that it is a hill, will keep the lower portions of the slope wet the longer. Hill sides are therefore often the worst of locations.

The planter of trees should make it his first study to ascertain the nature of his sub-soil; look for springy places, and go over the land frequently during the spring and autumn rains and snows, and ascertain carefully where the land is firm and dry soon after

heavy rains, where it will do to plow and plant early in the season, and select such, and such land only as the place for orcharding.

It will surprise many men to find that surface soil is so often deceptive in regard to the character of the sub-soil. A man looking over his farm after a flood, with this in view, will frequently find himself up to his ankles in water, upon what he supposed was a gravelly, dry place; gravely it certainly is upon the top, but not so below, whilst the patch of clay which he feared would swamp him is quite firm; he did not know that gravel lay below here, and the water had fallen through very readily. Sandy surfaces are also often found saturated with water, held there by the clay sub soil beneath.

The *depth* to which the natural drainage of water exists is, in our view, a most important consideration. The roots of large trees extend to considerable depth, and will, of course, be effected by the water in the soil, if they reach it, and if water exists in super abundance at some considerable distance from the surface, it will effect the surface so as to sensibly *diminish* the temperature early in the season. A soil dry to a great depth, then, we think desirable.

We have spoken only in favor of soils *naturally* underdrained to considerable depth; we know it will be said that we have the means of making any soil dry enough for fruit where there is sufficient fall for the use of draining tiles. Without asserting that this may not be done, we must beg planters of trees for orchards not to be too sanguine before trial of the benefits of draining tile, and if they do drain, to drain deeply, and at no great distance apart.

Apple trees in orchards are expected to grow large and their roots to extend a corresponding depth into the earth; and to cover a large surface. To drain for such roots is quite a different affair from draining for grass and grain, or even for dwarf fruit trees, and small fruits.

From some experiments in the use of drain tile, to carry off the water from an unprofitable apple orchard, we are satisfied that if accomplished at all, the work of draining a springy piece of land, so thoroughly as to make it valuable for orcharding is a serious undertaking, and that, although it is not very difficult to make the soil useful for grass or ordinary crops, it is much more difficult to get good, mellow, fine flavored and fair apples to grow upon such a hard pan bottom, than it is to select a proper soil before planting the trees.

The season is now at hand when many of our farmers will be planting new orchards, and enlarging their old ones, and we throw out these hints to induce watchful care in selecting a proper basis for those operations which must, from necessity, be long in producing results, but which will be very profitable if carried out with sound judgment.

It is a well established fact that the apple orchards of Western New York are the best investments our farmers can make, and we hope to see the good work of planting extensively, go forward upon sound principles.

H. E. H.

BET LEAVES were blanched by the Romans much in the same way as gardeners blanch endive at the present day, by laying a tile over it. These leaves were esteemed preferable to lettuce.

Editor's Table.

Winter Meeting of the New York State Agricultural Society.

The Annual Meeting of the New York State Agricultural Society, was held at Albany, February 11—13. The occasion brought together a more general representation of the farmers of the State than usual, and the discussions were of an interesting character, somewhat varied from the old routine, but marked by much good feeling. Being unable to attend, we make the following extracts from a full report in the *Country Gentleman*.

The Treasurer's Report having been read, showing a balance in the Treasury of \$1,140.70, the Report of the Executive Committee followed, referring to the Fair and other proceedings of the year as very satisfactory, the condition of agriculture, the crops and the prospects of the farmer as cheering, and mentioning the progress thus far made in organizing and locating the "Agricultural College" at Ovid—commending both it and the Society to the support and fostering care of the farmers of the State, in the future, as they have enjoyed them in the past. These reports having been adopted,

On motion of Mr. CLARKE, of Otsego, the rules of the Assembly were taken for the government of the meeting, and at the instance of Mr. PETERS, of Genesee, members were confined to five-minute speeches, and only one on any single subject.

Mr. CLARKE, of Otsego, then brought forward the amendment to the Constitution, proposed by him last year, with reference to the permanent location of the Fairs at such points, one, two or three in number, as a majority at this meeting might determine. He merely expressed a strong desire that this question, so many years a matter of discussion, should be "no longer dodged," but set at rest by a final vote. He cared not what places were selected, but hoped that the friends of those best adapted for the purpose, would combine to support a measure which would, he believed, be so advantageous for the Society and all its interests.

Mr. BURROUGHS, of Orleans, would be equally glad to see the subject decided, and thought that the decision could but be in the negative. He opposed the project at some length, by reference to the past successes of the Society, and various other considerations of importance to its prosperity. When he concluded,

Mr. RICHARDSON, of Albany, endeavored to obtain a hearing for the amendment to the same purpose, as proposed by him,—to which it is only giving justice to add, that it had been carefully worded with a view to do away with many of the objections urged in respect to the difficulty of deciding on Permanent Locations, and to provide for every emergency that might arise in so doing.

There seemed to be too strong a disposition to take the "final vote" that had been asked, directly on Mr. CLARKE's proposition, to pay much attention to any motion tending to complicate the question, and after further remarks and arguments in opposition, by Messrs. CHEEVER, RANDALL, NOTT, DICKINSON, ALLEN, PETERS, and others, the roll was called, showing 20 in favor and 132 against a measure requiring a two-third vote to be carried.

The Committee appointed to nominate officers, and select the next place for holding the Fair reported in favor of Buffalo, and nominated the following officers for the ensuing year.

President—Hon. ALONZO S. UPHAM, of Genesee.

Vice Presidents—JONATHAN THORNE, WILLIAM C. MCCOUN, HERMAN WENDELL, JOHN M. STEVENSON, B. E. BOWEN, FRANCIS M. ROTCH, WILLARD HODGES, LEWIS F. ALLEN.

Corresponding Secretary—B. P. JOHNSON.

Recording Secretary—ERASTUS CORNING, JR.

Treasurer—B. B. KIRKLAND.

Executive Committee—G. W. TIFFT, E. C. DIBBLE, C. S. WAINWRIGHT, SOLON D. HUNGERFORD, C. MORRELL.

Mr. JAMES LAWRENCE moved to amend the Report by substituting Syracuse for Buffalo, but after some discussion the Report of the Committee was agreed to with great unanimity.

TRIALS OF SPEED AT AGRICULTURAL FAIRS.—After some remarks on the proclivity manifested in our State and County Agricultural exhibitions to give undue and almost monopolizing precedence to horses, trials of speed and equestrian exercises, and showing the evil results to which such customs must tend, LEWIS F. ATTE, of Erie, offered a resolution deprecating the introduction of the system at the shows of the State Society, discouraging its farther extension at County Fairs, and earnestly recommending that no ring be hereafter laid out at either, of a larger diameter than 150 feet. He thought the race course on the Show ground as demoralizing as it was elsewhere, while it could but destroy the general interest in other departments of exhibitions, and weaken the public regard for societies permitting it.

Judge TERRILL, of Oswego, Mr. HILTON, of Albany, and Mr. BURROUGHS, of Orleans, were among those who opposed the resolution on the ground that speed ought to be encouraged in horses; that, if anything, justice had not yet been done them, and that it was for the interest of the State to have the breeding of the best (fastest?) horses promoted by every possible means.

Mr. OSBORN, of Albany, was in favor of the spirit of the resolution, but didn't quite like the dictatorial tone he thought it assumed towards the County Societies.

Judge CHEEVER considered the size of the ring mentioned too small, but, without assuming to determine the proper size, would vote to leave the whole subject with the Executive Committee.

Mr. PETERS, of Genesee, asserted that the value of the horse to the farmer was in reality less than that of any other domestic animal, and while he looked upon these trials of speed as only demoralizing in their influence, also considered the prominence thus given to the horse as unjust to all the other interests of Agriculture, and as anything but promotive of the objects of the Societies.

Mr. PERTICE, of Albany, followed in some very pointed and effective remarks, concurring entirely with the intent of the resolution, and only regretting that it had not been made to cover still greater ground; he spoke of the Vermont State Fairs—to which reference had been made as proving that horse-racing and successful exhibitions were not incompatible—as merely trials of speed; mentioned a recent

failure of his own to find a good serviceable animal in that state, and argued that the character of its horses for use had been over-rated. In respect to the "Female Equestrianism," so prevalent and popular, its effect was to place our daughters on a level with professional circus riders; with them they were forced to compete, although they could not do so successfully, as a matter of course.

Mr. BURROUGHS, of Orleans, followed, expressing the belief that premiums could not be properly decided on a course of less than a quarter of a mile, and stated that even if the subject had been already brought forward by others, it was his intention to have offered a resolution, directing the Executive Committee to provide a track at the next Show of at least the length he had specified, and full forty feet in width.

Hon. A. B. DICKINSON, of Steuben, expressed some very practical views in definition of "thorough-breeding" for the farmer—what it is and should be, and justly claimed more excellence for New York horses than had been allowed them—introducing the results of his long experience and observation on this and other subjects in connection, and making some happy *luts*, which were responded to by much merriment and applause.

It was voted to leave the matter with the Executive Committee, and adjournment was had for supper.

Dr. FITCH, the Entomologist of the Society, delivered a very interesting address in the evening, followed by a desultory discussion on Dwarf Pears.

Mr. ALLEN mentioned the ravages of the mice in his orchards, gardens and pastures last winter, stating that they ate off the roots under ground, so that no preventive applied on the surface had the least effect.

DEDICATION OF THE AGRICULTURAL ROOMS.—On Thursday evening, the new and commodious rooms of the Society, in the Geological Hall, were dedicated, in connection with the usual inauguration of the new President.

B. P. JOHNSON, the Secretary, reviewed the past as related to the peculiar features of the occasion, and argued the prospects of a brilliant future from the previous success and still more important position now assumed by the Society.

Ex-President CHEEVER followed, tracing the history of Agricultural progress for the past half century, together with that of the Society, in the estimation of the people, and the attention received from the State—very justly attributing a great influence for good to the Agricultural Journals, alluding to the old *Genesee Farmer* and *Cultivator*. The State Society from the time it was awakened to life in 1841, had effected much, and taken a stand at the head of similar institutions throughout the country.

After addresses from V. H. BOGART, of Cayuga, and the Hon. T. C. PETERS, of Genesee, who took the position that the wheat crop is rapidly diminishing through the State, and that its cultivation will soon have to be given up, except so far as requisite for the domestic wants of the farmer—arguing that dairy-farming is to take its place, strengthening his views by citations from the statistics of the census, and advocating such a change from numerous considerations.

Ex-President KELLY introduced Governor KING, whose remarks were felicitous and pointed, showing the connection of the farmer to the government, and *vice versa*, and

congratulating the agriculturists of the State upon the position they now hold, and assuring them of all their interests demand, at the hands of the Legislature.

The address of T. S. FAXTON, the retiring President, was read, referring to the success of the Watertown Show, adding statistics to prove the importance of the Agriculture of New York, and closing with the introduction of the President elect, the Hon. ALONZO S. UPHAM, who briefly returned thanks, and assured the members of his heartiest efforts in behalf of the common cause.

GREAT SUCCESS OF THE GENESEE FARMER.—As stated in our last, we have had to reprint the January number of the *Farmer* three times. Our last edition of six thousand is now almost exhausted, and we are daily receiving large additions to our subscription list. We shall have to strike off another edition in a short time. *Our circulation this year far exceeds our most sanguine expectations.* This unparalleled success is mainly due to the efforts of the friends of rural improvement, who have kindly volunteered to obtain and forward us the names of subscribers. We are deeply grateful to our numerous agents for their disinterested labors, and will endeavor to reward them by making the *Farmer* still more worthy of their patronage. There is still abundance of time to canvass for subscribers, and we hope our friends will still urge all their neighbors who have not already done so, to join the club for the *Genesee Farmer* and *Rural Annual*. There are thousands and tens of thousands of farmers in the United States and Canada, who take no agricultural paper whatever. The *Genesee Farmer* is so cheap that all can afford to take it, and though our circulation is now very great, there is no reason why we should not count our subscribers by *hundreds* of thousands, instead of *tens* of thousands. Still, as too many farmers prefer a paper devoted mainly to silly charades and stories, we shall have to be content for the present with somewhat less than fifty thousand subscribers; but we hope that the time is not far distant, when a paper filled with the practical experience of our best farmers and gardeners, and published at a price within the reach of all, will have at least one hundred thousand regular subscribers.

PREMIUM ESSAYS.—Our offer of a dollar book for the best essay on various subjects connected with rural pursuits has elicited much useful and practical information, with which we hope to enrich the future pages of our journal. This month we give the essays to which the premiums have been awarded; and we hope the writers will inform us what book or books they will have, and we will send them, postage paid, by return of mail. Much difficulty has been experienced in deciding on the relative merits of the respective essays. Without exception, all the articles received are brief, practical, and to the point, and our only regret is that we cannot award a premium to each one of them. We trust that every one of the writers will become regular correspondents of the *Genesee Farmer*.

We would remark in this connection, that we must not be held responsible for all the views set forth in the premium essays, any more than in ordinary communications.

CORRECTION.—In the article on page 59 of last number, four lines from the bottom of second column, read "cut out the young wood," instead of "set out," &c.

THE RURAL ANNUAL AND HORTICULTURAL DIRECTORY.—The demand for our *Rural Annual*, is far greater than our most sanguine expectations. Two editions have already been exhausted, and at this moment we have not a single copy left. We are striking off a third edition, and all orders will be filled as promptly as possible. The work gives great and universal satisfaction. It contains more matter than many dollar books; the articles are on various topics, and written expressly for it. The work contains reliable, useful, interesting and practical information, and any one of the articles are worth more than the price of the book.

In clubs of eight, the *Rural Annual* and *Genesee Farmer* are sent for fifty cents the two, and we prepay the postage on the *Rural Annual*. We did not do this last year, except to those who sent twenty-five cents for the work. This year, though the book is much larger and contains twice as much matter, we prepay the postage to club subscribers.

Every one about to build, to lay out a garden, to plant fruit or ornamental trees, should have a copy. At this season of the year especially, when gardening operations are about to commence, the information contained in the *Rural Annual* on the kitchen garden, the cultivation of the strawberry, the raspberry, the gooseberry, the currant, the blackberry, &c.; on ornamental gardening, on the management of grapes in cold houses, or planting hedges, and on various other branches of special interest at this time to all interested in the ennobling pursuits of horticulture, the *Rural Annual* and *Horticultural Directory* will be worth ten times its cost.

We annex a few extracts from the many complimentary notices the work has received from the press.

"Mr. JOSEPH HARRIS, editor of the *Genesee Farmer*, has issued his "Rural Annual" for 1857. It is a capital work of 144 pages, full of valuable matter, beautifully illustrated."—*Rural American*.

"A most valuable little work of 144 pages, that will be found useful to every rural inhabitant." We recommend it with confidence."—*Niagara Democrat*.

"This is the second issue of a valuable manual, specially devoted to rural architecture, rural economy, &c., handsomely got up. It contains an article on rural architecture, with numerous designs of farm houses, cottages, &c.; also treatises on the management of fruit, flowers, and Kitchen Gardens, and a list of Nurserymen in the United States and Canada, Agricultural Implement makers, &c."—*Hamilton (C. W.) Spectator*.

"We have received from the publisher of the *Genesee Farmer*, a neat little work, entitled the 'Rural Annual and Horticultural Directory.' It contains a valuable article on Rural Architecture, accompanied by beautiful designs of Farm Houses, Cottages, Suburban Residences, &c., also practical treatises on the management of Fruit, Flower, and Kitchen Gardens, cultivation of Grapes, Strawberries, Raspberries, Blackberries, Gooseberries, Currants, &c., plan for laying out a fruit garden and ornamental grounds, with the best location for fruit trees, vegetables, &c., together with useful articles on the rearing and management of poultry, and various other subjects of interest to every lover of rural life. It contains, also, a very full and correct list of Nurserymen in the United States and Canada. List of Agricultural Implement makers, &c., together with a list of the fruits recommended by the American Pomological Society, as corrected at its last meeting held at Rochester, Sept. 1856. It is a work of 144 pages, illustrated with eighty engravings, and is alike attractive and useful, containing as much matter and more information than many dollar books. Price only 25 cents."—*Welland (C. W.) Reporter*.

"A valuable manual, * * * containing useful information on rural architecture, cultivation of various kinds of fruit, management of poultry, &c., the whole forming a work of 144 pages, with eighty engravings."—*Boston Cultivator*.

"Our farmers cannot do better than send 25 cents to Joseph Harris, of the *Genesee Farmer*, Rochester, N. Y., and obtain the 'Rural Annual and Horticultural Directory,' a neat little book of 144 pages, replete with just such information as every farmer needs. It is illustrated with eighty engravings, and is worth dollars instead of cents to the farmer. Twenty-five cents will insure it sent, post paid."—*Salem (N. Y.) Press*.

"A combination of useful things, with regard to buildings, fruit and shubbery, plans for gardens and ornamental grounds, garden and farm implements, &c. &c."—*Elgin (Ill.) Gazette*.

PLANTING POTATOES IN THE FALL.—Mr. E. O. BUNDY of Oxford, Chenango Co., N. Y., writes us that he plants his potatoes in the fall, and obtains larger crops, and larger, earlier and better flavored potatoes, than when planted in the spring. His method of planting is as follows: Select a piece of good *dry* ground, prepare it as for spring planting, any time in the fall when the ground is in good order, taking care to plant the potatoes a little deeper than in spring planting. Throw a shovelful of coarse manure upon, or still better into, each hill; or better still, cover the surface of the ground with a coat of straw, where mice are not too plenty. The straw helps to protect the potatoes during winter and forms a mulch in summer, and checks the growth of weeds, so much so that the potatoes scarcely need hoeing or plowing. Mr. B. says: "I have raised my potatoes in this way for several years past, and they are invariably free from 'the rot,' and at least two weeks earlier, and two or three sizes larger than in spring planting. The ground is frozen this winter unusually hard, and mice are unusually plentiful, and should I fail for once it will be owing to one or other of these causes. If I do not fail this year, there can be no doubt this way of raising potatoes is the best. I will write again, and inform you whether the potatoes were frozen or eaten with mice during the cold winter of 1857." We hope Mr. B. will do so; and we should be glad to hear from others who have had experience in this matter.

WINTER BARLEY.—The experiments which have been made with winter barley in this vicinity have been very generally successful. Last fall, a considerable breadth of land was sown—one farmer in Greece sowing 25 acres, and which he informs us looks well at the present time, and has apparently suffered little from the winter. In Indiana and Southern Ohio, winter barley is rapidly taking the place of spring barley. It is said to do well on land which will not produce winter wheat, though as a general rule, the soil which is best adapted for winter wheat is also best adapted for winter barley. In regard to the comparative productiveness of spring and winter barley, we have been furnished with the following experiment made by a careful farmer in Indiana. He had four acres of corn ground, from two of which he removed the corn in October, and sowed winter barley; the other two acres were sown with spring barley the following spring. The two acres sown with winter barley produced 121 bushels, and the two acres sown with spring barley only 42 bushels. We should be glad to hear from any of our readers that have had experience with this crop.

THE USEFULNESS OF THE GENESEE FARMER NOT CONFINED TO ONE SECTION OF THE COUNTRY.—T. E. TATE, Esq., of Osyka Miss., writes us as follows: "Having been a subscriber to your valuable paper, during the past year, and found so much in its pages to interest and benefit the farmer, I beg leave to send you \$1 for two years' subscription. Though living at a great distance from your place of publication, and working soil and raising products of a very different character from yours, still I feel that in many leading features the same rule will apply to all.—Your articles on the subject of underdraining have awakened within me a new impulse, and I have laid eighty rods of underdrains since I became a reader of your pages. I believe these are the only underdrains in the county, and if they prove advantageous—as I am confident they will—several others will try similar experiments."

PREMIUM FOR THE BEST DOZEN DOMESTIC RECEIPTS.—We have received *twelve* "Dozen Domestic Receipts," and they are all so good that the committee to whom we referred this matter, have not been able to decide which is the best. The "proof of the pudding is in the eating," and they cannot decide without testing the receipts. When they come to a decision we will make it known and send the premium. From the fact that the committee cannot determine which is the best, it is evident to us that all of them are deserving of a premium, and *therefore award to each of the writers a 25 cent book.* They will find a considerable number of such books in our list published on the last page, and we hope that each of our fair correspondents will write us immediately which of them they would prefer, and they shall be sent, postage paid, by return of mail.

THE WEATHER AND CROPS IN INDIANA.—Our winter, from the middle of December last to the first of February, has been of a lower degree of temperature, to take the average, than last winter—yet we have had no single day or night as cold as last season; 10° below zero was the lowest point reached this winter. The fruit buds are all safe, thus far. We have at this time pleasant weather, the mercury standing at 60° to-day, and a prospect of an early spring. Our wheat crops look very bad at present, owing, I think, to the dryness of the ground last fall when wheat was sown. I think there was much of the grain that has not sprouted yet. If that should be the case, it may yet vegetate when warm rains fall. ELIJAH STARK.

Versailles, Ripley Co., Ind.

PREMIUMS FOR ESSAYS.—There are very few readers of the *Genesee Farmer*, who cannot furnish valuable practical information on some of the many subjects embraced in our premium list as published in our last number. We trust that our friends will not neglect to write on these subjects immediately, while they have leisure, and mail their letters so as to reach us by the first of April. We shall award the premium, even though there is but one essay received.

DISPOSED TO BE FACETIOUS.—In reply to our offer of a Premium for the "Best Means of Destroying Weeds," a correspondent writes: "Pull them up and shake the dirt off, and lay them on a stump to dry." Doubtless a very effective, if not an expeditious method.

TO DESTROY RATS.—An esteemed correspondent, Mr. WILLIAM RENO, of Newcastle, Pa., sends us the following amusing description of his plan of destroying rats:—I build my corn-crib, on posts about eighteen inches high, made rat-proof by putting a broad board or sheet iron on the top of the posts. Make everything secure against rats except the granary, and have this rat-proof except at one of the back corners. Here, where they will like it best, make a nice hole with a spout five inches long on the outside, where they can go in and out at pleasure. Then, if I think the rats are too numerous, I take a bag, after dark, and slip the mouth over the spout on the outside of the granary. Then send 'BEN' in at the door with a light, and the rats and mice will all run into the bag. Then slip the bag off the spout and slap it once or twice against the side of the granary. Turn out the dead, and in an hour or two repeat the process. After all are killed, stop up the hole till new recruits arrive, which catch in the same way. Try it, and my word for it you will save enough to pay for the *Genesee Farmer* as long as you live.

BAY WINDOWS.—Speaking of the form of windows, HENRY WARD BEECHER well observes: "Our common, small, frequent windows in country dwellings are contemptible. We love rather the generous old English windows, large as the whole side of a room, many-angled, or circular; but of what shape, they should be recessed—glorious nooks of light, the very antitheses of those shady converts which we search out in forests, in hot summer days. These little chambers of light into which a group may gather, and be both in doors and out doors at the same time; where in storms, or in winter, we may have full access to the elements without chill, wet or exposure—these are the glory of a dwelling."

A RAT-TRAP.—A humorous correspondent at Oxford, Chenango Co., N. Y., writes us that he has invented a rat-trap which has caught a great many old, sly, crafty fellows, so sly, that if they could speak and were made to tell the truth for once, they would have to confess that *they could not help being pleased with it themselves!* We must have a drawing and description of that trap, with the half admiring, half despairing expression of a sly old rat when he finds himself fairly caught at last.

BEST ESSAY ON THE MANAGEMENT OF BEES.—A correspondent calls our attention to an omission in our "Premiums for Short Essays." There is nothing said about bees. This was an oversight, and we now offer a premium of a dollar book for the best essay on the Management of Bees. All essays to be received by the first of April.

THE WINTER IN IOWA.—Our correspondent, EDWARD LINNE, of Toronto, Clinton Co., Iowa, writes, that the winter in Iowa has been very severe, and that a great number of cattle are dying from disease and starvation.—He adds, "long will the winter of 1856-7 be remembered by the farmers of Iowa."

BACK NUMBERS WANTED.—We will pay four cents each for clean numbers of the *Genesee Farmer* for June, August, September and October, 1854. Send them by mail, and we will remit the money forthwith.

TO GET RID OF RATS.—Mr. C. M. DEXON, of Sellersburgh, Ind., says the best way to disperse rats from a building where they cannot be caught, is to put in their holes very strong unslacked lime. This should be done in damp, rainy weather. The lime will stick to their wet feet, and produce an itching sensation which causes them to know their feet, and passing through the lime only aggravates the matter. They will soon vacate the premises, leaving behind no offensive smell, as in ordinary method of poisoning.

BUILDING FENCES.—A correspondent says that if farmers in building a fence, (a worm fence especially,) would "begin down hill and work up, they would gain enough in one year to make them life subscribers to the *Genesee Farmer*."

TO CATCH OWLS.—Raise a pole near the hen-roost, on which the owl will alight to watch for his prey. Set a trap on the top—and you have him. WILLIAM RENO.

Newcastle, Pa.

CURING FIGS.—A correspondent wishes to know the best mode of curing figs. Will some of our readers inform him?

Inquiries and Answers.

WILL you, or some of your correspondents, inform me in regard to the following queries:

1. How can evergreen trees, say Arbor Vitæ, Norway Spruce, &c., be safely transported from a distance—say from Rochester Nurseries to this place? It is said that even a very short exposure of the roots of evergreens is fatal.

2. What is the proper time to trim forest trees so that they will sprout well? I have reference to heavy trimming.

3. What is the difference between our White Cedar and American Arbor Vitæ?

4. What is the best grass seed for seeding down a lawn, sandy soil and among large evergreen trees?

5. Is coal tar the same as gas tar?

6. Will Osage Orange stand our cold winters, where the mercury went down to -40° this winter, and we get frost nearly every month in the year, except June, July and August? and what would be the next best hedge plant for this latitude? JOHN PARRY, *Argyle, Wis.*

1. Evergreen trees can be transported safely a great distance, if they are well packed with moss among and around the roots. Our nurserymen here, send out large quantities every season, with as good results following their transplanting as that of fruit trees.

2. The best time to prune trees so as to induce them to sprout vigorously, is after they have shed their leaves in the autumn, or early in the winter; a plant continues during the winter to absorb food from the earth, which is distributed equally throughout its system, and if pruned early the sap is stored up in the remaining parts, enabling them in the spring to push with great vigor; on the contrary, when late pruning is had recourse to a large proportion of the sap that has been accumulated during the winter, will be thrown away.

3. *Cupressus thyoides*.—White Cedar. This tree grows from 70 to 80 feet high, and is rarely more than three feet in diameter, and when growing in masses, the trunk is straight, perpendicular, and destitute of branches to the height of 50 to 60 feet; it grows naturally only in low, wet ground and marshes; the wood, besides for other purposes, is used in manufacturing shingles, pails, washtubs, churns, &c.

Thuja occidentalis.—American Arbor Vitæ, is a tree which attains a height of 45 or 50 feet, with a diameter from 1 to 3 feet. "The full grown Arbor Vitæ is easily distinguished from all other trees, by its shape and foliage. The trunk tapers rapidly from a very large base to a very slender summit; and it is furnished with branches for four-fifths of its height. The principal limbs are widely distant from each other, placed at right angles with the trunk, and have a great number of drooping, secondary branches." It grows on the high banks of rivers, as well as in marshes; we have seen it flourishing on the banks of the Hudson, the Genesee, and the Niagara; it abounds in the tract of swampy land between Rome and Montezuma, in this State, and in numerous other localities in the Northern States and Canada.

4. Kentucky blue grass or red top.

5. Coal tar and gas tar are the same.

6. We have never seen or heard of the effects of a temperature of -40° on the Osage Orange plant. Winter before last, in this vicinity, the mercury went down to -26° , and this winter to -20° without injuring the shoots, except at their extremities. We are not prepared to advise any other hedge plant for your locality, but if any of our readers know of any that is suitable, we shall be happy to receive their report.

(V. L. COLLIER, Jr., Gallatin, Tenn.) You can get the Earth Almond from THORBURN & Co., New York.—See advertisement in last number. We know but little of the process by which the French make "bran from wheat straw." One thing we do know, straw contains comparatively little nutritious matter, and no mere mechanical or chemical process can make it as nutritious as good wheat bran; they may render the matter it contains more digestible but they can create nothing. SCOTT & HODGES, of Cincinnati manufacture a good mill for grinding corn in the cob.

(J. P.) MAD ITCH IN CATTLE. Give the animal affected, as much soot and salt as it will eat; soon after give half pound of sulphur, and eight hours afterwards, half a pound of Epsom Salts. If the animal is large, from three fourths to one pound of sulphur and salts, may be given. We should be glad to hear from our correspondents who have had experience with this fatal disease.

(E. L., Toronto, Iowa.) Allen's Diseases of Domestic Animals, Cole's Veterinary, Youatt and Martin on Cattle, Dadd's American Cattle Doctor, are all good works. For price, see advertisement on last page.

(C. N. HOWE, Homer, N. Y.) You will find an article on Osage Orange Hedge, in the *Rural Annual*. See advertisement in this number, in regard to the Chinese Sugar Cane.

(D. K., Mt Healthy, Ohio.) For wheat we would sow "tafew" broadcast. We have not much faith in it. See an article "Facts about Nightsoil." in the April number of last year.

(H. I.) The Chinese Sugar Cane and the Sugar Millet, are the same thing. For seed, see advertisement in this number.

(A SUBSCRIBER, Eden, N. Y.) The experiments which have been made on the application of electricity to crops, have not sustained the expectations that were entertained on its first introduction.

ADVERTISEMENTS,

To secure insertion in the FARMER, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. TERMS - Two Dollars for every hundred words, each insertion, PAID IN ADVANCE.

TO NURSERYMEN AND OTHERS.

FOR SALE AT

GENESEE VALLEY NURSERIES, ROCHESTER, N. Y.

WE offer to the trade the following Nursery articles at extremely low prices, affording rare inducements to Nurserymen and Dealers:

- 10,000 Fontenay Quince stools—the best stock for dwarfing Peaches—three years old, strong plants. These plants yielded 50,000 well-rooted layers this past summer. This is the only sure method of propagating Quince stocks. Price, \$25 per thousand.
- 20,000 Plum Stocks, extra fine. Price, \$18 per thousand.
- 10,000 Pear Stocks, two years. Price, \$15 per thousand.
- 25,000 Western, or Wild Plum Stocks. Price \$12.50 per thousand.
- 25,000 Quince Stocks—Angers and Fontenay—first choice. Price, \$20 per thousand.
- 25,000 Peach Trees, one year old, very fine and choice budded varieties. These trees are perfectly free from Yellows and other diseases. Price, \$70 per thousand.
- 5,000 Apricots, one year old, extra. Price, \$10 per hundred.
- 10,000 Cherries, second size, two years old, three to five feet high, part with heads, best varieties. Price, \$8 per hundred.
- 10,000 Pears, dwarf, second size, one and two years old, 2½ to 3 feet, best sorts. Price, \$14 per hundred.
- 3,000 Pears, standards, second size, two years old, 3 to 4 feet, very best varieties. Price, \$160 per thousand.
- 10,000 Horse Chestnuts, one year. Price, \$10 per thousand.
- 25,000 Arborvitae, 2½ to 3 feet, for hedges, very fine plants, and very cheap. Price, \$60 per thousand.
- 50,000 Norway Spruce, two years old, suitable for transplanting, four to six inches. Price, \$18 per thousand.
- 500 *Desultzia gracilis*. Price, \$12 per hundred.
- 1,000 *Wigelia rosea*. Price, \$18 per hundred.
- 1,000 *Bignonia radicans*. Price, \$3 per hundred.
- 3,000 Dahlias, splendid collection, dry roots for propagating.—Price, \$10 to \$25 per hundred.
- 2,000 English Yews, 5 inches. Price, \$5 per hundred.
- 1,000 Siberian Arborvitae, 6 inches. Price, \$8 per hundred.
- 500 *Crotonia Japonica*, 12 to 15 inches. Price, \$25 per hundred.
- 500 *Elaeagnus Japonica*, variegated, 12 to 15 inches. Price, \$3 per hundred.

For more full and complete information, the proprietors refer to the following Catalogues now ready, gratis, to those who enclose a one cent stamp for each:

- No. 1. Descriptive Catalogue, Fruits.
No. 2. Descriptive Catalogue, Ornamental Trees, Shrubs, Roses, &c.
No. 3. Descriptive Catalogue, Dahlias, Verbenas, Green-house Plants, &c.
No. 4. Wholesale Catalogue or Trade List.

A. FROST & CO.,
March 1.—2t. Genesee Valley Nurseries, Rochester, N. Y.

SPRING GARDEN SEEDS, &c.

The best varieties of

- PRIZE CUCUMBERS AND MELONS, for frames.
Improved New York Egg Plant.
EARLY TOMATOES, CABBAGES and LETTUCES.
Early Paris, Nonpariel, Lenormands, and other approved CAULIFLOWERS.
PEPPERS, CERIEES, CARDOON.
Peas—Early *Daniel O'Rourke*—Emperor, Cedo Nulli, Prince Albert, Champion of England, and the recently introduced and very superior later sorts. *Lord Raglan*, *Epp's Monarch*, *Harrison's Glory and Perfection*, &c. &c.
GREEN GLOBE ARTICHOKE—WINDSOR BEANS—BEETS—BROCCOLIS—RADISHES.
CARROTS—Early forcing and other sorts.
MUSH ROOM SPAWN—HERB SEEDS—SPRING TURNIPS—of all sorts.
INDIAN CORN—Extra Early Burlington, *King Phillip* and *Darling Sugar*, Early Canada and Tuscarora, Evergreen, Old Colony and Mammoth Sugar, &c. &c.
CHRISTINA MUSK and New ORANGE WATERMELON.
POTATOES—Early Sovereign, Early June, &c.
BEANS—Early Snap Short, Valentine, and other bush varieties.
POLE BEANS—Large and Small Lima, Horticultural, Cranberry, &c., and every other desirable variety of Vegetable Seeds—all of the very finest qualities, and growth of 1866.
FLOWER SEEDS—the largest collection to be found in the Union, comprising standard sorts and novelties, both of domestic and foreign growth.

NEW CHINESE SUGAR CANE, 75 cents a pound, and in packages at 25 and 50 cwt. each, prepaid, by mail—NEW CHINESE POTATO, (*Dioscorea batatas*)—CHUFAS, or EARTH ALMONDS—JAPAN PEAS—SPRING and WINTER VETCHES, or TAKES—OSAGE ORANGE, YELLOW LOCUST, BUCKTHORN, HONEY LOCUST, NOKWAY SPRUCE, SCOTCH FIR, and other Tree and Evergreen Seeds.

FRUIT SEEDS—Pear, Peach, Plum, &c. &c.
TOBACCO SEED—Maryland, Virginia, Florida, Connecticut Seed Leaf—Imported Havana, &c. &c.

DYER'S MADDER SEED—SPURRY—WHITE LUPINS—FULLER'S TEASLES.

BIRD SEEDS—of all kinds.
AGRICULTURAL SEEDS—Field and Ruta Baga Turnips—Long Orange, White Belgium and Allingham Carrots—Mangel Wurtzel, Sugar Beet.

GRASS SEEDS—Italian and Perennial Rye, Sweet-scented Vernal, Red Top, Blue, Festucas—*French Mixed*, and other desirable mixtures for Lawns—White Honeysuckle, Lucerne, and other Clovers, &c.

FRUIT, EVERGREEN and ORNAMENTAL TREES—GIANT ASPARAGUS Roots, RHUBARB, &c.

GARDEN SPRINGES, BUDDING and PRUNING IMPLEMENTS, and a general assortment of HORTICULTURAL TOOLS.

Catalogues on application. If by mail, enclose a three cent stamp for return postage.

The smallest orders by mail promptly responded to.

J. M. THORBURN & CO.,
15 John Street, New York.

JUST RECEIVED from Holland, in the finest condition, large and sound, an assortment of Bulbs for spring planting, viz: AMARYLLIS, (*Jacobean Lilies*.) FERNOS-ISSIMA, and LUTEA. GLADIOLUS *Petitcinnus*, *Floribundus*, *Gandavensis* and *Ramosus*, named and mixed sorts.

TIGER FLOWERS, (*Tigrida*), Red and Yellow.
TUBEROSES, MADEIRA VINES, &c. &c. March 1.—1t.

THE BEST BOOK FOR AGENTS.

TO PERSONS OUT OF EMPLOYMENT.

An elegant Gift for a Father to Present to his Family!

Send for One Copy, and try it among your Friends!

WANTED, Agents in every section of the United States and Canada, to circulate SEARS' LARGE TYPE QUARTO BIBLE, for Family Use—entitled

THE PEOPLE'S PICTORIAL DOMESTIC BIBLE,

With about One Thousand Engravings!!

This useful book is destined, if we can form an opinion from the Notices of the Press, to have an unprecedented circulation in every section of our wide spread continent, and to form a distinct era in the sale of our works. It will, no doubt, in a few years become THE FAMILY BIBLE OF THE AMERICAN PEOPLE.

The most liberal remuneration will be allowed to all persons who may be pleased to procure subscribers to the above. From 50 to 100 copies may easily be circulated and sold in each of the principal cities and towns of the Union. IT WILL BE SOLD BY SUBSCRIPTION ONLY.

Applications should be made at once, as the field will soon be occupied.

Persons wishing to act as agents, and do a safe business, can send for a specimen copy. On receipt of the established price, Six Dollars, the PICTORIAL FAMILY BIBLE, with a well bound Subscription Book, will be carefully boxed and forwarded per express, at our risk and expense, to any central town or village in the United States, excepting those of California, Oregon and Texas.

Register your letters, and your money will come safe.

In addition to the Pictorial Bible, we publish a large number of Illustrated Family Works, very popular, and of such a high moral and unexceptionable character, that while good men may safely engage in their circulation, they will confer a PUBLIC BENEFIT, and receive a FAIR COMPENSATION for their labor.

Orders respectfully solicited. For further particulars, address the subscriber, (post-paid.) ROBERT SEARS,
March 1.—1t. 181 William street, New York.

CHINESE SUGAR CANE SEED.

NEW, pure, and well ripened, by mail, in packets at 50 cents and \$1 each. All the best Vegetable and Flower seeds, by mail, sixteen packets for \$1. Also, all the finest Roses, Bulbs, &c.

Address W. T. GOLDSMITH,
March 1.—2t. Rochester, N. Y.

PLEASE TO READ THIS.

EMPLOYMENT FOR THE WINTER. Persons out of employment may find that which is both profitable and pleasant by addressing ROBERT SEARS, Publisher,
Jan. 1.—4t. No. 181 William street, New York.

TO FARMERS AND GARDENERS,

THE Subscribers can for sale 40,000 barrels of their New and Improved **POURREFFTE**, manufactured from the night-soil of New-York city, in lots to suit purchasers. This article (greatly improved within the last two years) has been in the market for eight years and a full-dress competition as a manure for Corn and Garden Vegetables, being *Cleaner, more powerful than any other*, and at the same time *free from disagreeable odor*. Two barrels (\$3 worth) will manure an acre of corn in the hill, will save two-thirds in labor, will cause it to come up quicker, to grow faster, ripen earlier, &c. will bring a larger crop on poor ground than any other fertilizer, and is also a preventive of the cut worm; also, it does not injure the seed to be put in contact with it.

The L. M. Co. point to their long-standing reputation, and the large capital (\$100,000) invested in their business, as a guarantee that the article they make shall always be of such quality as to command a ready sale.

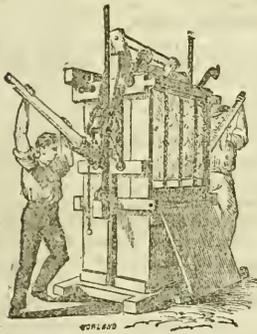
Price, delivered in the city free of charge and other expense—

One barrel, - - - - -	\$2 00
Two " - - - - -	3 50
Five " - - - - -	8 00
Six " - - - - -	9 50

And at the rate of \$1.50 per bbl. for any quantity over 6 bbls.

A Pamphlet containing every information, will be sent (free) to any one applying for the same. Our address is—
THE LOMI MANUFACTURING CO.,
 Feb 1—4t Office, 60 Cortlandt St., New York.

INGERSOLL'S PREMIUM PORTABLE HAY PRESS.



THIS Press combines greater power and portability, and requires less labor, occupies less space, and costs less space, and costs less money than any other machine for baling hay ever offered to the public.

It is equally convenient for pressing Cotton, Hemp, Hops, Broom Corn, Bags, Husks, &c. samples may be seen at our Warehouse, and circulars with cuts and full descriptions will be furnished upon application by letter or otherwise, to

FAIRBANKS & CO.
 Scale Manufacturers,
 No. 159 Broadway,
 Jan. 1—3t. New York.

CHINESE SUGAR CANE SEED.

THE Subscribers have made arrangements for, and have now on hand a moderate supply of the seed of the above plant, well ripened, and may be relied on as **GENUINE**.

Sufficient to plant about one-fifth of an acre in drills 4 feet by 13 inches, put up in strong linen packages, sent by mail, post paid on the receipt of One Dollar, or a proportionate quantity by express, at purchaser's expense.

Order early to secure the seed.
 Also, a full assort ment New and Fresh GARDEN SEEDS, imported and American growth.

Field Seeds and Grain of the most desirable kinds.
 Flower Seeds, the finest variety.
 Full Catalogues, gratis on application.

Feb 1—2t **HENRY D. EMERY & Co.,**
 No. 204 Lake St., Chicago, Ill.

SUGAR CANE SEED.

EMERY BROTHERS have, at much expense and trouble, obtained a supply of Genuine Seed of the Chinese SUGAR CANE, or "*Sorghum Saccharatum*," successfully grown, fully matured, and sown to vegetable, from Mr. R. PETERS, of Georgia, which they will supply in strong linen packages, with full directions for its culture, for ONE DOLLAR, each containing sufficient quantity for one-fifth of an acre. All orders should be accompanied with TWENTY CENTS, or Stamps if to be sent by mail. Pamphlets containing a compilation of reliable information, experiments and success of the plant since its introduction in this country, furnished gratis (post-paid) upon receipt of a three cent postage stamp.

EMERY BROTHERS,
 Proprietors Alb. Agricultural Works, 52 State St. Albany
 Feb 1—2t

FOR SCHOOL EXHIBITIONS.

THE EXHIBITION SPEAKER AND GYMNASIIC BOOK, illustrated with Seventy Engravings; contains Plays, Farces, Tableaux, Tragedies, Dialogues, Comic and Humorous Pieces, Sentimental Speeches, &c., &c. The action is all described and written out so that Teachers and Scholars have no difficulty in performing them well on the rostrum. The Gymnastics and Calisthenics part of great importance to Teachers and Pupils in Schools and Academies. Retail Fifty-seven cents in stamps, and you will get the book by mail, five of postage. Address—
 Feb 1—2t **D. M. DEWEY, Rochester, N. Y.**

GENESEE FARMER PREMIUMS FOR 1857.

1. To every person who sends **EIGHT** Subscribers, (at our lowest terms of *thirty-seven and a half cents each*), we will send, postage paid, a copy of our beautiful twenty-five cent book the *Rural Annual* for 1857.
2. To every person who sends us **SIXTEEN** subscribers, (at our lowest club terms of *thirty-seven and a half cents each*), one extra copy of the *Genesee Farmer*, and one copy of the *Rural Annual*.
3. To every person sending us **TWENTY-FOUR** subscribers, as above, two copies of the *Rural Annual*, and one extra copy of the *Farmer*, or any agricultural work valued at 50 cents, postage paid.
4. To any person ordering **THIRTY-TWO** copies of the *Farmer*, as above, three copies of the *Rural Annual* and one extra copy of the *Farmer*, or any agricultural book valued at 75 cents, postage paid.
5. For **FOURTY**, four copies of the *Rural Annual* and one extra copy of the *Farmer*, or any agricultural book valued at \$1, postage paid, or four extra copies of the *Farmer*.
6. For **FOURTY-EIGHT**, five copies of the *Rural Annual* and one extra copy of the *Farmer*, or any agricultural book valued at \$1.25, postage paid, or five extra copies of the *Farmer*.

For larger numbers, books or papers given in the same proportion.

To save expense to our friends, we pay the postage on all these works, and persons entitled will state what they wish sent, and make their selections when they send orders; or if their list is not complete, if wished, we will delay sending until the club is full.

Premiums for the Greatest Number of Subscribers.

In order to excite a little competition among our friends everywhere, as well as to reward them for their voluntary labors in behalf of our journal, we make the following liberal offers. Those who do not get the premiums offered below are sure of the above, so that we have no blanks.

1. **FIFTY DOLLARS**, in Agricultural Books (at the lowest prices,) to the person who shall send us the largest number of subscribers at the club prices, before the 15th day of April next, so that we may announce the successful competitors in the May number.
2. **THIRTY DOLLARS**, in Agricultural Books, to the person who shall send us the second highest list, as above.
3. **TWENTY DOLLARS**, in Agricultural Books to the person who shall send the third highest lists, as above.
4. **FIFTEEN DOLLARS**, in Agricultural Books, to the person who shall send us the fourth highest list, as above.
5. **TEN DOLLARS** in Agricultural Books, to the person who shall send us the fifth highest list, as above.

Our object in offering books is to increase their circulation throughout the country. If any prefer the cash they can be accommodated.

CLUBS are not required to be at one post office or sent to one address. We send wherever the members of the club may desire.

THE RURAL ANNUAL AND GENESEE FARMER IN CLUBS.

Every Subscriber to the *Farmer* should have a copy of the *Rural Annual*. In clubs of eight, we send the *Farmer* for one year, and a copy of the *Rural Annual* for fifty cents. In other words, for **FOUR DOLLARS** we will send *eight copies of the Farmer* for one year, and eight copies of the *Rural Annual*. For **EIGHT DOLLARS** we will send *sixteen copies of the Genesee Farmer* and *sixteen copies of the Rural Annual*, and one extra copy of each for the person who gets up the Club.

Any person sending us \$3 for a club of eight of the *Genesee Farmer* shall receive one copy of the *Rural Annual* for his trouble, postage paid.

Postmasters, Farmers, and all friends of Rural Improvement are respectfully solicited to obtain and forward subscriptions. Money may be sent at our risk. Address,

JOSEPH HARRIS,
 Rochester, N. Y.

BOOKS FOR THE FARMERS!

FURNISHED BY THE PROPRIETOR OF GENESEE FARMER.

- Morton's Cyclopaedia of Agriculture. Two volumes beautifully bound in Morocco. Price \$22.
 - Morton's Cyclopaedia of Agriculture, bound in cloth, \$18.
 - Wilson's Rural Encyclopedia. Four vols. (second hand) \$16.
 - Rhind's Vegetable Kingdom, with colored plates. Price \$6.
 - The Farmer's Guide. By James Webb. Price 87½ cents.
 - The Farm Engineer. By Ritchie. Price \$3.
 - Gunn's Domestic Medicine. Price \$3.
 - The Cow, Dairy Husbandry, and Cattle Breeding. Price 25 cts.
 - Every Lady her own Flower Gardener. Price 25 cents.
 - The American Kitchen Gardener. Price 25 cents.
 - The American Rose Culturer. Price 25 cents.
 - Price Essay on Manures. By S. L. Dana. Price 25 cents.
 - The Pests of the Farm, with directions for extirpation. Price 25 cents.
 - Horses—their Varieties, Breeding, Management, &c. Price 25 cents.
 - The Hive and Honey Bee—their Diseases and Remedies. Price 25 cents.
 - The Hog—its Diseases and Management. Price 25 cents.
 - The American Bird Fancier—Breeding, Raising, &c. 25 cts.
 - Domestic Fowls and Ornamental Poultry. Price 25 cents.
 - Chemistry made Easy for the Use of Farmers. Price 25 cts.
 - The American Poultry Yard. The cheapest and best book published. Price \$1.
 - The American Field Book of Manures. Embracing all the Fer-tizizers known, with directions for use. By Browne. \$1.25.
 - Buist's Kitchen Gardener. Price 75 cents.
 - Stockhart's Chemical Field Lectures. Price \$1.
 - Wilson on the Cultivation of Flax. Price 25 cents.
 - The Farmer's Cyclopaedia. By Blake. Price \$1.25.
 - Allen's Rural Architecture. Price \$1.25.
 - Peap's Bee Keeper's Chart. Illustrated. Price 25 cents.
 - Johnston's Agricultural Chemistry. Price \$1.25.
 - Johnston's Elements of Agricultural Chemistry and Geology. Price \$1.
 - Rantall's Sheep Husbandry. Price \$1.25.
 - Miner's American Bee-Keeper's Manual. Price \$1.
 - Dadd's American Cattle Doctor. Complete. Price \$1.
 - Fessenden's Complete Farmer and Gardener. 1 vol. Price \$1.25.
 - Allen's Treatise on the Culture of the Grape. Price \$1.
 - Youatt on the Breeds and Management of Sheep. Price 75 cts.
 - Youatt on the Hog. Complete. Price 60 cents.
 - Youatt and Martin on Cattle. By Stevens. Price \$1.25.
 - The Shepherd's own Book. Edited by Youatt, Skinner and Randall. Price \$2.
 - Stephens's Book of the Farm; or Farmer's Guide. Edited by Skinner. Price \$4.
 - Allen's American Farm Book. Price \$1.
 - The American Florist's Guide. Price 75 cents.
 - The Cottage and Farm Bee-Keeper. Price 50 cents.
 - Country Dwellings; or the American Architect. Price \$6.
 - Nash's Progressive Farmer. A book for every boy in the coun-try. Price 50 cents.
 - Allen's Diseases of Domestic Animals. Price 75 cents.
 - Saxton's Rural Hand-books. 2 vols. Price \$2.50.
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Contents of this Number.

Hints on Spring Work,.....	72
Frauds in Artificial Manures,.....	74
Items Suggested by the February Number,.....	75
Notes for the Month, by S. W.,.....	75
Correction—Plaster for Clover, &c.,.....	76
A few Facts for the Genesee Farmer,.....	77
Ergot the Cause of Foul in the Feet,.....	77
A Dozen Receipts worth Saving,.....	78
Another Profitable Flock of Sheep,.....	78
Cultivation of Potatoes,.....	79
History of Marl as a Fertilizer,.....	79
Composition of Fat,.....	79
Lime on Beans,.....	79

GENESEE FARMER PRIZE ESSAYS.

On the Management of Sheep,.....	80
On the Management of Horses,.....	80
On the Management of Swine,.....	80
On the Cultivation of Winter Wheat,.....	81
On the Cultivation of Indian Corn,.....	82
On the Cultivation of Potatoes,.....	83
On the Cultivation of Onions,.....	84
On the Management of a Prairie Farm,.....	84
On the Best Method of Fencing a Farm,.....	85
On Destroying Rats, Mice and other Vermin,.....	85
On Butter Making,.....	86
On the Influence of Agricultural Papers—and Reasons why Farmers should Write for them,.....	86
On the Best Means of Destroying Weeds,.....	86
On Lime as a Manure,.....	87
Is the Cultivation of Fruit on a more extended scale desirable?.....	87
Why do Farmers so generally neglect their Gardens? and the Best Means of rectifying the evil,.....	88
On Drying Apples, Peaches, and other Fruit,.....	89
What can Mothers and Daughters do to make Farm Life attractive to their Sons and Brothers, and prevent them from leaving the Farm to engage in Mercantile or Professional Pursuits?.....	89
Is it right to ask the Women Folks to Milk the Cows during the busy season?.....	90
Is a Residence in the Country or City most conducive to high mental culture, beauty of person, health, happiness and usefulness?.....	91

HORTICULTURAL DEPARTMENT.

Annual Meeting of the Western New York Fruit Growers' As-sociation, (conclusion,).....	92
The European Linden,.....	93
Horticultural Operations for March,.....	95
Location of Orchards,.....	96
Beet Leaves,.....	96

EDITOR'S TABLE.

Winter Meeting of the New York State Agricultural Society,.....	97
Great Success of the Genesee Farmer,.....	98
Premium Essays,.....	98
Correction,.....	98
The Rural Annual and Horticultural Directory,.....	99
Planting Potatoes in the Fall,.....	99
Winter Barley,.....	99
The Usefulness of the Genesee Farmer not confined to one Sec-tion of the Country,.....	100
Premium for the Best Dozen Domestic Receipts,.....	100
The Weather and Crops in Indiana,.....	100
Premiums for Short Essays,.....	100
Disposed to be Facetious,.....	100
To Destroy Rats,.....	100
Bay Windows,.....	100
A Rat-Trap,.....	100
Premium for the Best Essay on the Management of Bees,.....	100
The Winter in Iowa,.....	100
Back Numbers Wanted,.....	101
To get rid of Rats,.....	101
Building Fences,.....	101
To Catch Owls,.....	101
Curing Figs,.....	101
Inquiries and Answers,.....	101

ILLUSTRATION.

The European Linden,.....	94
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CULTIVATION OF BARLEY.

THE cultivation of barley is receiving more and more attention every year in this section. The uncertainty of the wheat crop since the prevalence of the midge, and the increasing consumption of *Lager beer*, render barley one of the most profitable crops that can be raised on many farms. The geographical range of barley is greater than that of either wheat or oats; it is cultivated under the scorching suns of Africa and Central Asia, and in the northern regions of Europe and America. Its susceptibility of rapid and vigorous growth, without injury to the perfect development and maturity of the seed, fits it admirably for ripening under the intense and steady heat of the South, or the short-lived summers of the North.

It is probable that all the kinds of barley in general cultivation are varieties of one species, of which the *Hordeum distichum* of LINNÆUS is the type. The spikelets of this genus always standing in threes, and the threes being placed back to back, it is evident that every ear of barley must consist of six rows of spikelets. If the middle spikelet of each set of threes is alone perfect, the side spikelets being abortive, we have the common two rowed barley (*H. distichum*) and its many varieties; if the two lateral of each set of three is perfect, and the central spikelets imperfect, as sometimes happens, then we have four rowed barley; if, on the other hand, all the spikelets are perfect, we have six

rowed barley (*H. hexastichum*); but the cases of four rowed barley being merely accidental, they may be referred to the six rowed form, and thus we have only two principal kinds of barley, the two rowed and six rowed. The former is the only kind of barley that has been found apparently wild.

The annexed engravings (figs. 1, 2, 3 and 4.) represent some of the best varieties of the two rowed barley. The drawings were taken from specimens grown under circumstances equally suitable to them respectively, and they may thus be compared with some confidence. The common two rowed barley (fig 1) is perhaps cultivated to a greater extent in this country and in England than any other variety. It is remarkable for its early maturity and adaptation to a great variety of soils. HAXTON, an English writer of great experience, says: "For light soils of an inferior nature, this barley is undoubtedly better adapted than almost any other kind; and even on cold clay land, its early maturity and free manner of growing give it a decided superiority over those varieties which, although of finer quality, are later of coming to maturity."

The Chevalier barley (fig. 2) has thicker and stiffer straw than the common two rowed barley, ripens later, and on a rich soil will yield a heavier crop. In England it has a high reputation with the malsters, who will pay five or six cents a bushel more for it than for the former. The soils best adapted for this variety are a black and rich sandy loam, though a rather heavy clay soil that breaks down readily into a fine, loose mould frequently, when the season is favorable for getting the land into good condition and sowing early, produces large crops.



FIG. 1.



FIG. 2.



FIG. 3.

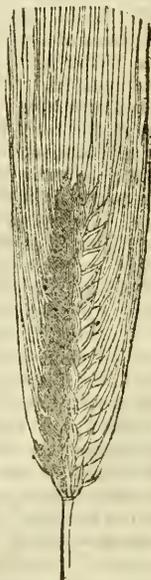


FIG. 4.

Italian barley (fig. 3) is a remarkable variety, both in appearance and general habit of growth. The ears are short and broad, and the grains are extraordinarily plump and round, having a clear yellow, transparent husk. The straw is of a bright yellow hue, (hence this variety is frequently called Golden barley,) and is stiffer, taller and more erect than any of the other varieties, and on this account is particularly adapted for sowing on rich black or soft soils, which are apt to produce too much bulk. It was introduced into Scotland from the Alps some years ago, and was extensively cultivated, but it is found to degenerate so rapidly when grown for two or three years on the same farm, that its cultivation is now nearly abandoned there. It might suit our climate better. The result of several experiments in England show that it is very productive, yielding, in one experiment, 52 bushels per acre, while the Chevalier yielded only 43 bushels per acre. Weight per bushel the same (49½ lbs.) in both cases.

The Common Four or Six Rowed barley (fig. 4) differs very materially from any of the foregoing two rowed varieties. The ears are shorter and thicker, and the grains are arranged around the rachis in two single and two double rows. The single rows are opposite each other, and when the double rows are removed the appearance of the ear is exactly similar

to that of two rowed barley when deprived of the chaffy-like matter (barren florets) between the rows. The grains of the single rows are straight, and in the plane of the rachis, while those of the double rows diverge angularly from each other. Each double row is generally distinct at the base, but the grains gradually assume a more upright position towards the top, where they merge into one. For this reason four rowed barley cannot be considered, as before stated, a distinct species. In Ireland this variety is usually sown as a winter crop. A Scotch writer, speaking of this variety, says: "When bere is cultivated on good land, situated in an early climate, the produce is often greater than that yielded by the two rowed barley; yet notwithstanding this, the price which it fetches is so much lower that the gross return per acre is less, while at the same time the labor of threshing and cleaning the grain is greater." In this vicinity, four or six rowed barley is considered by many farmers more profitable than the two rowed, the yield being greater, and the malsters paying nearly as much for one as the other.

An improved variety of the common four or six

rowed barley is cultivated in Great Britain under the name of Victoria Bere, (fig. 5,) of which LAWSON says: "Its introduction may be considered as the first step to the acquirement of superior varieties of the old big, or bere, (fig. 4,) compared with which it produces longer straw, is longer eared, more prolific, and produces a finer sample, sometimes weighing 56 lbs. per bushel."

The true Six Rowed barley (*H. hexastichum*)—fig. 6—is interesting in a botanical point of view, but of little value to the practical farmer. It differs from the two former varieties (figs. 4 and 5) in having all the rows equi-distant from each other. The ear is short, and contains on an average only about thirty-two coarse grains. It is hardy and prolific, and can be sown either in the fall or early in the spring.

Four or Six Rowed Naked barley (fig. 7) differs from the common four or six rowed barley (fig. 4) in its seeds, which separate from the chaff in threshing, but the form of the ear is similar, although longer.

It is cultivated in the North of Europe, where its earliness and rapid growth suit the short summers, but in England its cultivation has met with but little encouragement. It is sometimes called Siberian barley. One of our correspondents, a short time ago, sent us a sample of grain, wishing us to inform him what it was, but neglected to give us his post-office address. We think it is Siberian barley; and if this meets his eye, we should be glad to hear from him in regard to it. We think it will prove valuable in this country. It was introduced into England in 1768. LAWSON states that two bushels of it were grown in 1769, weighing 132 lbs., or 66 lbs. per bushel! These were sent to mill, "and yielded 80 lbs. of fine flour, equal to London seconds, 40 lbs. of coarse sort, and 12 lbs. of bran, superior to that of wheat. The best flour made excellent bread, and so retentive of moisture as to be as good at twelve or fourteen days after baking as wheaten bread on the fourth day." (Wheat bread in the moist climate of England keeps moist and good much longer than in this country.) Twelve lbs. of barley and the same of wheat flour, being made into bread and baked in the same oven, the wheaten loaf weighed 15 lbs. and the barley loaf 18 lbs. It is said to make good malt.

Another variety of barley, similar to the Siberian, was introduced into England from the Himalayan Mountains in 1817, called Nepaul barley, or Nepaul wheat (*H. trifurcatum*). It is not cultivated to any extent in Great Britain. The same variety has been introduced into this country and extensively distributed during the last two or three years, by Mr. I. W. BRIGGS, of West Macdon, N. Y., under the name of "Beardless" barley. Whether it will prove of any more value in this country than it has in England, remains to be seen.

The soils best adapted for barley are those which are naturally dry and easily reduced to a fine tilth. It should never be sown on sod land. It is vain to hope for a good crop unless the soil is thoroughly pulverized. Some of the best crops of barley we have



FIG. 5.



FIG. 6.



FIG. 7.

seen in this neighborhood, were grown on land plowed in the fall, and cultivated and harrowed thoroughly in the spring, without plowing. It is desirable to sow as early as possible, but it is better to wait till the soil is in good condition than to plow or cultivate it early when in a wet state. It does best, perhaps, after corn than after any other grain crop. If the corn has been well manured and the ground kept clear by the repeated use of the horse-hoe, no better preparation could be desired.

Two bushels per acre is the usual quantity of seed. We should prefer a little more, unless it is sown with the drill, when two bushels is amply sufficient. In England, from three to four bushels is the usual quantity. After sowing, the land should be well harrowed lengthwise, and afterwards across, or obliquely, then roll, sow the clover seed, (if desired,) and finish off with a light pair of harrows lengthwise of the furrows. The practice of rolling the land when the barley is just out of the ground is very common in England, but in this country it is apt to cause the soil to bake on the surface, if it is somewhat wet. For this reason it is better to roll before the last harrowing, if the ground is dry enough to admit the use of the roller without clogging.

When barley commands one dollar per bushel, we think Peruvian guano might be used as a manure for this crop with considerable profit, though the results of experiments which have been made with it are somewhat conflicting. It should be sown broadcast, say at the rate of one hundred and fifty pounds per acre, and harrowed in, before or at the time the seed is sown.

CULTIVATION OF OATS.

For the production of oats of the best quality, a moist atmosphere and a low and equal range of summer temperature is required. An insular position, too, is desirable. The best oats we have ever seen in this country were grown on a piece of new land, entirely surrounded by extensive woods. Oats will flourish on nearly all kinds of soil. Land that is *too poor* to produce wheat or barley, will often yield a fair crop of oats, and soil which is *too rich* for these crops will not unfrequently produce an enormous crop of oats. For the production of a large crop, irrespective of quality, a soil of a black mucky nature, abounding in organic matter, is well adapted for oats. If too rich, however, the crop may fall down before the grain ripens. To avoid this, reduce the fertility of the soil by taking a crop or two of Indian corn off first. A good dressing of lime, too, will often strengthen the straw of the oats on such soil and enable it to produce an immense crop. Three or four bushels of salt per acre might also be useful, but we have had no experience with it. Clayey soils, when well prepared, frequently yield good crops of oats, and of a superior quality. Loose, black, mucky soils, which are too low and wet for barley, may be sown with oats, and the same may be said of cold, heavy clay land. Oats are frequently sown on sod ground with good results, though as a general rule, if the land is in good condition, they do better after a root or grain crop.

Two bushels per acre is the usual quantity of seed sown. We think two and a half and even three bushels might frequently be sown with advantage. Oats should be sown as early as the soil and season will admit, barley, however, taking the precedence.

The *Common White oat*, and *Black oat*, are the

two varieties most extensively cultivated. They are hardy and productive, and weigh from 30 to 34 lbs per bushel. The latter is perhaps most popular in this section. The *White Poland* oat is a very superior variety in some respects, weighing over 40 lbs per bushel; but the yield per acre is small, and it shells out easily. For these reasons many farmers have abandoned its cultivation, finding the *Common Black* or *White* oat more profitable.

CULTIVATION OF SPRING WHEAT.

So far as chemical composition is concerned, the soils most favorable for raising winter wheat, are also best adapted for the cultivation of spring wheat. But the mechanical condition of the soil most favorable for the production of these crops varies very materially. Winter wheat requires a seed bed of a somewhat hard and compact texture. It is easy to pulverize the soil too much. In fact, a somewhat cloddy seed-bed is desirable. For spring wheat on the other hand, the soil cannot be made too fine and loose. Repeated harrowings are required. The soil must be dry, warm and active, so as to enable the plant to grow rapidly during its early stages. It is desirable to sow early, but it is better to wait till the ground can be got into fine tilth, even if the wheat cannot be sown till the middle of May, than to plow and harrow the land before it is dry enough to crumble to pieces readily.

Varieties should be selected with reference to the character of the soil, and time of seeding. This point is too much neglected. For loose, low, somewhat mucky soils the *Fife* is perhaps one of the best varieties of spring wheat at present known. It can be sown quite late. Good crops have been raised in this vicinity, on land that was not dry enough to sow till the first of June. The *Canada Club*, on the other hand, should be sown early on dry uplands, of a firmer texture. The *Siberian*, *Black Sea*, and *Tea* or *China* are also excellent and well known varieties of more or less repute in different sections. The *Magnum Bonum* or *Zimmerman* wheat which took a prize at the Annual Meeting of the N. Y. State Agricultural Society in 1855, and which was sold for fifty cents a quart, proves, as we stated at the time, to be nothing more than the *African* or *Mummy* wheat, introduced under a new name. A cut and description of it will be found in the *Genesee Farmer* for May, 1852. It has been known in Germany for 240 years. It has been cultivated to some extent in England as a winter wheat, and according to *Loudon*, is "*in little estimation.*" Our climate may be more suitable for it, but it is hardly worth fifty cents a quart.

CARROTS.—An esteemed correspondent at Crowland, C. W., informs us that he raised last year 99 bushels of carrots on a quarter of an acre of ground, and adds, "Beat this who can." We should consider 336 bushels per acre rather a small crop in this vicinity. Eight hundred bushels per acre is not an uncommon yield. Our correspondent's mode of cultivation is as follows: Plow under, eight inches deep, about 40 loads of well rotted barn yard manure per acre in the fall; and in the spring plow under about 24 loads of horse manure more; and about the middle of May plow the land again, and mix the manure thoroughly with the soil. Then sow the seed in drills, ten inches apart. Hoe them three times.

AN INTERESTING LETTER FROM PROFESSOR LEE.

Influence of Agricultural Papers.—The GENESEE FARMER a cheap Education! Institution.—Premiums for Short Essays.—Chinese Sugar Cane.—Corn Stalks and Cotton Seed for Cows.—Climate and Soil of Georgia.

ATHENS, GA., Feb. 23, 1857.

FRIEND HARRIS:—Since I have been cultivating the soil in upper Georgia, I have read the *Genesee Farmer* with increased interest to avail myself of the many valuable suggestions which it contains. It is a marvel to me how sensible men engaged in tillage of any kind or in stock-husbandry, so often deny themselves the advantages placed within their reach by the numerous agricultural papers of the day. Such neglect is in many respects a public misfortune; for it not only diminishes the aggregate wealth of the country, compared with what it would be if all farmers both read and labored to improve, but it tends to keep them in ignorance to their great discredit, and to the lasting injury of society. How to accomplish a perfect reform in this matter has long been the subject of thought and study with the writer; and I am pleased with your plan of offering small premiums for short original communications on a variety of farming processes most familiar to your readers, and easy to discuss. This can hardly fail to impart additional interest to your paper, and increase its circulation; and I trust every friend of progress in agricultural knowledge, and of improvement in mankind, who now takes the *Genesee Farmer*, will cooperate with you in enlarging its already wide sphere of usefulness. If the "mite" of the poor widow was acceptable and valuable on many accounts, as evincing an excellent heart, and a true christian disposition, let no one withhold his contribution to the rural literature of the distinguished age in which he lives. To young persons of both sexes, few accomplishments are more desirable than the ability to write properly for the press; and this equally agreeable and useful attainment is acquired only by practice and due care in reference alike to *what* is written, and *how* it is written. In America, more persons can speak and write with nearly grammatical accuracy than in any other part of the world; and as a consequence, we have more popular orators, and a larger number of newspapers than all the rest of the human family. To cultivate this honorable feature of our republican institutions, and still further elevate the masses, who till the earth, what school is better than that cheapest of all schools for adults, the *Genesee Farmer*?

As an old and humble pupil, who has learned much from its enlightened correspondence during the last twenty-five years, I cherish for it a profound regard as an educational institution. Viewed in this light, it has all the claims that age, character, and good conduct ever impart to public sympathy and support. Through the medium of its monthly visits, thousands and tens of thousands may teach one another the sound practical wisdom that grows up from the cultivated common sense of persons earnestly devoted to a noble and common calling. This is leveling a whole community *upward*, without pulling down one member of society. It fosters a close observation of all agricultural interests and practices, and a livelier appreciation of both their merits and their defects, to extend the one, and correct the other. Suppose all the Mind, now less than half developed, that is employed in tillage, husbandry, horticulture, and fruit-

culture, in the United States, were as fully enlightened as is clearly practicable? Who does not see the benefits that must, in that case, accrue to this young, growing, and aspiring republic? As one of its citizens, I would not neglect the duty of reading and studying to learn, nor that of extending a word of encouragement to my brother farmers that they may do likewise. All must learn before they can teach; and nearly all have learnt many lessons from experience, if not otherwise, which enable them to instruct others in some things that are worth knowing.

Not to prolong these introductory remarks, I would state that the cultivation of the Chinese Sugar Cane is just now the most favored theme of discussion among progressive planters. In the south part of this State, two crops from one planting are grown in a year. I saw ripe seed at Savannah last autumn from the second growth of the plants, just as a second crop of clover is often produced, with mature seed, at the North. The syrup of the Chinese cane has kept well up to this time, and resembles that made from the sap of the maple tree in taste more than the syrup obtained from the common sugar cane of Louisiana. It is to be regretted, that the saccharine matter in this recently introduced cane is not, when expressed, in a condition to crystalize, or only partly in that state. It is in the chemical condition of maple sugar after the buds of the tree are somewhat developed, when the syrup refuses to "grain," or granulate. In a word, the sugar is partly that of grapes in character, and partly that of the proper sugar cane, and crystalizable. As a forage plant, and especially for soiling cows, it promises to supersede corn.

I spent a part of the months of November and December in Washington, and saw the crops grown to supply the Patent Office with seed, and was satisfied from personal observation that Mr. BROWNE, (the successor of the writer in taking charge of the Agricultural Department of that Bureau) has rendered the country an important service, by introducing the seed of this new sugar plant from France, where it first attracted his attention. Mr. WHITNEY, the first projector of the Pacific Railway, raised most of the seed for government distribution. He keeps a fine herd of cows, and sells milk in the federal metropolis; and such was the obvious value of the Chinese cane for dairy purposes and fattening dry cows, as to leave no doubt in my mind that the plant is a great acquisition to the country. Members of congress will distribute something over one hundred bushels of the seed; and it is to be hoped that it will fall into good hands. Such as have it, should plant it on good land, and not too closely so as to injure the full maturity of the seed. The writer will plant, and cause to be planted, over sixty acres this season. Mr. PETERS, who made several barrels of the syrup last year, will plant, I am told, one hundred acres. Southern planters will give the crop a fair trial soon. In this quarter of the Union, where hay is so expensive, a good substitute for English grasses is a great desideratum.—I made a good sized barn full of corn hay last season, which answers all my expectations this winter. That and cotton seed keep cows in fine condition. Their butter, however, is very white; but the seed gives it no unpleasant taste. Not raising any cotton, I pay ten cents a bushel for seed, which yields excellent manure.

This region is favored with an admirable climate, having pure air and water, and a median tempera-

ture between heat and cold. The soil is none of the richest, being formed mainly of primitive and transition rocks, *in situ*; and not, as in all higher latitudes, mainly from *drift* depositions. The geology of Georgia is quite interesting, viewed in its agricultural relations, as is the study of this science everywhere.—Having a fondness to talk and write of rocks and soils, you may hear from me on this subject. D. LEE.

ITEMS SUGGESTED BY THE MARCH NUMBER.

THE "Prize Essay" number is before me, and proves I was not destined to be disappointed in my anticipations of a "rare treat from its perusal." Let me *itemize* as usual:

HINTS ON SPRING WORK.—Yes, we must now be at it. Spring is here, and its *work* has come with it. About the first that can be done is to build new, and re-lay old, *fences*. Don't forget to put up a gate or two on the most frequented routes. Sow your clover seed, and be sure you have fresh seed, of last summer's crop. If older, its growing is doubtful. For corn and potatoes, manure should now be drawn out, but I would not spread it until the day it was to be plowed in. Get in spring crops as soon as the season will admit. It is important that they get rooted before the early summer drouth.

FRAUDS IN ARTIFICIAL MANURES.—The success of the self-styled Professors, in humbugging farmers, is largely due to their neglect to look and think for themselves. Let them search out and save up the fertilizers wasted upon their own farms, and they would not need to go abroad for artificial manures to enrich their soils. If they do, chemical analysis will inform them truly of its value.

PLASTER FOR CLOVER.—Knowing that some Seneca county farmers think plaster can be used too freely, I thought perhaps Mr. JOHNSTON coincided with them in opinion, and sowed plaster only once in *seven years* on his farm. It is three years since we have sown any, and we have had only half a crop of clover, and very poor success in seeding, during that time. I am glad to know what Mr. J.'s practice is, and must have two tons of plaster for my grass lands this spring. For corn, I think ashes better than plaster, though many mix the two for a top dressing, and commend it highly.

FOUL IN THE FEET.—Many years since, some of our cattle were severely afflicted with this disease; they could scarcely stand, and it seemed as though their hoofs would rot off. There was plenty of *ergot* in our speargrass hay. Of late years, we have grown only timothy and clover hay, and have seen nothing of the disease. I have no doubt that its cause is truly stated by your New Haven correspondent.

MANAGEMENT OF SWINE.—I like Mr. BRITTEN'S remarks on this subject, because he "winters his pigs in the pork barrel." It is a great nuisance, this feeding a lot of pigs all winter, and then not making better pork of them in December than spring pigs ought to make, though at more than one-half additional expense.

WINTER WHEAT, INDIAN CORN, AND POTATOES.—The prize articles on the cultivation of these crops, are each of them worth the price of the *Farmer* for several years. Yet there are hundreds of farmers who can write just as well—who can raise as good crops, and *know how to do it every time*, excepted. Will they, too, write out their ex-

perience? It will enable you to give, every month, a "Prize Essay number."

FENCING—SWEET BRIAR HEDGES.—One of your correspondents suggests a trial of sweet briar hedges. This plant would seem pretty well adapted to hedging purposes. It has a "quick, thick, and thorny growth," and on good soil I have seen the stems an inch in diameter, and ten feet high. Actual trial, however, must be had to test it.

BEST MEANS OF DESTROYING WEEDS.—The *short* essay (twenty-five lines) on this subject, suggests a very thorough remedy for a very serious evil. It will not be very expensive to give it a trial, and I think it will succeed.

WOMEN'S RIGHTS AS TO MILKING.—Give us more light on this question, if you have any in reserve; not that I need it in my own case, for my "women folks" do not need *asking* to milk in the buisy season. I think it is a *busy season* any time in the year with women who have their own housework to do and children to care for, and so does any kind and thoughtful husband.

FRUIT-GROWERS' ASSOCIATION.—The discussions of this body I look upon as of much value to the public, and hope the Society may receive every encouragement from the agricultural as well as horticultural community. Yours is the best report, so far, I have seen of its proceedings. The Horticultural Department of the *Farmer* is well sustained, and filled with practical matter, though I have, heretofore, seldom offered any remarks upon its contents. My present garden is but just commenced; it is half a dozen years since circumstances have permitted me to pay much practical attention to the subject. B.

Niagara Co., N. Y.

NOTES FOR THE MONTH BY S. W.

THE DEATH OF DR. KANE.—Since my last our country is deprived of a son, in his prime, by death, of whom it may well be proud. His Arctic expedition, as lately published, is one of the most stirring narratives of Arctic research and discovery yet published. His graphic details of the toil, exposure, and famine of himself and shipmates, are animated by the enthusiasm and indomitable courage of the man.—While journals of other Arctic voyagers are tame and meagre from the paucity of material and incident to be found in a bold, icy, hyperborean region, Dr. KANE enlivens his journal by making the most of every thing that came under the notice of his ever active, expanded, philosophical and observant mind. He not only gives the moral and physical individuality of each of his associates, and shipmates, but to every praiseworthy Esquimaux friend, with a detail of their truly philosophical habits of life. Of the country, ice bound and barren as it is, he makes the most and best by describing its geology, its stunted *sylva*, meagre herbaceous plants, mosses and flora; its mammalia, birds, cetacea and fishes, with the inspired pen of a true master. But although the mind, through the aid of divine Providence, lifted up and sustained the severely tried body in every privation and exposure, the effort was too unequal; the material has succumbed, and the spirit has gone to God who gave it. I repeat the words lost in Dr. KANE, a hero, the like of whom the present generation may not see again.

THE PRIZE ESSAYS.—The March number of the *Farmer* is enriched by a series of short, graphic es-

says; the most important of which detail farm experiments of manuring, tilling, culture and crops; but there are others not less interesting, and hardly less important to domestic comfort on the farm. The best of them is the one over the signature of "A Mother," and a true mother she undoubtedly is. I would bet a cookey that her daughters are not of the number of those *scary* creatures, who are "afraid of seeing their own shadows in the milking yard." She evidently does not feel at all scandalized at GREELY's comments on "Country Cooking." My word for it, her breakfast cakes, well made aromatic Java, and white table cloth, cannot be eclipsed even in Gotham. Mc-thinks a boy who is so fortunate as to have such a mother will always leave his *stable* boots outside the kitchen door. It is important in detailing those farm experiments in manuring and cultivating crops, that the surface and subsoil should be described, and also whether the field is either surface drained or under-drained, or both, which is still better.

THE WINTER.—December and January were the coldest months we have had here since my recollection, although the mercury sunk but one night as low as 24° below zero, and on very few nights before or after the 18th January, was it more than 2° or 3° below; generally many degrees above. We have had none too much snow, sleighing was good from the middle of December to the 6th of February. February was one continued thaw night and day, the wheat looked well as the snow left it, and the grass grew in sheltered slopes, putting on its richest green. March came in like a lion, but a north-east snow storm covered the wheat again like a garment, so that although the mercury fell to 5° above zero on the morning of the 2d, and it was now again on the morning of the 7th as low as 7° above; the ground is but little frozen, and the promise of the wheat crop was never better. Our Isabella grape vines are safe.

GUANO AND CONCENTRATED MANURES.—It is truly comfortable to those who have been pained so often with the idea of the destruction and waste of organic matter in our great cities, which if persisted in must eventually bring sterility to our rural domains, to read the numerous competing advertisements of highly concentrated manures for sale at New York, all, except Guano, made from the night soil, dead animals, and offal of the city. A new company at Brooklyn advertises Tafeu, which may be supposed to be still richer in ammonia salts, than that of her sister city, where that great diluant and solvent Croton water, is in such active force; but all depends on the skill and honor of the manufacturer. Much praise is due to Meinheer SCHWAGER for his unique enterprise in turning the little sea girt barren Island into a laboratory of fixed salts, made from the excrements of defunct animals, and offal of the city. But methinks if he looks to his permanent interest, he will not set the price above that of Peruvian guano; true the latter holds its ammonia as a volatile carbonate,* but some of our

* Our esteemed correspondent will permit us to say that this idea, though held by nearly all agricultural writers, is without foundation. A good, sound sample of Peruvian guano seldom contains as much as 2½ per cent of carbonate of ammonia. If it contains two or three per cent of ammonia in the form of a carbonate, it is safe to assume that the guano has been damaged by water. The ammonia of Peruvian guano exists in the form of urea, urate of ammonia and other fixed salts, and is converted into the carbonate of ammonia by fermentation. Keep guano dry, and there will be but little loss of ammonia, however much it is exposed to the air. If it is moistened and placed in a warm temperature, rapid fermentation soon takes place, carbonate of ammonia is formed and great loss is sustained.—Eds.

best practical farmers prefer stable manure after it has arrived at that same ripe and volatile condition.

THE REDUCTION OF THE TARIFF ON IMPOSTS BY CONGRESS.—While this important concession to free-trade is an honor to the improved intelligence of the country, it cannot but fail to redound to both our agricultural and manufacturing interests. Our carpet manufacturers, so long discouraged by taxation, now get their coarse wool and dye-stuffs free; and the farmers best customers, the manufacturers of the finer fabrics of wool, have their dye-stuffs free; hence they will be better able to compete with the foreign manufacturer, and to shut out of the country much of that *wool in the cloth*, which will be a true protection to our fine wool growers. S. W.

Waterloo, N. Y.

TEN RULES TO BE OBSERVED IN MAKING BUTTER.

IN making good butter there are several nice operations to be gone through with, which require an eye to cleanliness, forethought, and some little experience.

1. On milking clean, fast, yet gently, regularly twice a day, depends the success of the dairyman. Bad milkers should not be tolerated in a herd; better pay double the price for good ones.

2. Straining is quite simple, but it should be borne in mind that two pans about half full each will produce a greater amount of cream than the same milk if in but one pan; the reason of this is the greater surface.

3. Scalding is quite an important feature in the way of making butter in cool weather; the cream rises much quicker, milk keeps sweet longer, the butter is of a better color, and churns in one-half the time.

4. Skimming should always be done before the milk becomes loppered; otherwise much of the cream turns into whey and is lost.

5. Churning, whether by hand or otherwise, should occupy forty or fifty minutes.

6. Washing in cold soft water is one of its preserving qualities, and should be continued until it shows no color of the milk by the use of the ladle; very hard water is highly charged with lime, and must in a measure impart to it alkaline properties.

7. Salting is necessarily done with the best kind of ground salt; the quantity varies according to the state it is taken from the churn; if soft, more—if hard, less; always taking the taste for the surest guide.

8. First working, after about twenty-four hours, is for the purpose of giving it a greater compactness.

9. Second working takes place at the time of packing, and when the butter has dissolved the salt, that the brine may be worked out.

10. Packing is done with the hands or with a butter-mall; and when butter is put into wooden vessels, they should be soaked two or three days in strong brine before using. After each packing, cover the butter with a wet cloth, and put a layer of salt upon it; in this way the salt can easily be removed at any time, by simply taking hold of the edges of the cloth.

Butter made in this way will keep any length of time required. J. C. ADAMS.

Seymour, Allegany Co., N. Y.

CULTIVATION OF CARROTS.

THE carrot requires a deep, mellow soil, well manured, and if not dry enough naturally it should be well under drained. Chestnut sandy loam, or deep black soils inclining to muck, are the best for this root. It should be well worked with plow and cultivator to make it fine, and subsoiling would improve it much. To prepare the ground for sowing, after plowing and cultivating, take a small corn plow and ridge the ground, turning two furrows together, leaving them about two feet apart from top to top.

I have practiced sowing in rows about fourteen inches apart, but have concluded from trial of both methods to sow this season in ridges. The advantages are, first: the soil is more mellow for the young plants to start and grow. Second: the rows can be more easily followed when the plants are small, which is very important. Third: they can be cultivated with a horse after they are large enough, and at harvesting they can be worked out mostly with the plow. I think the above are sufficient reasons for the latter method. I think the greatest crop might be raised by sowing them on a level surface, about twelve or fourteen inches apart, but the work is nearly double.

It is very important to sow good seed, which should always be tested before sowing for a crop, which may be done by sowing a little in a hot bed or in a little box set in a warm place in the house. The best time for sowing is about the 25th of May, but a good crop may be raised sown as late as the 15th of June. My rule is, to sow as soon as the ground is ready and the weather warm enough to start the seed quickly. The seed should be soaked in warm water two days before sowing, and if the weather should be unfavorable, then the seed may be taken from the water, rolled in plaster, set in a cool place and it will not take any hurt for a week or ten days; if it is sprouted when sown all the better. If the weather is dry when the sowing is commenced the soil should be rolled after sowing, or the seed may be trod by following on the rows immediately after it is sown, and then lightly covered with a rake. I do not think any definite rule can be followed as to depth of sowing, but it must depend on the weather and the moisture or dryness of the soil; usually from half inch to one inch is deep enough.

I have always practiced sowing by hand, but there are machines that do the work well, and are said to be labor saving. The seed must be dry to work well with a machine. If the weather is favorable the plants will be up ready for the first hoeing in about two or three weeks, which should be done lightly as soon as it is possible to distinguish the plants—as a little work at this time will save much hard labor two weeks after. The first hoeing should be lightly done, just deep enough to cut up the weeds, as that is the principal object. Follow the second time in about a week, stirring the soil deeper and more thoroughly eradicating the weeds; after this the hand weeding must commence, which should now be done as soon as possible; do not wait to finish hoeing a piece of corn or potatoes, for by so doing you may have many days hard work weeding. When weeds begin to grow in the carrots, and they are large enough to weed, that must be done, if all other work stop for a day or two; one or two days delay may make a week in weeding; if the weather should be rainy, then look at the carrots all over grown with

weeds, and the labor of weeding increased four fold. After the second hoeing and first weeding, the hard work to this crop is done and they can if properly tended be kept nice and clean the remainder of the season. When they are about two inches high they should be thinned so as to stand four or six inches apart in the rows, if the ground is rich, if not, they may stand nearer. This thinning is very important and should not be neglected, for much depends on it. They may be harvested as late in the fall as November, and I think they keep better by being put up late, and are not so liable to decay. If sown late they will continue to grow till the ground freezes.

This crop should be cultivated extensively by farmers generally, and may be raised at a cost of from seven to ten cents per bushel. A good crop is eight hundred bushels per acre, and if not more than four or five hundred bushels are raised the crop will pay as well as any other on the farm. The greater the yield the less the cost per bushel, and vice versa.

As food for horses, cows, neat cattle, and hogs they are not equalled by any other root; store hogs will winter well on them, and horses are very fond of them in the spring of the year when warm weather commences, and some value them as highly as oats. If worth only half as much, which is about my estimate, how much better is it than oats? Oats eighty bushels per acre on the same ground as the carrots at forty cents would be \$32, and 600 bushels of carrots at twenty cents would be \$120, leaving a difference in favor of the roots of \$88; deduct \$40 for cost of cultivation more than the oats, and we still have a balance of \$48 per acre in favor of the roots, which is profit enough to induce farmers to extend their cultivation as much as circumstances will permit.—They are excellent feed for fat cattle fall and spring, winter being too cold for profitable feeding.

Brighton, N. Y.

E. S. H.

PLOWING.

MR. ANDREW WILSON of Augusta, near Prescott, C. W., in the March number of the *Genesee Farmer*, says: "Would Mr. ADAMS enlighten us as to the width of his furrows, for it is certain a horse cannot turn on much less than six feet and then the plow would naturally be three or four feet behind. Also to draw a furrow and return in the same track, appears to me a waste of time and labor." My furrows are twelve inches wide, which make six feet of the ten he thinks necessary for a "horse" and "plow" to turn on. Three for the balk, between the fence and ground after it is plowed, make nine. The other foot is gained by dodging the corners; and room to spare.

Mr. W.'s plan of "marking out" and plowing headlands will answer for the "benighted Canadians" and also for a double team. But for a single team to draw a furrow both ways on the headland, packed as it always is, appears to me both useless and cruel.

Seymour, N. Y.

J. C. ADAMS.

SOW LETTUCE WITH CABBAGE.—Lettuce seed sown with cabbage will generally prevent the destruction of the latter by the fly. The lettuce should be pulled up as soon as the cabbage plants are out of danger. Try it.

Woodstock, Vt.

R. W. S.

THE BEST METHOD OF FENCING A FARM.

EDITORS GENESEE FARMER:—The question of the relative amount of division fence necessary on a farm, may be passed with little more than the general remark, that as much only should be made as the most judicious arrangement and farm management require, for the obvious reason that more would be a waste of land, labor, and means. It is plain that the amount required must vary according to the particular branch or branches of farming pursued. A farm, every acre of which will produce from thirty to forty bushels of prime wheat every two years, will be cultivated in wheat and clover exclusively, (the last to be plowed under,) will require but little division fence. When it is desirable to cultivate most kinds of grain, as well as rear and keep most kinds of stock on the same farm, much more is necessary. Between these extremes will be ranged all other grades of farming affecting this question. In all cases the above general rule should be adhered to; for a great amount of division fence is maintained throughout the country at an immense yearly expense, which is neither necessary nor convenient.

But the *kind* of fence best suited to general use, is the question sought to be determined. It may be remarked here, that no one method can be devised which shall be the best adapted to all cases, for it is evident that the best mode of fencing any particular farm, must depend upon its available resources for fencing materials—not necessary or valuable for other purposes.

THE COMMON WORM FENCE.—Some kinds of fence, long in common use, are so well known that they need only be mentioned to make apparent their comparative value. Such, perhaps, is the common rail, or worm fence. This, in countries covered with suitable timber, must always be the fence of the pioneer, (whatever may be its defects,) as it is almost the only available one of any value. This fence, once upon a farm, will of course remain until it decays, and the timber to replace it is exhausted or become too valuable, when other kinds less objectionable and of more permanent value will be sought.

STONE WALLS.—This may be had in properly constructed stone walls, which is conceded to be the best fence known. This is valuable for its durability and the little land occupied. The first cost is not great, when it is considered that the cost of laying the wall only, is justly charged to the account of the fence; clearing the fields of stone being necessary, were no fence required. Where there are materials for this none better need be sought.

BOARD FENCE.—A very neat, and not expensive fence is made of posts and boards. Let durable posts and boards, sixteen feet long, and a full inch in thickness be procured. The bottom board may be from ten to twelve, and the other two from six to eight inches wide. The length is completed by a three-by-four scantling being spiked firmly to the top of the posts. Three boards and a scantling, with spaces properly arranged, making a strong fence four feet high, with about fifty feet of lumber per rod, exclusive of the posts. Any one may easily calculate the cost of such a fence, which will vary with the cost of lumber in the locality.

WIRE FENCE.—Wire fence, has so far, proved unsatisfactory in the experience of most who have tried it. It has some qualities to recommend it, but there

are serious, if not insurmountable objections to it.—Beside the difficulty of guarding against the temperature, it is expensive, easily gets out of repair, is not claimed to be the most durable, and is not an effective fence. Such being the general verdict in regard to this kind of fence, it cannot be recommended for general use. The above kind of board fence is preferred, where suitable lumber can be had at any thing under extreme rates. The Lowell Pannel Wire fence is less objectionable, but the objections from temperature and cost lie against it with equal weight.

HEDGES.—The next and last kind of fence I shall mention, is the hedge. This is a cheap, durable, beautiful, and most effective fence. The main objections to it are, liability to injury by mice under the snows of winter in northern latitudes, and the great amount of land necessarily occupied by it. The first it is confidently believed will be remedied, if not in the manner of construction, yet by the use of hedge plants only which mice will not attack. A supply of these may be had, it is believed, in all respects suited to hedging purposes. Several kinds of these have to some extent been tested. Among these are the Buckthorn, Newcastle thorn, and the whole family of evergreens. The thorns mentioned grow rapidly, making a strong fence in four or five years. Among the evergreens, the Norway Spruce and Norway Fir, are said to be of equally rapid growth, and to make, in all respects, a desirable hedge. An evergreen hedge is always beautiful, and by allowing a high growth, is also a good protection from the wind.

The second objection, it must be admitted, is of some weight in localities where land is very valuable. But I doubt not that it could be successfully shown, and allow its opponents their most extravagant claims as to the amount and value of the land occupied, that, in the end, (except stone wall,) it is the cheapest and *best* fence known. Most other kinds subject the farmer to constant expense for repairs and losses, because they are imperfect, and to the cost of a periodical reconstruction, and all this to be repeated as time progresses, without limit. It is therefore claimed that when its light cost and after expense, its perfect effectiveness and everlasting durability are considered, this will be apparent.

I would, therefore, bring to the notice of farmers a hedge constructed after the following plan. Where it is desirable to have a permanent fence, let the ground be deeply plowed, and a compost of swamp muck, leaves, ashes and barn-yard manure be well worked in. Draw a line for a guide in setting your quicks, that your hedge may be perfectly straight. Set your quicks in a line, from six to twenty-four inches apart, according to the hedge plant used. Quicks should be of two years growth in the nursery. Cut them off twenty inches from the ground. Keep the soil, for a few feet on each side, mellow and clear of weeds, which is all that is required the first year. Ascertain if any have failed to grow, and replace such with vigorous ones from the nursery. Then draw a line two feet from the hedge and parallel with it on the side where an open drain would be most useful. (Let division fence be located with reference to the efficiency of these drains, so far as can be done without detriment to the order, beauty and convenience of the arrangement of the fields.) Along this line open a ditch four feet wide on the top, six inches wide on the bottom, and two feet deep. Let the earth removed from the ditch be thrown around your hedge, raising a bed twenty

inches high, with slopes corresponding to the slope of the ditch, and forming a regular grade with it on that side. Cut back your hedge to within three or four inches of last year's cutting, and your work is done for another year. If the plashing system be not pursued, cut back again to within six inches of the last, when it may be allowed to grow, only shearing to give it the desired shape. The third year the part cultivated on each side of the hedge, and also the ditch, may be thickly seeded to timothy to keep out weeds and prevent the falling of the drain.

Some advantages claimed for this way of constructing hedge, are, that its position, on the top of this ridge, is a good security against mice; and this bed forms a deep rich soil, which will give a rapid and vigorous growth, and consequently early maturity to the hedge. And without adding to the width of land occupied, it furnishes also a drain; thus answering the double purpose of a fence and drain.

Where it is desired to make them a defence against wind, as well as a fence, a plant which attains considerable height and of rapid growth should be sought. The American Elm, (*Ulmus Americana*), it is thought is such a plant. It is easily propagated, and grows well on all soils adapted to cultivation. The plan, already described may be followed, setting the quicks two feet apart. At the commencement of the third year let the plashing be done, which should, if possible, be done without much use of the knife. The shoots may readily be bent down without cutting, and fastened by a little twisting together. Leave a vigorous shoot, at every other setting, to grow up without further care, except what is necessary to give it a low bushy top.

Thus, a fence, and at the same time a screen from the winds, would be secured, which in fifteen or twenty years would tell in the most happy results in the bleak regions of our western prairies.

Perhaps some of the evergreens, if they can be propagated with facility, may be more desirable for this purpose.

From the south, we hear no objection to the hedge, where they have the most desirable of hedge plants in the Cherokee Rose and Osage Orange.

Leicester, Livingston Co., N. Y. A. W.

CULTIVATION OF THE MANGEL WURZEL.

For the profitable cultivation of the mangel, two things are indispensable; *first*, a strong, deep soil; *second*, thorough tillage. Sward, when rotted, produces the best of soil for every root crop. The ground designed for mangel wurzel should be plowed in July or August preceding, and tilled as for wheat. In the spring, as soon as the ground is in working order, apply ten loads of good barn-yard manure to the acre; spread it evenly over the surface, and plow under with three horses, taking narrow furrows, and allowing the plow to penetrate to the depth of one foot. After plowing harrow thoroughly, and, if needed, roll and cultivate, using a wheel cultivator; and then again lightly with the harrow. Then apply six good loads of fine, fermented manure, spread as before directed. Having done this, take a small plow and throw the land into ridges two feet and a half apart from centre to centre, turning a furrow each way so as to cover all the manure, but avoid plowing deeper than just sufficient to cover it. The ridging is intended for rather wet land. If the

ground is dry, (naturally so,) ridge as before directed, and drop the manure in the furrow, and split the ridge with the plow, (a double mould board if you have it,) or apply one-third more of the unfermented manure, and cover with the cultivator, and smooth with the harrow. If the land is ridged, it will be necessary to pass lengthwise of the ridges with a light roller.

The ground is then ready for planting. There are two methods of planting—with the drill, and by hand. When planted by hand, the holes for the seed may be made with a wheel having pegs in its circumference, five or six inches apart, to penetrate the ground one inch. After the seed is dropped, it may be covered by passing the wheel of a barrow over it, which leaves also a slight rut for retaining moisture.

As soon as the plants can be readily discerned, the ground should be stirred with the hoe, and the plants thinned to one. As soon as they are large enough to admit it, a cultivator should be drawn between the rows; and if done two or three times, it will be a great benefit to the crop. At the second hoeing, each alternate plant should be removed, if not before destroyed—leaving the plants from ten to twelve inches apart.

I consider the mangel wurzel the most productive of all sorts, and the easiest to harvest and secure. They are excellent food for cattle, especially for milk cows; though not as nutritive for the same bulk or weight as carrots or Swede turnips. An acre of good mangels is, I think, equal to the same of any other roots.

DAVID LEATHERSCHEL.

Caledonia, N. Y.

THE MANAGEMENT OF SHEEP.

ANY branch of agriculture to be the most successfully pursued, requires thought, reflection, observation, comparison, and economy. He who drives on business at random, without these, is almost sure to meet with disappointment. If success attend his efforts, it is oftener the result of accident than of skill.

This is emphatically true in sheep husbandry. Without careful attention, but little profit will be realized from this business. In order to meet with success, select a dry, elevated location. This is far preferable to low, wet, marshy land. Sheep dislike to wade in mud and water. It is important too, that they be kept *quiet*. They are timid in their nature, and ready to flee before an enemy. When worried by dogs or boys, who delight in the sport of seeing them run, they soon become wild and unruly. They are continually restive,—on the look-out for danger, and started at every trifling noise. Such a state of excitement hinders them from feeding, and prevents their food in a measure from performing its proper office. And the effect will be apparent in their bodies, and in the quantity and quality of their fleeces.

Sheep should also be kept in an enclosure by themselves. If suffered to run with other stock, they are robbed of half their food, especially in winter,—they are driven hither and thither by their superiors, and are continually liable to receive injury; their growth is hindered, and their fleeces damaged.

They should also have at all times a supply of nutritious food. True they may be kept on scanty and barren pastures, but this is not true economy. The effect will soon be seen in themselves, their offsprings

and their fleece. They should be kept constantly thriving. Ewes, especially in the spring and summer, need fresh herbage and an abundance of it. Much also depends on their management in winter. At this season they need not only to be kept quiet and well fed, but to be protected from storms and inclement weather. It is a mistaken notion that they can be left to shift for themselves at this season, to pick their food from the dry and frost-bitten herbage of the field, and to find a shelter behind the barn, or under the fence, or any other object they may chance to meet, and perhaps covered with the drifting snows during the night. With such treatment the system becomes chilled, they grow feeble, lose their appetite, their wool falls off, and many often die, and half the summer is needed to recruit their wasted system. Give them an ample range for exercise, but provide a comfortable shelter, where, when the thermometer ranges below zero, or the storm of rain, snow or sleet howls without, they may be securely protected, and fed. Let their shelter be dry and freely littered with straw, and the manure obtained will compensate for all the trouble of doing it. Give them a supply of good bright clover or other hay, and a little grain.—And to compensate for the absence of fresh herbage, let them have a supply of roots, turnips, carrots, or rutabagas. Sheep soon become fond of these, and thrive much better than on hay alone.

It is desirable that sheep at all times have access to pure running water. They will exist for a long time without this, and this leads many *thoughtless, unobservant* farmers to suppose that it is not necessary. But when they can have access to it, you will find them resorting to the brook or spring much oftener than other stock. The idea that they can satisfy thirst by eating snow is absurd. Let their owner try this experiment, and see how he will succeed. Salt should also be kept in boxes or troughs, where they can have free access to it, mixed with a little tar, especially in summer.

Great care should also be taken of the health of the flock. Too many should not be crowded together, for in this way disease is often produced. Fifty is enough to run together in any enclosure. And when by careful watchfulness, symptoms of disease are discovered, the invalid should be immediately removed, least the infection spread. A great loss is often thus prevented by a little timely precaution.—The shepherd needs to be a minute observer, and to keep watch over his flock continually, if he would meet with success in his occupation. HUBERT.

WHEN DOES WOOL GROW?—I answer, when it is wanted to cover the sheep and keep it warm. From the time the sheep is sheared until the frost comes, you can see the shape of every clip of the shears; when the frost and cold weather comes it grows out immediately. Now, if you wish for a heavy clip feed when the wool is growing. If you have any extra feed then is the time use it. The wool draws very hard upon the carcass and growing out fast deceives almost every farmer. They think their sheep are doing well when they are growing poor. I can make an additional pound of wool with one bushel of corn, and my sheep will afterwards winter one bushel of corn easier. Let your sheep get poor while the wool is growing and you cannot recruit them until the next summer. J. D. CHAMBERLAIN.

Waterford, Ohio.

EXPERIMENTS ON INDIAN CORN.

Wn plow as deep as we can, taking all things into consideration, and harrow, if on sward land, lengthwise of the furrows so as not to turn up the sods, then furrow it crosswise in order to have it mellowed deep where the hills come, and mark the other way with a corn marker. Seed corn wet with tar water and rolled in a mixture consisting of one part No. 1 Peruvian guano, and three parts plaster, will hardly be disturbed by the crows, and the guano gives it an earlier start, the plaster preventing it from burning the corn, and it also attracts moisture in dry weather, and by that means you get a more thrifty growth.—Two years ago we tried an experiment on a piece of worn out meadow—a sandy loam, dropping in each hill about a tablespoonful of hen manure, as much ashes, and half as much plaster, throwing a little dirt over the hen manure and plaster, so it should not touch the corn, and then dropping the ashes and corn on it. The after work done to it was once going through it with a cultivator and once with a double mould-board plow; it was also hoed once, but when we cut it up the ground was covered with weeds which grew after the hoeing; yet we harvested at the rate of 160 bushels of good merchantable ears to the acre.

By an experiment made the last season on the white flint corn, I am satisfied that three feet ten inches apart each way, is as close as it will pay to plant that variety. We let out a piece to plant on shares, to an old foggy farmer, who planted it three feet apart each way, and plowed and pretended to hoe it twice, while we planted another piece three feet ten inches each way, plowing it once and working once with the cultivator both ways, but not hoeing it, and we harvested double the amount from the same quantity of land, on the widest planted piece that we did on the other. The larger the variety of corn the more room it requires to perfect itself.

MYRON E. TANNER.

Clarkstown, Rockland Co., N. Y.

ON THE MANAGEMENT OF SWINE.—As soon as the young pigs are old enough to drink, they should be plentifully supplied with milk. Through summer they should be allowed to graze in a good field of clover, and should have a quantity of swill, mixed with chopped grain, twice or three times a day. Be sure and not keep more hogs than you are able to keep well. When hogs have been thus kept through summer, half the trouble of fattening is over. As soon as they fail to get a good supply of food in the fields, they should be shut up in a warm pen, with plenty of bedding. Feed them three times a day. I believe the best feed is corn, ground or chopped, and then soaked or steamed, or made into mush.

Ayers, Pa.

W. H. M.

CULTIVATION OF POTATOES.—Turn over green sward; plant in drills three feet apart; drop whole, medium sized potatoes, ten inches apart, in the rows; apply half a handful of composition (consisting of two parts ashes, two parts plaster, and one part lime) to each hill, at the time of planting, and the same quantity on the hill before hoeing the first time. The last two years I have planted after the above method, and have raised good crops of sound potatoes.

Sheepscot Bridge, Me.

G.

LARGE VS. SMALL BEANS.

Messrs Editors:—I tried an experiment last season, to satisfy myself, which were the better beans to plant, and give you the result, as follows: The small beans give nine and a half bushels from one of planting, and the large ones thirteen and three quarters from one of planting. The land was light, as you see by the crop, but equal in both cases. I concede that a bushel of small beans, will plant as much land as three bushels of large ones, and many will conclude from this that there is four dollars saved in the item of seed. To such I would say, "don't be hasty gentlemen." Don't you have to plant three times as many hills to get out a bushel of small, as you do of the large beans?—and then they fall four bushels short of the large ones in product. Here then is a saving in favor of the large beans of two thirds of the labor and a gain of more than one fourth in product from a given quantity of seed.

I plant beans north and south, if possible, rows three feet apart, and eighteen inches apart in the row, about six beans in a hill.

I planted last season, three and one half bushels of beans in my corn field, the product of which I sold for about \$100, expenses as follows:

Planting with Wakefield's patent corn planter,.....	\$3.50
Seed,.....	7.00
Pulling and cutting,.....	6.00
Threshing and cleaning,.....	7.50
Total expense,.....	\$24.00

You will perceive there is no item in the expenses for hoeing. The reason of this is, that I plant the beans within four or five inches of the hill of corn, and they are both hoed at one and the same time, without extra labor.

I plant the beans the south side of the corn; pull the beans and hang them on the corn hills, and let them remain, until the corn is ready to cut up. They are then thrown down into heaps, the corn cut and set up; at which time I can drive the team and get them, as I do hay in tumbles. W. L. B.

Brandon, Vt.

OBJECTS OF PLOWING.

EDITORS FARMER:—When following the plow, my thoughts are ever busy on various subjects, and among them have been meditations on the query, "What are the objects of Plowing?" A simple question, the reader may think, but one which the farmer cannot give too thorough an investigation. Let us state (without particular care as to method) some of the reasons for the practice under consideration:

1. We plow to secure a seed-bed of fresh turned soil for planting or sowing.
2. We plow to destroy one crop (of weeds or grass) in order to produce another.
3. We plow to bury growing vegetation, as a means of increasing the fertility of the soil.
4. We plow to bury manures, for the same purpose.
5. We plow to loosen and pulverize the texture of the soil, the better to fit it for growing plants.
6. We plow to bring up a fresh portion of the soil to the sun, rain and air, as in summer fallows and fall plowing.

Here arises another question—one full of impor-

tance to the farmer—"Does plowing, as usually performed, accomplish the desired objects?"

1. Do we get a seed-bed of fresh turned soil for plowing or sowing? Not unless great care is taken to leave no *batts* or unplowed spaces.

2. Does plowing destroy the crop of grass or weeds, as desired? See for yourselves, and answer. Does not much that is called plowing fail woefully here?

3. For this reason we lose the full benefit to be derived from plowing under green crops.

4. And also barn-yard manures. They are not fully buried under the soil, and no plow can mix them, as usually applied, with the soil, as should be done to get their greatest immediate effect.

5. To loosen and pulverize the soil, we must cut deep, narrow furrows, instead of wide, shallow ones. And the *plow* (and the *harrow*) is an imperfect implement for this purpose, but the best yet known. Properly employed, it can do much more than is generally accomplished. We are too anxious for "progress," and so plow wide, shallow, flat furrows, which "cut and cover," not break up the soil.

6. Summer fallow, with repeated plowings, aerates and pulverizes the soil. So does fall plowing, by exposing it to the action of the frost—if, *first*, the plowing be well done—furrows deep and narrow, and lapping each other; and *second*, proper drainage be provided, so that no water be compelled to pass off by *evaporation*, for want of other outlet.

Fineness and depth of soil are wanted to secure the best growth of any crop. It should be penetrable to every minute root, and the manure should be thoroughly incorporated therewith, that it may supply the demand for food. It should be open to the influences of air and moisture, and ready outlet be provided for all surplus of the latter.

But there is no end to the suggestions which this subject calls up. May I leave it for your readers to think out for themselves? B. F.

FARM HOUSES IN MICHIGAN.

Messrs Editors:—I have taken a good deal of interest in the building department of the *Farmer*, but find that most of the plans are rather expensive for this new county where many of the original log cabins are still occupied, and very few farm houses cost over one thousand dollars.

The houses recently built in this vicinity (Oakland Co., Michigan,) though individually dissimilar have generally a strong family resemblance, viz:

Main building, gable end to road, story and a half, about 18 x 26 feet, nice room, bedroom stairway with cellar stairs underneath, about two rooms above, cellar whole size, with hatchway door outside. Front door ornamental, seldom opened except on wedding and funeral occasions. Wing, one story, containing living room, bedroom, frequently a bed recess, pantry and woodroom. Sometimes a part of the woodroom is used for a cookroom in summer, but generally, let the house be ever so large and convenient, a rough, leaky board shanty must be stuck on back for the especial benefit (?) of the cook and cook stove in hot (or showery) weather. SOLON COOLBY.

Four Towns, Oakland Co., Mich.

REMARKS.—[We should be glad if our correspondents in different parts of the country, would furnish us with plans of *cheap* and convenient farm houses.] —Eds.

AVERAGE INJURY FROM THE WHEAT MIDGE.

MESSRS. EDs :—In the February *Farmer*, while discussing the feasibility of continuing "Wheat Growing in Western New York," you estimate the usual injury from the midge at five bushels the acre, be the crop more or less. A yield of ten bushels, will be one half destroyed, one of thirty, one-sixth, and so on. The latter will leave a fair profit, while the former will scarcely pay for the labor bestowed in its culture. Hence you advise the selection of suitable soils, as to fertility and character, and early maturing varieties, so as to increase the product as far as possible beyond the destructive power of the midge. In most of your suggestions, I coincide, and will here state some facts which have fallen under my observations on this farm.

In 1854, our wheat crop was somewhat injured by the winter—on the low land, nearly destroyed. The average product expected, was from twelve to fifteen bushels per acre, but the midge attacked it, and on harvesting and threshing, we realized from six to ten, according to the vigor of the growth and the promise of the crop before the midge appeared. In 1855, our wheat looked better, and that part sown to the golden drop, even after the midge had done its worst, (it ripened too soon for it,) promised us twenty bushels per acre. The wet weather sprouted it repeatedly, before and after cutting, and damaged it far more than the midge. Between the two, the product was about eight bushels per acre. Another field of a later maturing variety, promising well, was almost entirely destroyed by the midge, and finished by the wet weather at harvest. In 1856, we sowed our wheat on pretty good land, some of it too light, perhaps, but it appeared favorably, in parts stout, and was estimated as full up to twenty bushels per acre. This was also, golden drop, an early maturing variety. The midge came, and for a time it seemed that there would be nothing left, but the centre of the field was injured comparatively little, and the product on threshing was fourteen bushels per acre.

You can draw what conclusions you please from the above facts. I think, by selecting good soils, early varieties, and cultivating in the best manner, we can still raise wheat profitably in

NIAGARA COUNTY.

SOWING PARSNEPS IN THE FALL.

MESSRS EDITORS :—I observe in your January Number, an inquiry as to growing parsneps by fall sowing. If my experience is of any value, it is quite at your service.

Some years since, I sowed some parsnep seed in the last of April. It came on very cold, and the seed did not appear above the ground till the 10th of May, and then only sparsely. A little rain fell on the 12th of May; and from that day until the 24th of June not a drop of rain fell, and the season throughout was very dry. Of course my seed not sprouted before the 12th of May did not germinate after that. The ground (having only half a crop) was well cultivated, and was in September free of weeds. About the 1st of September, rains falling, the soil became moist and in fine condition. About the 28th of September the ungerminating seed began to sprout, and in three or four days the vacant spaces were all filled. The crop stood through the winter. In the spring all those

which had come out of the ground in May, were dug and used, except some quite small ones. The September started plants looked well and commenced to grow in March, which was a fair month for this latitude. I paid no attention to them till May, when I had them weeded. In April, however, I filled up the vacant spaces, (from which I had drawn the used parsneps,) with seed. The season was a good one, this second year, and the seed of the second year's sowing grew finely and plants did well, as did those which sprouted in September of the first year. All the plants of both sowings growing beside each other, and scattered among each other, were treated alike in all respects. There could be no advantage of the one set of plants over the other in any regard, either of soil or care.

The whole crop, composed of both sowings remained in the ground till the third spring, (two years from the first sowing), when all were dug and used. The two sets were separately dug, and the yield on the parts where the plants had stood two winters, was forty per cent more than on the other.

This was a field crop, and the seed used in both years was the same kind, being grown from plants, the kind of which had been long grown in my garden.

A few of the plants which germinated in September, showed a disposition to go to seed in the second year, perhaps twenty in the whole piece of two acres. These were pulled. In other respects the crop of September germination went on as if sown in spring.

This chance growing of an autumn crop, induced me afterwards to grow parsneps by fall sowing wholly for three or four years. And they *always germinated*, and I had no failure in sprouting and they always yielded better than with any spring sowing. I have not for some years grown them at all, except in my garden. But there the fall sowing is always more successful in point of certain germination and larger product.

I can confidently recommend a trial of the fall sowing in preference to that of spring.

Balavia, N. Y.

A. STEVENS.

BUYING WESTERN LANDS.

MESSRS EDITORS:—Without doubt many of your readers are longing for homes at the west, on lands which they suppose can be bought at government price readily enough. And so they ought to be, but there are such shoals of "land sharks," (so called here) or speculators, that they absorb *all* the best claims as soon as the lands are offered for sale. So extensive is the business done in this way by these cormorants, that a large proportion of actual settlers have to buy their lands of dealers, at double and many times more than double, the usual cost at government price.

Any eastern man desiring land at government price, and better come in the spring and enter or pre-empt his land, and not be too sanguine of obtaining it even then in Iowa, Wisconsin, or Illinois. Perhaps as good a way would be to secure the services of some trusty individual, engaged in such business, to enter land for you. The usual charge for services is twelve and a half per cent. on the money invested. Much good land will be sold in Iowa and Wisconsin, when the offices open again at double the usual rate, or twenty shillings per acre.

JNO. SANFIELD.

Illinois.

CULTIVATION OF ARTICHOKEs.

MESSRS EDITORS:—All our domestic animals will eat the artichoke eagerly; horses, cows, sheep, hogs, geese and hens, all eat and get fat on it. I have raised it on a small scale for years. *It never fails.* Hogs can be raised from sucking pigs on this vegetable alone, except water. I have had them shut up where they could get nothing but artichokes for many weeks at a time, and they grew beyond all example.

The artichoke stands drought and everything else but shade, better than any other crop. (It does not root well if too much shaded.) It grows on the poorest of land, may be planted at any time from October till the middle of June; and if planted early, and pasture is scarce, it may be pastured till other pasture comes forward. The tops make better fodder than hay. It may be propagated by planting the branches when seed is scarce, either early or late, but if this is done as late as July or August, the plants will only grow large enough for seed; but if it is done in May or June, the plants will root well. The plants do not form much root till late in the fall, and the ground should not be plowed after harvest, as many of the shoots on which the roots grow run some distance, and the plowing would cut them off.

If artichokes are planted on rich ground in rows about as close as corn, they will be too thick and shade the ground too much; but this may be obviated by cutting off some of the stalks and curing them for fodder. The yield of tubers will still be good—five time as much as corn. If planted in poor soil, they will not have much top, but will root well. The hogs may be turned into the field and they will root up the artichokes for themselves.

PENN.

CULTIVATION OF INDIAN CORN.

WHATEVER difference of opinion may exist among farmers in regard to the cultivation of Indian corn, nearly all agree on one point, viz: that green-sward, plowed either in the spring or fall, constitutes the best foundation to commence on.

I plow green-sward late in the spring, that is, allowing only sufficient time for planting in season, having previously applied all the manure. By this late plowing, the grass is easier kept in subjection than by plowing in the autumn.

Depth of furrow according to circumstances, the nature of the soil, &c. Plowing done, the ground should be thoroughly pulverized with the harrow or cultivator; I prefer the former implement, as the cultivator too frequently tears up the seed. Plant from 25th of May to first of June, in this latitude. Rows three and a half feet apart, and hills two feet in the rows. Some plant three feet each way, but this does not give so many hills, and although the labor of hoeing may be less, I do not consider it sufficiently so to pay.

In hoeing, use the cultivator exclusively—the plow disturbs the roots too much. Hills should be made flat or hollow on the top in order to catch the rain. For a fertilizer I consider ashes as good as any thing to give the corn a good start. If leached, apply after plowing and incorporate by harrowing. If unleached, put a handful on each hill at the first hoeing. When the corn has begun to glaze on the small end of the ear, cut and set up in stooks of six or eight hills each to cure.

S. S. B.

Potsdam, N. Y.

DEVON AND DURHAM CATTLE.

In a district of country where feeding, milking and working are required in the same animal, the North Devon is superior to all others, being hardy, speedy, and easily broke to work. The oxen, when turned out from work, feed easy. The cows, when dry, acquire flesh easy. As a general thing, the Devon cows rank among the highest class for dairy cows, their milk being very rich. They will stand the extremes of heat and cold well, and will live well on rough pastures. In fact, I believe the North Devon, or its cross with the Durham, is the best calculated for all districts of country in the United States, north of 40 or 41 degrees of north latitude. The Devons are very muscular, and of a uniform color, (dark red,) and their horns an ornament to working cattle.

In a district of country where beef is high, and feeding alone is required, the Durham is the best, as they mature early, and grow large, where the climate and pastures are congenial to them. Animals of a rapid and large growth, are less hardy and shorter lived than those of a medium growth or size. As a general thing, the Durhams are not calculated to milk or work, being slow, tender, and less muscular; milking being by chance—only some families good. They are best calculated for south of 40 or 41 degrees, where pastures are more luxuriant, and climate more congenial to them.

B.

Sandy Lake, Mercer Co., Pa.

BEANS AS A FIELD CROP.

MESSRS EDITORS:—I noticed in your January number a communication over the signature of "A Young Farmer," requesting bean growers to give facts in regard to producing them. I will give a statement of one and one-fourth acres planted with a variety known as the marrow fat bean—a large, very white, and in my opinion the best variety for this latitude.

Dr. Plowing and fitting land,	\$3.00
1 bushel 10 quarts seed,	3.00
9 days work planting and hoeing,	9.00
8 " " pulling and threshing,	8.00
Interest on land,	5.00

\$28.00

Cr. 30 bushels of beans sold at \$1.96 per bush.,	\$58.80
1½ tons bean straw \$6.00 per ton,	9.00

\$67.80

Net profit,

\$39.80

But few farmers comparatively know little or nothing of the value of bean straw for fodder. It is worth as much as the best hay per ton for cattle or sheep, and the manure from a ton of it, is worth as much as from two tons of hay.

W. L. B.

Brandon, Vt.

TO KILL BUGS IN SEED PEAS.—On the day of sowing, put the peas into a tub, or barrel; pour on hot (not boiling) water, sufficient to immerse them; let them remain about two minutes, or until the bugs are dead; then turn them into a basket, or something that will separate them from the water quickly, and they can be sown without applying anything to dry them. This has been my practice when I have sown peas for a field crop.

The degree of heat required can be ascertained by trying a few, before applying the water to the whole.

Euclid, Cuyahoga Co., O.

J. PERKINS.

CULTIVATION OF INDIAN CORN IN KENTUCKY.

The cultivation of Indian corn, receives very considerable attention in this part of the country, and our best farmers do the thing up about as follows:

After they have selected a portion of the farm most suitable in their opinion for such a crop, they take (if the land is middling fresh) a large turning plow, with two horses or a yoke of oxen, and plow the intended corn field thoroughly, across the last plowing. And in the meantime they have a second team carrying a large harrow in lines parallel to those drawn by the plow. After all this is done, they turn both plow and harrow across this late plowing, and repeat the operation when the land is in good order. Care must always be taken *not to plow when the ground is too wet*, as this materially injures land by forcing the soil into hard clods.

When the soil has been well prepared as above described, they will take one horse and a shovel, or bull-tung plow, and run furrows across the last plowing four and a half feet apart, and parallel to each other, after which cross furrows are run, in which the corn is planted; the furrows running perpendicular to these serve to mark the point for each hill. When the corn is an inch or two inches high, a bull-tung plow is run close to it across the planting, this leaves it fair to the sun on both top and side of the rows. In a week or ten days it is cross-plowed in the same manner, and if the soil is not foul, with the same plow, but if so, with a small turning plow. And when this has been done and a week or two has passed, the small turner is taken and the bar or shear, as the size of the corn will admit, is run next to the corn for the first time. And finally in ten or fourteen days it is laid by, by cross-plowing in the same way. We plant in April or May, and lay by in July. J. N. BOAS.

Exchange, Ky.

FALL PLOWING FOR SPRING WHEAT.—In the spring of 1854, as the season was backward and wet, and the ground not having been plowed the fall previous, I did not sow my wheat till the 10th of May; consequently, as the insects preyed upon it, and that which escaped their ravages rusted, I had not half a crop. I then altered my plan, and plowed the ground in the fall, and sowed it the 6th and 7th of April, 1855, before the frost was out, so that the frost bore up the horses. I sowed about two acres, and put on about four bushels of seed, and I afterwards harvested sixty-two bushels of good wheat. I prepared the ground in like manner the next fall, and in April, 1856, I sowed five acres, putting on nine bushels of seed; but having to wait for the snow drifts to get melted off from the borders of the field, it gave the frost an opportunity of getting out to the depth of eight or nine inches, consequently the grain was harrowed in too deep—it being a flat, heavy soil, and full of water while the frost was coming out; consequently a great portion of the seed rotted in the ground, but what came up branched and thickened, and grew famously—and notwithstanding the ravages of the mice and rats, I had one hundred and ten bushels of full, plump wheat. Now, I think spring wheat should be sown as soon in the spring as the frost is out of the ground to the depth of four or five inches. No insects have injured the wheat when the ground was plowed in the fall and sown early.

Vienna, C. W.

ANDREW CHUTE.

RAISING CLOVER SEED IN MASSACHUSETTS.

CLOVER seed is as profitable a crop as any that can be raised in this section of the country, and we have had very good success in producing it, in the following manner: First, the ground is fitted for corn, by spreading on a good coat of barn-yard manure, and plowing in to a fair depth; then, at the time of planting, put on a compost made of ashes, plaster and fine manure, which is all the manure used until the clover is taken off. After corn we put in oats, which are followed by rye, with which crop we put on the clover seed in the spring, about the time the snow goes off. The ground should be well plowed and harrowed for all the foregoing crops, and left as light and mellow as possible. The quantity of seed used may vary with the quality of soil. We sow from four to six quarts to the acre. The crop may be fed off the following spring, and as late as June if the season is right, and no damage will accrue to the yield; but we do not practice it, for the following reason: if the "times" should be dry when the stock are taken off, the growth may be "cut." Nothing is done through the summer but to see that no foul weeds or grasses get in. We generally cut it the latter part of August or first of September, leaving it in the swath a few days to dry, or cure. We then rake it into small rolls of about a forkful each, doing it while the dew is on, to prevent shelling. We thresh it off the straw by hand, and have the seed ground out by machinery; the charge for getting it out, together with fanning and putting up ready for market, being \$1.50 per bushel. The high price of this seed with us makes it a good crop, as it costs little labor and expense, and leaves the ground in good condition for corn.

F. R.

Sheffield, Berkshire Co., Mass.

EATING OFF WHEAT IN THE SPRING.—In the February number of your valuable journal, I find that the subject under consideration, whether the cultivation of wheat shall be abandoned in Western New York, because of the ravages of the weevil. I will inform you what I consider will counteract the mischief. It is admitted that if wheat could be sown early, it would receive but little injury from the midge; but this cannot be done on account of the Hessian fly. Sow in August, (the earlier the better) on a well prepared fallow. In April following, turn on sheep, and eat off as closely as possible. (Calves, might answer, when the ground is dry, if sheep cannot be had, but I never knew them used.) This will entirely destroy the Hessian fly, and the wheat will ripen quite as early—soon enough to be out of the way of the weevil. When this method shall have been tested, I think there will be no necessity to abandon wheat growing in Western New York, as I have known it tried, with perfect success.

Euclid, Cuyahoga Co., O.

J. PERKINS.

HOVEN IN CATTLE.—You request your correspondents for information on "Hoven in Cattle." Let me say I have found the best relief in twisting up a large band of hay or straw, introducing it into the mouth and tying it up tight behind the horns, so as to keep the animal with its head up and its mouth open; the gas is thus evolved from the stomach, and speedy relief is obtained.

CHARLES PALMER.

Mansfield, Ohio.

SUMMER MANAGEMENT OF SHEEP.

In the spring do not turn your sheep into the pasture until it is well up, or until it is ankle high, so as to have something to shade the ground; keep your sheep close and feed them hay and grain of some kind—they will eat it well if kept from grass. When put upon pasture have three or more fields and change them often so that their pasture may be sweet. I have known a neighbor lose three hundred sheep out of six hundred in one summer. He divided them into three parts, and put them into three large fields, with no shade except what the fence on the south side of each field made. The sheep lay along the fence, and when the nose fly came the sheep were to be seen running with their noses to the ground, fighting the fly, and eating only just enough to keep life in them. The sheep did not go more than eight or ten rods from the fence and this was eaten close to the ground when there was plenty of pasture on the north side of the field; as a consequence the sheep poisoned themselves in their own filth. The fly laid its eggs in the nostrils of the sheep and they soon died in great numbers of "worm in the head."

Now, you would ask, how should he save his sheep? He should have put them all into one field and forced them to go farther from the fence; and about two or three days after the first shower he should have changed them to another field. Whenever you see your sheep run with their noses down to the ground, drive them to your farthest pasture; the fly will stay about where the sheep have lain. Keep changing them from field to field and you will not be troubled with "worm in the head."

J. D. CHAMBERLAIN.

Waterford, Ohio.

CULTIVATION OF INDIAN CORN IN MAINE.

Plow in, eight or ten inches deep from forty to sixty loads (half a cord to the load) of new made dung, per acre; harrow fine; furrow three and a half feet apart; place a small shovel full of fine old rotten manure, or a small handful of hen manure three and a half feet apart in the rows; drop six kernels of corn in each hill, cover two inches deep; spat the hill well down with the hoe—it serves to break lumps and prevent the hills from drying up. After the corn is up apply a handful of wood ashes to each hill; pass through with the cultivator; follow with the hoe.—Second time of hoeing pull out all but four or five stalks to the hill. Plant early and do not let it stand out too late in the fall. If you are troubled with crows and other birds tar the corn and roll in plaster.

Sheepscot Bridge, Me.

S. K. G.

STABLES FOR HORSES.

MESSES EDITORS:—I agree with your correspondent in regard to docking horses. It is one of the most barbarous acts that was ever practiced in an enlightened and civilized community. The horse is abused in many other ways besides the one alluded to. It is just as essential for the health of a horse to keep him clean and away from filth, as for man.

The stable should be about fourteen feet from the floor to the loft, so that no horse can strike his head against the joist, and for good ventilation. The floor should incline at least two inches from the manger to the rear of the stable. Partitions between stalls should not be less than seven feet high at the head,

and five at the rear; the upper edge being lined with plate iron to prevent the horses from eating it. The stalls should be from five to six feet wide. This will allow the horse to lie down and get up with ease.—Horses are very often hurt in lying down and getting in narrow stalls.

Farmers should make it the object to keep their stables neat and clean. There are more horse diseases caused by a dirty stable and impure air than by all other things combined.

R. J. S.

Clintonville, Ohio.

POLL EVIL.—I noticed sometime ago, an article from one of your correspondents, asking for a remedy for the poll evil. I cured a horse of that disease last spring, of over a year's standing, with the following recipe, and have heard of a number of horses that were cured by the same, but cannot give the *modus operandi*. The remedy, however, is based upon the theory that the poll evil is caused by a hardening of the ear wax, thereby creating inflammation, &c. This I know is contrary to the usually received opinion of the writers on the diseases of the horse, &c. The recipe is as follows:

Take of gun powder, blue vitrol and coperas, each one ounce; soft water one quart; dissolve and wash the poll and roots of the ear with the above solution warm; then take common glass, pulverized fine and sifted through book muslin; four table-spoonsful fresh butter melted, half pint—mix. Put a ball about the size of a small hazelnut into the ear, once or twice a week. Be particular to keep the sore washed clean.

I confess I had no confidence in the above remedy when I commenced using it, but in less than two weeks from the time of commencing the treatment, to my astonishment the discharge had entirely ceased, and the sore healed up. There can be no danger in applying the above, provided the glass be perfectly pulverized.

W. A. SAWYER.

Eartville, Ill.

BEST MEANS OF DESTROYING WEEDS.—There are few weeds that can withstand the combined operation of the plow, the cultivator, and the frost. Plow the ground soon after the preceding crop is taken off, and as soon as the weeds get a good start cultivate thoroughly, and deep enough to stir up another crop of seeds. Repeat with the cultivator as often as there is a green shade to the field, until winter draws closely on, when the plow should go through again, not deeply, but a little below the track of the cultivator, and sufficiently wide to leave the ground in small ridges.

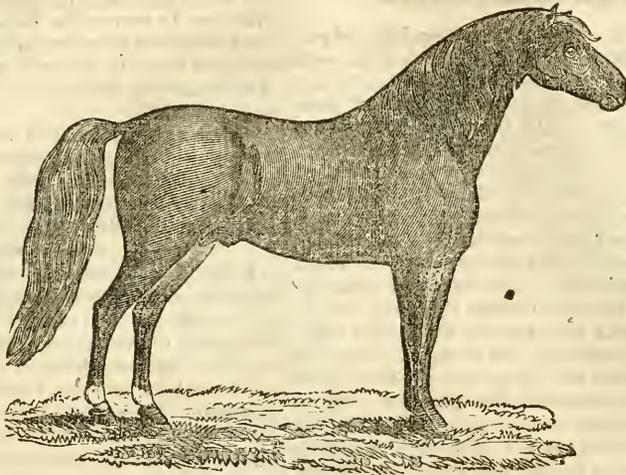
The best and only means of destroying yellow dock, is to pull them up before they blossom and carry them into the road, where they will be trampled to death.

D.

Gates, N. Y.

AGRICULTURAL PAPERS.—What the telegraph, the railroad, and our excellent postal system is to the business world, the agricultural paper is to the farmer. It records, heralds, describes, recommends, advises, cautions, announces, appoints, advocates, persuades, advertises, urges, and improves the farmer to his benefit; making him more prosperous, wealthy, wise, enterprising, cautious, observing and industrious. But to this end farmers must write for, as well as read agricultural papers.

J. S.



FLYING MORGAN.

FLYING MORGAN.

This celebrated Morgan horse was foaled in 1843, the property of R. M. ADAMS, of Burlington, Vt. Sired by Hacket horse, g. sire, Gifford, g. g. sire, Woodbury, g. g. g. sire, Justin Morgan. Dam sired by Woodbury. Flying Morgan is 14 hands high, and weighs 900 lbs; color, blood bay, with white hind feet. When five years old he was sold to Dr. Wm. RUSSELL, of Middlebury, Vt., but Mr. ADAMS repurchased him the following year and has owned him ever since. He is a horse of a great deal of bottom and power; trots perfectly square and fair; goes smart; is perfectly sure for all he can do, and generally makes his best time the last heat. From heating and overwork, his eyes have been injured, and he can see but little.

In March, 1850, a race on the ice, mile heats, best two in three, was won by Flying Morgan, in two straight heats, beating Tramp. Time 2m. 51s.—2m. 48s. In a race over Cambridge Park Course, October 2d, 1851, mile heats, best three in five, between Flying Morgan and Cleopatra, the former was victorious in three straight heats. Time, 2m. 51s.—2m. 51½s.—2m. 57. In this race Flying Morgan was called Burlington.—*Linsley's Morgan Horses.*

SHEEP SHOULD NOT BE KEPT TOO LONG IN A SMALL FIELD.—Sheep have a great relish for the sweetest and most fattening productions of the earth; no animal has a greater dislike to coarse, rank grass, consequently, they run over and tread it down in search of the best and sweetest food. This, however, is not all, sheep are a strong scented animal, and wherever they huddle for any length of time, they spoil the grass, and do not thrive, which plainly shows that they require plenty of room. If the fields are small, change them often. G.—*Woodstock, C. W.*

SHEEP, when first turned out to grass in the spring, should be housed on cold nights. If troubled with the scours, drench with half a pint of milk porridge thickened with two table-spoonfuls of wheaten flour. We have rarely known this remedy to fail. If two or three doses do not effect a cure in as many days, add ten drops of laudanum.

TO PREVENT SMUT IN WHEAT.—Wash the wheat thoroughly till the water becomes clear—or in other words, till it will no longer rile the water; then take blue vitriol, an ounce for every bushel of wheat you have washed, and dissolve it in hot water, and pour it into the tub, cask, or whatever your wheat is in, as the wheat must be covered with clear water at the time, and let it soak in this vitriol water for not less than six, or more than twelve, hours. This process should be carried through in the morning, and at night drain off the water, and the wheat will be fit to sow the next morning. It will be necessary to stir the wheat occasionally with a shovel while it is soaking in the vitriol water, as it tends to scour it, and makes it look bright. If this is done thoroughly, it will be a permanent cure for smut, either in spring or fall wheat.

ANDREW CHUTE.

Vienna, C. W.

SOWING AND REAPING.

Sow with a generous hand,
Pause, not for toil or pain,
Weary not thro' the heat of summer,
Weary not thro' the cold spring rain;
But wait till the autumn comes
For the sheaves of golden grain.

Scatter the seed, and fear not
A table will be spread;
What matter it if you are too weary
To eat your hard-earned bread?
Sow while the earth is broken,
For the hungry must be fed.

Sow—while the seeds are lying
In the warm earth's bosom deep,
And your warm tears fall upon it,
They will stir in their quiet sleep.
And the green blades rise the quicker,
Perchance, for the tears you weep.

Then sow—for the hours are fleeting,
And the seed must fall to-day;
And care not what hands shall reap it,
Or if you shall have passed away
Before the waving corn-fields
Shall gladden the sunny day.

Sow, and look onward—upward—
Where the starry light appears—
Where, in spite of the coward's doubting,
Or your own heart's trembling fears,
You shall reap in joy the harvest
You have sown to-day in tears.

[English Paper.



FARM HOUSE—FRONT ELEVATION.

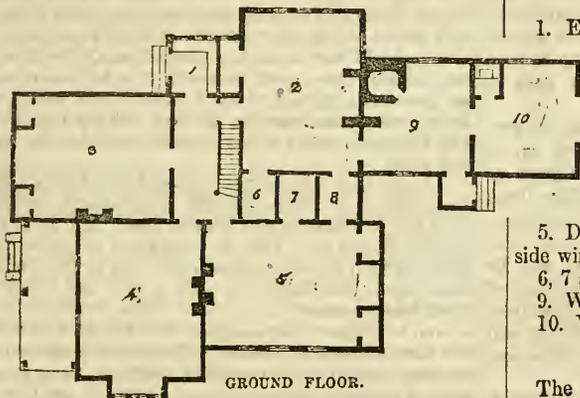
DESIGN FOR A FARM HOUSE.

The erection of good, substantial, conveniently arranged farm houses, is a pleasing indication of the

to get as much variety of outline as possible, with as many conveniences and comforts as are needed, at a moderate expense.

FIRST STORY.

1. Entrance porch, with seat, glazed sash, and outer door.
2. Kitchen, 19 by 15, with three closets.
3. Family room, 19 by 15, with closets at the sides of the window, forming a bay on the inside.
4. Parlor, 19 by 15, with a bay window at the end, and two French windows at the side, opening on a veranda.
5. Dining room, 19 by 15, with ample closets. The side windows are shaded by a canopy roof.
- 6, 7 and 8. Closets.
9. Wash room, or back kitchen.
10. Wood-house or dairy.

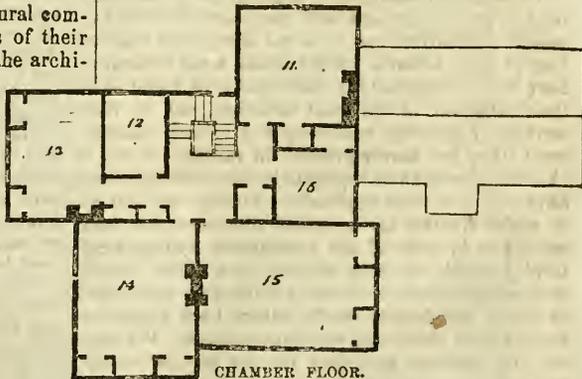


GROUND FLOOR.

SECOND STORY.

The second story contains two large and four small

increasing taste and wealth of the agricultural community. Men, it is said, are the architects of their own fortunes, and, in America, women are the architects of their own houses. The former are acquired little by little, the latter are built quite frequently in the same way. Some of them are curious specimens of architecture, but nearly all of them are convenient. We have not the slightest hesitation in saying that American farm houses, for adaptability and comfort, are not excelled by those of any other country. Still there is room for great improvement, and the knowledge acquired in altering and enlarging our old houses cannot fail to be of great service in designing new ones.



CHAMBER FLOOR.

The accompanying design is supposed to be built of wood, in the usual manner of a timber frame, covered with clapboards or mill-worked flooring, and covered with a shingle roof. The chief idea in it is

to get as much variety of outline as possible, with as many conveniences and comforts as are needed, at a moderate expense. The estimated cost of the above is \$3,000.



Horticultural Department.

CULTIVATION OF DWARF PEARS.

As a general rule, anything which retards the growth of a tree has a tendency to force it into premature or unnatural fruitfulness. To attain this object, various methods are employed, among them root pruning, and grafting on a slower growing stock. Thus the apple is *dwarfed* and thrown into early fruitfulness by grafting on the slow growing Douceain or Paradise stock, the plum on the myrabolan or sloe, the cherry on the Mahaleb, the apricot on the plum, and the pear on the quince. Trees so "worked," or grafted, are in an exceedingly artificial condition, and require very careful and judicious cultivation. Apples, cherries, plums, apricots, &c., are all cultivated in this country as dwarfs, but to a limited extent only as compared with the pear, which, in its natural condition, is much longer than any other fruit in coming into bearing.

Pear trees budded on quince stocks can be purchased in the nurseries in the spring, planted out in our gardens, and fruited the following summer or autumn. True, it is not advisable to let them bear so early; but the second or third year from planting, the trees, if vigorous, may be allowed to bear considerable fruit, though not full crops. It will be readily seen that dwarf pears are peculiarly adapted to a new country, where this delicious fruit is scarce; and it is not to be wondered at that hundreds, and even thousands, have rushed into their cultivation, without adequate knowledge or experience.

The artificial condition of pears on the quince stock renders great care and skill necessary for their successful cultivation, and it is not surprising that we hear of many failures. But because some cultivators have been unfortunate in their choice of varieties, in their selection of soil and situation, and in their method of pruning, manuring and general management, they are hardly justified in raising the cry of "humbag," without stopping to inquire whether others have not been more successful. During the last six or eight months, an animated discussion has been carried on in some of the agricultural and horticultural journals on this subject, which has clearly demonstrated that while many cultivators have failed to obtain satisfactory results, others have succeeded beyond their most sanguine expectations. We have not the remotest pecuniary interest in this matter, and take pleasure in saying that the leading nurserymen in this city who advocate the extensive cultivation of dwarf pears, are sustained in their position by the fine crops which they annually obtain from their extensive orchards of specimen dwarf pear trees.

No one can walk through the grounds of Messrs. ELLWANGER & BARRY, H. E. HOOKER & Co., and other skillful and intelligent nurserymen, without being satisfied that dwarf pear trees are not only eminently ornamental, but that their judicious cultivation is a source of great pleasure and profit. We may also add that the profitable cultivation of dwarf pears in this vicinity is not confined to nurserymen; there are amateur cultivators who have been equally successful, and who are annually increasing the number of their dwarf pear trees.

A short time ago, Mr. Wm. STOMS read a paper before the Cincinnati Horticultural Society, in which he strongly condemned dwarf pears, and alluded to some remarks made at the last meeting of the American Pomological Society in this city, by the President, Hon. M. P. WILDER, of Boston. Among other things, Mr. STOMS says:

"When the friends of dwarf pear culture shall come forward, and, with 'bill of particulars,' show me an orchard of five hundred dwarf pear trees that have been ten years planted, which have borne fruit *successfully* and *paid cost*, I will give up the contest."

After alluding to his own orchards, which are very extensive, and contain many hundreds (and we believe *thousands*) of pear trees on quince stocks, some of which are thirty years old, Mr. WILDER in reply to the above, says:

"Now we cannot carry our orchards to Ohio, but if friend STOMS will take the cars next August for Boston, and advise me of the time and at what depot he will arrive, I will have a carriage in readiness, take him to my house, have a good chat with him in the evening on pomology, give him the best bed and board we have, and in the morning he shall see my pear trees and the memoranda of my sales of fruit for the past few years.

"I will then take him to my neighbor AUSTIN's, the treasurer of the Massachusetts horticultural society, who has *five hundred and ten pear trees*. All these are on the quince root, with the exception of one or two dozens which are on the pear root; but as these latter have borne but little fruit, Mr. S. will not object to their being counted in the lot. These trees are from eleven to thirteen years of age. One hundred of them are Louise bonne de Jerseys. These trees commence bearing about three years after planting, have borne regular and abundant crops ever since, and are now in a very vigorous and healthy condition. No account of the crops was kept until the year 1851, but Mr. AUSTIN has kindly furnished me with the amount of his sales since that date. The total sales for six years, was \$3,408.76. The original cost of these trees was about fifty cents each, or \$250. Mr. AUSTIN is a merchant, and goes to the city every day, and the only help he has had, is the service of a man who also takes care of his stables and grounds. He has, however, given them his personal attention, and good cultivation, but I think, without further estimate of 'cost,' we may reasonably conclude that these '*five hundred trees*' have '*borne successfully, and paid cost.*'"

"We will then take a ride over to the Messrs. HOVEY's, where we shall find a much larger number of pear trees, on the quince root. Their beautiful avenues are lined with them, some of which are from fifteen to twenty years of age, but as it will occupy perhaps too much time to examine all of them, we will take one walk as an example. How delighted Mr. S. must be to see 220 pear trees, 110 on each side, loaded with their luscious fruit, only eight or nine years planted, and all independently on the quince root. The pro-

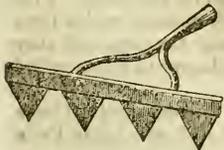
duct of those trees in 1855, was twenty barrels. The highest price obtained was twenty dollars per barrel, the lowest eight dollars. Then we can call on Mr. STICKNEY, and look at his 'dwarf' pear trees. We shall see some magnificent specimens of Urbanistes and Louise bonne de Jerseys. The crop of the latter he sold the last season at ten dollars per bushel. Then we will go to Mr. MANNING's, who has some pear trees on the quince of very large size, being from thirty to forty years old, and which 'still live,' and produce annual crops. Then we will pursue our journey and call on Mr. CABOT, the President of the Mass. Horticultural Society, MESSRS BACON, DOWNER, RICHARDSON, JOHNSON, and others who have splendid collections of 'dwarf' pear trees, which have been 'planted ten years.'

Our space forbids further quotations from Mr. WILDER's interesting letter; but the above is sufficient to prove that dwarf pears are no "humbag."

GARDEN SEEDS SHOULD BE SOWN IN DRILLS.

WHEN a boy, we have spent many long, weary hours in the back-breaking labor of weeding the onion and carrot beds, which, because it required less time, were sown broadcast. We cannot help thinking now, that had the man who prepared the beds and sowed the seed been obliged to do the weeding, he would soon have discovered that the little extra labor required to sow the seed in drills was amply atoned for by the ease with which, as compared with the thumb and finger process, weeds could be destroyed by the hoe. Nearly all garden crops, when sown in drills sufficiently wide to admit the use of the hoe, are not only more easily kept clean, but the constant stirring of the soil in hoeing is found to be exceedingly beneficial. On soils that are not too sandy, the constant use of the hoe is a great means of alleviating the injurious effects of drouth. It also keeps the ground loose, so that the plants can throw out abundance of roots, and at the same time the decomposition of the organic matter and the disintegration of the mineral matter of the soil are accelerated, and it is found that though there are fewer plants on a given space, they are more than enough larger to make up for this deficiency.

Where a considerable breadth of land is sown with carrots, onions, and similar crops, it is advisable to use a drill, but in ordinary gardens, where only a few beds of these crops are sown, its use is not desirable. Drills made lengthwise of the beds present the best appearance, but it is not so convenient to hoe them as when the drills are made across the beds. The beds, too, may be made wider, say five to six feet, in the latter case, than when the drills run lengthwise of the beds. Various contrivances have been employed to economise time in making the drills. The drill-rake, shown in the annexed engraving, is one of the simplest and most efficient. It is constructed of a headpiece of wood, into



DRILL-RAKE.

which broad, flat wooden teeth are set, tapering towards the points, and at such distance apart as the drills are to be drawn. Sometimes the head is in two flat pieces, to admit of the teeth being set at different distances. The pieces are screwed together at each end; or if more than three drills are to be

drawn at once, a third screw is placed in the middle. The first drill should be made by a line; afterwards the drill-tooth on the right hand side should be run in the last drill formed. This will keep the drills straight and equi-distant. Be very careful not to make the drills too deep. This is a very common error. For onions, carrots, &c., from half an inch to an inch is quite deep enough.

TRANSPLANTING GARDEN VEGETABLES.

Nearly all our culinary esculents can be transplanted with impunity. Some plants, such as cabbage, cauliflowers, celery, &c., are amazingly improved by transplanting from the seed-bed once or twice before their final planting out. It increases the formation of extra roots, and renders the plant more "stocky." It frequently enables the cultivator to detect the club or "finger and toes," and also affords opportunity for throwing out mal-formed plants. Onions admit of it with impunity; leeks with singular advantage. The former, however, should not be transplanted too deep or they have a tendency to run to top. Lettuce admits of it freely, and the plants, being deprived of part of their tap-root, throw out a great number of lateral roots, in consequence of which the production of radical leaves is encouraged, and the tendency to run to flower is retarded; while a more succulent growth is induced, owing to the plants being placed in newly prepared soil.



FIG. 1.

In transplanting it is desirable to preserve as many of the small roots or spongioses as possible, and the more so when the operation is to be carried out without checking the growth or vigor of the plant, as in transplanting lettuces at any age. In removing any young plants from the seed-bed to the nursery plantation, the ground should be well watered if dry; and instead of pulling up the tender plants as is usually done, the ground should be loosened with a transplanting fork, similar to the one shown in the accompanying cut, (fig. 1.) It is also of great use in facilitating their removal from the nursery bed to their final place of planting.

In transplanting large plants from the nursery rows, it is very desirable to have a ball of earth round their roots, and for this purpose a semi-circle trowel will be found useful, if not indispensable. Where a large number of plants are to be transplanted, the operation may be facilitated by the employment of some such an instrument as figured in the annexed engraving, (fig. 2.)—The blades are opened by pressing the lever *a* towards the handle when they open outwards, and in this state are thrust into the ground, having the plant within them; a counter pressure causes them to collapse, and to embrace the ball firmly, and in this state, the transplanter being drawn upwards brings with it the plant and ball entire. It is then taken to its new site and set in its place, when



FIG. 2.

the lever *a* is again pressed inwards, and the blades open and are withdrawn, leaving the plant and its ball entire, to be filled around with earth, and the operation is repeated on another subject. In this way large plants can be transplanted with great ease, and without retarding their growth.

HORTICULTURAL OPERATIONS FOR APRIL.

Attend to the hot beds. See that the heat is kept up well. If it should decline too much, as it most likely will, apply a good lining of hot manure as recommended last month. A good way of doing this is to prepare the manure as advised for the hot-bed, and apply a lining at the back and one end of the bed one week, and at the front and other end the next week; by this means a regular warmth will be kept up. As the cucumber vines advance in length, all the strong and fruitful branches should be trained out at distances of twelve or fifteen inches from each other so as to cover all the space in the bed. To keep them in their places they must be pegged down with little hooked sticks. All the small and fruitless branches must be cut away. As soon as the first young fruit is set and beginning to swell, the end of the vine should be pinched out two leaves above the fruit. By the time this first fruit is ready to cut the vine will have pushed a second time and another young fruit will be set, and will commence to grow as the other is removed. If it be desired to have fine, long and straight fruit, it will not be advisable to leave more than one fruit upon a vine at the same time and that should be laid into a small box about two inches wide and eighteen or twenty long, to keep it straight. I have a variety that I have, by this means, frequently grown two feet in length, and sweet, tender and crisp to the very stalk.

Towards the end of the month, the seeds sown in boxes on the hot-bed, as tomatoes, purple egg-plant, celery, peppers, &c., will have grown large enough to require pricking out, and where there are not proper hot-bed frames and sashes, a substitute may be made in this way: In some rather elevated and dry spot, dig out a trench eighteen inches deep and five feet wide and of sufficient length to take the required number of plants, then drive down a post at each corner and place some boards all around on the brow of the pit and bank the earth up to the boards on the outside. Now fill the pit full of hot manure, as high up as the bottom of the boards, well mixing it, and beat it down firmly with the back of the fork. Cover the manure with four or five inches of the best garden soil that can be had; rake it smooth and press it down gently with the back of the rake; cover it over with some old boards or mats to keep cold wind and wet off, and in a few days it will be nicely warmed through. The best way of transplanting or pricking out, will be to take the plants separately between the fore finger and thumb of the left hand, and with a common dinner fork in the right hand gently lift the plant up without breaking the roots, then, with the fore finger of the right hand, or with a dibble about the same size, make a hole in the new bed and place a plant in about up to its seed-leaves without breaking it and press the earth gently down about its roots. Plant the rest, or as many as are wanted of each kind, in the same way about four inches apart; when done give a gentle watering with water of the temperature of about 60°. This planting should be done in mild,

dull weather, to avoid drying the roots. Shade a little at first in sunny weather, and cover up in cold or wet weather, and at night.

SEEDS OF HARDY VEGETABLES IN OPEN GROUND.— If the weather be favorable in the first or second week in the month, select a warm sheltered spot; manure and dig it well, and if the soil be mellow rake it finely. Lay it out in beds five feet wide with alleys two feet wide between. One bed may be sown with early cabbage lettuce, one with scarlet short-top radish, one with early short-horn carrot, one with onions, and a small patch of early June potatoes. It is a little more trouble to sow these seeds in drills, but it is a great deal the best way. For lettuce, strike a line the length of the bed and six inches from the edge, then make a drill half an inch deep, with a stick; make these drills six inches apart; sow the seeds thinly in the drills, and just cover them by pulling the earth from the edge of the drill over them with the back of the rake, and press it gently upon the seeds. When up, thin out to four inches apart; and as they get fit for use pull every other one, leaving the main crop eight inches apart. The radish seed can be sown in drills in the same way, but buried a little deeper, say half an inch; four inches apart for the radish drills will be sufficient. When they have made the two first rough leaves it will be seen which will bulb and which will not; pull out those that will not bulb, leaving the others two inches apart; the thinnings will make very nice salad. The onion seed may be sown in the same manner as the radishes, and if to be used small for salad, the drills may be made six inches apart, but if any are to remain to come to maturity, they must be made twelve inches apart, and the onions thinned to four inches apart in the rows. Early short-horn carrot may be sown in drills twelve inches apart, and to the same depth as the radish. If the weather should be windy at time of sowing, it will be well to rub the seed with a little damp sand; this will prevent it from being blown away and will facilitate the work a great deal. When the carrots are two inches high thin out to two inches apart, and as they grow large enough for use, say half an inch in diameter, at which time they will be sweetest, pull out the largest for use, and leave the small ones to grow larger. Plant a few early June potatoes in rows two feet apart, and one foot apart in the rows; plant with a large dibble so as to cover the sets four inches deep. All these may be sown, if the weather be favorable and the frost out of the ground, first week in April; but there will be nothing gained by sowing while the ground is wet and cold. A good place for these first seeds will be a rather elevated border, sloping a little to the south, and on the south side of a board fence, or sheltered by some buildings. Protect them by covering the beds at night with a little light litter, and pull it off during the day, until they have got large enough to be in danger of being pulled out by the litter.

Some Early York or Early Winingstadt cabbage may be sown on a gentle hot-bed, also Early Paris cauliflower.

Choose the richest and best piece of ground you have got for some early peas. I am aware that many writers recommend rather poor ground for peas, but I have always used the richest and deepest that I could command, and always with the best results. On poor ground they are apt to mildew when the crop is about in its best condition, if the weather should

prove hot and dry; but in deep, rich ground never. Plant the rows five or six feet apart, this will leave room for the celery trenches between them; which will be planted before the peas are cleared away.

If some old barrels, with the heads knocked out, be placed over some of the rhubarb plants and the barrels banked round with warm manure, about two feet thick; the rhubarb will be fit for use a week or two before that in the open ground without protection, and much nicer. The barrel should be covered every night with old mats or boards, and uncovered in warm days.

Asparagus beds should be lightly forked up and dressed with a little rotten manure. Raspberry canes should be taken out of their winter covering, tied to stakes and the strongest cut to four and the weakest to two or three feet in length. JOSIAH SALTER.

FLOWERS FOR SPRING SOWING.

In this climate where late springs, and hot, dry, summers so often occur, recourse is generally had to annuals for the adornment of gardens, on which, indeed, in a great measure we depend for flowers during the summer months, but so little judgment is shown in the selection of kinds, oftentimes through lack of forethought, but generally through an imperfect knowledge of what is being planted, that I have thought, at this time, that a short sketch of a few of the best annuals, &c., would not be unwelcome to your readers, especially the lady portion of them.

The double balsam is one of those annuals, which, when well grown, is one of the most beautiful productions of Flora, and yet how seldom do we see it entering into the composition of the flower garden, and when there, is seldom more than semi double, and oftener single. Now, it costs no more to raise good plants, than it does to grow poor ones, and we should no longer have such a thing as a single balsam in the garden. Procure your seed of reliable persons, and if it *does* cost sixpence more than you can get it for elsewhere, do not hesitate to pay it and take out the pay afterward in satisfaction at having good flowers, and in laughing at your neighbors who would not buy good seed and got cheated. The balsam, to do well requires a warm, moist spot, and should never be allowed to flower where the seed was sown. The plants should be raised in the house, or in a warm spot in the garden, and when about three inches high, transplanted to the place where they are to bloom. It requires rich soil and liberal treatment, and cannot brook starvation. The colors are scarlet, crimson, purple, white, yellow and mottled. The plants should never be grown nearer than two feet apart. Sow seed 1st to middle of May.

The China aster is the greatest ornament to our flower gardens in the autumn, that can be well grown; like the balsam, the plants should be raised early and when about two inches high be transplanted where they are to flower. They may be grown in rows or in masses, and the plants should be about eighteen inches apart. Colors—crimson, red, pink, white, blue and purple, and variegated, all the above colors in different varieties, being mixed with white. Should be grown in good soil.

The Drummond phlox, is an annual, unrivalled by any other for beauty and diversity of color, and should be grown in masses, by which method it becomes very effective. The seed should be sown about the 2nd

week in May, where it is to flower, in a warm, sunny spot, and in dry weather it should be carefully watered.

The centaurea too, is but seldom grown, although deserving of attention from the unique shape of the flowers, they being of all shades of blue, purple and crimson and sometimes white. Plant seed same time as Phlox Drummondii.

Minulus cardinalis, or cardinal monkey dower, should be in every good garden. The seed is very minute and should be planted early, in a well prepared bed, and shaded from the bright sun till the plants are up.

The Marvel of Peru, or four o'clock, is a large spreading tuberous rooted annual, well known, but not sufficiently planted. The plants should be grown about three feet apart in a warm sunny spot. The improved varieties are beautifully striped pink and white, purple and white, and orange and crimson.

Candytuft should be in every garden, especially the tall white and purple sorts, which are fine for growing in masses.

The sweet pea is useful for hiding fences or bare spots, the flowers being not only extremely gay, but also very fragrant. It also looks well planted in circles, with a large branch or other support for them to cling to.

Nemophila insignis and *maculata*, are very delicate and pretty, and useful for sowing in shady places where other things will not thrive.

Portulacca is indispensable for growing in hot, dry places, for no sun can be too hot, or weather too dry for it. Colors—scarlet, crimson, yellow and white. Plant seed about the middle of May, in clumps or masses.

The petunia, although a perennial, blooms the first season from seed, and makes one of the most showy flower beds imaginable, the flowers being large, and varying in color from dark crimson to white.

The double flowered china pink, is also worthy of general attention, the flowers being beautifully variegated and the colors extremely gay.

All the foregoing, with a few others for winter ornaments, such as *Gnaphalium*, *Xeranthemum*, *Amaranthus*, &c., together with a well chosen collection of perennials, if well grown will make a display through the whole season that will be hard to beat, and will require but little attention other than keeping clear of weeds and watering carefully during dry weather.

Rochester, N. Y.

W. T. GOLDSMITH.

BIRDS—THEIR USEFULNESS, &c.

It is a well known fact that the alarming increase of insects and worms in making ravages upon our fruit trees and fruit, not only paralyzes the efforts, and disheartens the hopes of the cultivator, but threatens total destruction to many of the most delicious fruits. So extensive are their ravages, that but very few of our apricots and plums ripen without premature decay from the worm generated by the beetles which surround our trees in the twilight of the evening, in great numbers, when the fruit is quite young. And when the produce of our apple, pear, or peach trees is small, but few of these escape the same fate.

The birds are to the farmer and gardener of great value. They were designed by the Creator to check the too great increase of insects, and no farmer should suffer them to be wantonly destroyed on his premises.

The number of insects, worms and larvæ, destroyed by the robin, cat bird, swallow, sparrow, wren and other small birds, is astonishing. One little family of sparrows will destroy several hundred insects in a single day.

The most casual observer could not help to observe that the various tribes of insects have increased in proportion to the decrease of birds, who are their natural enemies; the equilibrium of nature has been disturbed by our cruelty and ignorance, in refusing protection and succor to our best friends, and the annual loss sustained by the country would be difficult to estimate. Wheat, Indian corn, garden vegetable, fruit trees, and even the grass, and the trees of our forests, annually furnish conclusive evidence of the great disturbance in the equilibrium of nature produced by those cruel, ignorant, loafing savages, and even boys, who may be seen skulking and creeping round the fences with an old rusty musket or fowling piece, killing without discrimination, every bird they see. It is a mean and contemptible business, to say the least, to destroy the little songsters that render the fields vocal, and beautify creation.

During the past fifty years the various tribes have been diminishing with a frightful rapidity, and if it should progress in the same ratio for the next fifty years, it will be a serious question whether the produce of the country can be kept up so as to supply the wants of the inhabitants.

Where is the farmer that followed the plow fifty years ago, that does not remember the flocks of birds that crowded the furrows of the newly turned up earth, devouring every grub and worm that was exposed to the surface? They seemed to be fearless of man, each one appearing anxious to be nearest to the foot of the plowman to destroy his inveterate and insidious enemies. Now what has become of those faithful guardians of our property? The answer to this question can be given by every farmer in the country. As soon as they begin to make their nests in the spring, a set of idle, miscreant boys commence annoying them, take their eggs, and often destroy their nests; and at all seasons of the year a set of ruthless vagabonds prowl through every neighborhood, with their guns, ever ready to shoot down a robin, cat-bird, sparrow, and even the diminutive, harmless wren, either of which are rendering more service to community, in proportion to their ability, than their numerous persecutors.

In addition to the important usefulness of these birds, their musical notes in the twilight of the morning, are peculiarly delightful; awaking the farmer to the sublime contemplation and enjoyment of all the infinite beauties of creation. What is more pleasing to a lover of nature, than to rise at the dawn of day in the month of May or June, and when sallying forth, to be greeted and cheered with the lively notes of the sparrow, the melodious song of the robin, and the musical and queer notes of the bobolink?

Birds are the best of entomologists. No ornithologist ever hunted specimen birds with the industry and perseverance exhibited by birds themselves in their researches. "They desport in the air," says a writer, "penetrate every nook and corner of thicket, hedge and shrubbery; they search the bark, pierce the dead wood, glean the surface of the soil, watch for the spade trench, and follow the plowman after worms and larvæ. A single bird in one season destroys millions of insects for its own food and for that

of its own nest. No computation can be made of the insects which birds can devour. We cannot think of another theme more inspiring than the plowing season in this respect. You will find bluebirds in the tops of trees, practicing the scale; crows are cawing as they lazily swing through the air toward their companions in the tops of distant dead and dry trees; robins and blackbirds are wide awake, searching every clod that the plow turns, and venturesome almost to the farmer's heels."

Birds are also the best of scavengers, the nimblest hunters, and adroit butchers. They have no Grahamite scruples to agitate this worm and bug-loving tribe. They do not show their teeth to prove that they were designed for meat. They eat what they like, wipe their mouth on a limb, return thanks in a song, and wing their way to a quiet nook, to dose or meditate, snug from the hawk that sails about in the air above. To be sure, birds like men, have a relish for variety.

Birds are likewise, the best of pomologists. We charge every man and boy with positive cruelty and dishonesty, who drives the birds from the garden in fruit time. Does not the fruit belong to them as well as you? Did they not watch and take care of it as well as you? If they had not eaten egg, worm and bug, your fruit would have been pierced and ruined. Besides, on investigation it has been discovered that they never disturb sound cherries, and none but those that have worms in them. We say *protect and spare the birds*, and they will destroy millions of your greatest and worst enemies—the insects.

"There is scarcely a farm in England," says a writer, "without its rookery; the humid atmosphere multiplies every species of insect, and those birds reward man for his forbearance and protection, by ridding him of legions of his foes."

Treat the birds kindly and they will become almost domesticated—follow the plowman, and pick up all the grubs and worms turned up from their subterranean abode. For doing so they deserve well of the farmer, and no honest man will cheat them out of their part of the crop—much less kill them for trying to get it. We repeat again, *spare the birds*.

In vain will be all our labor and toil; in vain the united efforts of the horticultural societies for increasing and perfecting the cultivation of the most delicious varieties of fruit, unless we can *increase* or at least *cease* to diminish these useful and melodious birds.

We would appeal to the self-interest of the owners and cultivators of land. They must surely be ignorant of the injury which is in progress when they allow it to go on unreprieved before their eyes. We would also appeal to their own selfishness and love of gain, if no higher motive will reach them, and entreat them, as their influence gives them opportunity, to lend themselves to a work, the first consequence of which will be their own welfare; the second, the welfare of their country. They are supreme, each one over their own territory, be it large or small. Let them resist and punish every trespass of the wanton slaughterers of birds; let them declare war against the whole tribe of truant murderers, whose daily sport is the spoiling of the nest, the invention of new, and the use of their old and destructive snares, and the more immediate devastations of the gun. Let our sturdy farmers hold themselves forth as steadfast resistors of every such act, and particularly of every encroachment for this purpose, upon the lands for which,

as stewards of our country's prosperity they are more immediately responsible; let them do this work with all their might, and again we say, we look not beyond them for ultimate success. We are not, however, over sanguine of success of any or all these schemes and appeals; we look high for the source of assistance and remedial action, to which we think the way lies clear.

We look then to legislative enactment for our remedy. It protects the birds in our cemeteries, and game for sportsmen, who disregard all fear of trespass in its pursuit. In many States it offers large rewards for the destruction of the noxious birds, whose numbers are small, but whose paid destruction is of evident injury to the farmer. Those who take advantage of the bounty offered, being usually low miscreants, who care no more for the laws of property than for the lives of the myriads of serviceable birds which fall in common with the proscribed species.—We look to legislative power for the uprooting and extermination of this evil. Let stringent and summary laws be enacted, inflicting fines and penalties. Let the power be put into the hands of the farmers to arrest any person found on their premises with a gun and birds in their possession; aye, let them have the power to take the gun from them as security for the fine or penalty.

With half the ingenuity which is yearly expended upon more favorite enactments, the power of offended government might be readily brought to bear upon offenders, by a well contrived system of rewards to discovery and prevention, and punishments for transgression. This, united with and enforced by the labors of possessors of the soil, and trainers of the young, would soon be effectual in the attainment of our object.

In concluding these remarks, we hope to be pardoned for again reiterating the importance of the subject. The injury done by insects is often unseen and unknown, but enormous; the number of their destroyers is fast decreasing, and can never be renewed; without them we are helpless, and agriculture deprived of servants and services which can not be replaced.

BEMENT.

Rochester, N. Y.

FRUIT GROWING IN OREGON.

MESSRS EDITORS:—I have over one thousand fruit trees of various kinds, some of which are in bearing and promise well, being the result of my own labor of three years residence in this territory. Having a somewhat elevated situation of 800 feet above the level of the Wallamett at Salem, and 1000 feet above the level of the sea, surrounded by a valley from ten to thirty miles wide, and from six to nine hundred feet below the highest part of my plantation. Soil red clay loam; subsoil a redish clay.

As I have been a careful observer of all matters pertaining to horticulture in this territory, it may not be amiss for me to state a few things for the benefit of my fellow horticulturists. Apples, pears, plums, cherries and apricots, have already shown themselves capable of profitable cultivation; peaches, grapes, nectarines and gooseberries, furnish an ambiguous result thus far, with an occasional promise of success.

Of apples we have over 150 varieties in cultivation, the greater portion of which are well known to you; but there are a few varieties highly approved

with you that are nearly worthless here, among which I will name the Sweet Bough, while there are others that are second rate with you that are first quality with us, among which are the white winter Pearmain and the Wine Sap, the latter, as I am informed, sold last winter for ten cents more on the pound in San Francisco, than any other variety.

The mildew is almost the only enemy that the apple has in this country. Pears are universally productive, and the fruit large and high flavored, and it is quite likely that the quince, as a stock, will be entirely dispensed with here, as our trees on pear stock bear quite young, and the long dry season perfects the flavor of the fruit, equaling that grown on the quince.

Plums, like the pear, are very productive, large and delicious, and have no enemies. Curculio and black knot are not known here. Apricots are hardy and productive, promising well. Cherries come up to our best expectations, except the occasional death of a tree, which we attribute to the use of wild stocks.

Peaches are very uncertain, owing to the curl in the leaf; more than two-thirds of the peach trees in the Wallamett valley suffer every season with this malady, and present to the eye of the beholder, in the month of June, a desolate appearance, destroying the hope of the cultivator almost entirely; but those varieties that escape, produce fine fruit. It is difficult to say what is the cause of this disease or to suggest a remedy. When the *Genesee Farmer* came to hand, in which a correspondent gave his experience in nailing the trunks of his trees, I predicted at once that in less than two weeks there would be more than 500 pounds of nails used in Oregon in nailing up peach trees, and immediately nailed some myself to try the experiment, but with a very small degree of success.

WM. RUBLE.

Cincinnati, Polk Co., Oregon Ty.

MAKING AN OSAGE ORANGE HEDGE.

EDITORS GENESEE FARMER:—The osage orange grows spontaneously on the Osage River, in Missouri and Kansas, where it forms a small tree, growing to the height of twenty-five feet. I have seen it flourishing north of forty-three degrees of latitude; still it is rather tender while young, and liable to kill more or less the first winter; and as it is a thrifty grower, the ends of the branches are often nipped by the extreme cold; yet the bodies of the plants came safely through the frosty ordeal last winter, and they are not likely to have a tougher time of it soon.

PREPARING AND SOWING THE SEED.—The seeds are rather hard to start. The best way is to mix them with earth in the fall, and put them where they will keep frozen through the winter; or if kept dry until spring, pour hot water on them, and let them stand in a warm place two or three days; then mix them with wet sand, and keep warm. Do not fear spoiling them with hot water; if you do not scald them they will not sprout. After they have begun to sprout pretty freely they may be planted, which should be done in April.

PREPARING THE SEED-BED.—The osage orange is a lover of good living; so in preparing either the seed bed or the hedge row, never fear of getting the soil too rich. Some prefer planting in a bed and transplanting to the hedge row the next year, while

others sow the seed where they want the fence. I have tried both ways, and like the last best if the ground is well prepared and not disposed to be weedy; otherwise it is better to sow the seed in a bed, and transplant when the plants are one year old.

SETTING OUT THE PLANTS.—Make the ground rich and mellow, and plow a furrow where the hedge is to be set. Then, when you are ready to transplant, take a scythe and mow off the tops of the plants in the seed-bed about two inches above the ground; then run a sharp plow under the rows, cutting the plants off about eight inches under ground, place them in something convenient to carry them in, and set them six inches apart in the furrow you plowed where the hedge is to be, and draw the dirt around each plant with a hoe, making it firm with the foot.

TRAINING THE HEDGE.—The fall following, mow off the sprouts to within two or three inches of the place where they were first cut, and cover the ground with coarse manure or straw before cold weather sets in. In the spring this must be cleared off. Keep the weeds out, and, about the tenth of July, cut the plants down to within four or five inches of the last cutting. Cut again in the fall, and so on from time to time. If you have taken pains to fill in with fresh plants where any have died, in four years time the orange will make an impregnable fence. L.

Lynn, Pa.

"MY NEW GARDEN."

THE "mid-winter thaw," which came in February, gave me another look at my new garden, and almost made me impatient for spring so that I could work in it again. I took so much pleasure there last season, that I have a mind to tell your readers about it—perhaps it may incite others to seek happiness in the same innocent manner. I must say, however, that it is not much of a garden yet—as only last spring it was a part of an old meadow—an unoccupied corner of the orchard lot—very conveniently situated for my purpose. The soil is a sandy loam, dry, and full of small stone, which will make plenty of work for the hoe and rake for several years to come. I don't like a stony garden—but I like such a soil as we always find with stone, better than any other; and *work* will clear them away in time, as they are turned up in plowing, spading, and raking the ground.

As to *fencing*, my garden fronts on the road, and lies east of the front door-yard, so I had fence to make only on two sides of it. This, temporarily, I constructed of "picked up" rails about eleven feet long, with every other length of five and a half feet rails. The later were culled from several loads of broken rails, drawn up for wood, and sawed into regular lengths before using. Such a fence occupies only about four feet in width, and with a rider staked across the centre of each long length, would stand quite a heavy wind or push from an animal. Mine has stood without this "finishing touch" so far, except when thrown down last fall by some unruly horses.

The plat was plowed early in May, was well harrowed immediately, and pretty fine tilth established, considering the depth of the plowing (seven inches) and the toughness of the sod. No manure was applied, as I wished to get an idea of the present capa-

city of the soil, and intended hill-manuring and top-dressing most of my crops with stimulating fertilizers.

The first object being to get the ground clear of sods and in fine tilth, I *planted* the greater part to *potatoes*, May 6th and 10th, putting in seven varieties. On the last named day, I also planted a few hills of *corn*, and on the 21st some fifty hills of *Lima beans*, with a small handful of ashes and bones, (which had lain together some weeks,) mixed with the dirt over each. I found I missed it in not taking pains to place each bean with the *eye down*, as those thus placed come up more readily and surely. Such large beans cannot turn easily in a compact soil, and the shoot often breaks and rots before getting to the surface. I also planted French dwarf beans, some fifty hills, but without any special application. On the 24th, I planted a few hills of sweet potato, and Boston marrow *squashes*, in opposite corners of my garden.

The *cultivation* consisted simply in keeping the soil mellow and the weeds down with cultivator and hand hoe. The corn and Lima beans were hoed most frequently. The corn was top-dressed with ashes, also the potatoes,—the later also received an application of gypsum. The squashes were watered with soap-suds occasionally. As to *weeds*—pigeon grass, pig-weed, parsley, and the wild bean, were the most troublesome—the parsley is the most difficult to eradicate.

In regard to the *crops*, they were very satisfactory. It is a pleasant thing to eat the fruit of one's labor. First, we had string and shell-beans from the dwarfs, and then the delicate Limas, so delicious I can almost taste them as I write. These lasted a long time, at least two months, and until hard frosts come. We had also new potatoes, green corn, not forgetting a few radishes, which grew where some hills of the Limas were missing. And in the fall we had fine potatoes, also fair squashes—though these did not do very well on account of the drouth.

The present year will give quite an addition to my garden products. I made a nice *strawberry* bed last August, digging up the ground some eighteen or twenty inches deep, and planting four of our best varieties. They rooted finely, and I hope will come out in the spring, ready to give many a dish of strawberries next June, and some seasons thereafter. I have also made a *pie-plant* bed, digging it up two feet deep, and putting in plenty of manure, setting out my roots in October. I shall prepare for *asparagus* next season, and devote considerable attention to other usual garden vegetables. The manure is already on the ground for my onions and other beds and my vine patch, and I shall have more drawn out before plowing. But I must not make a long story of my plans and projects, but will give you some account of them perhaps after putting them into execution. A. COUNTRY INVALID.

THE CABBAGE was highly esteemed by the ancients. PHILLIPS tells us that the ancient Romans, *having banished physicians out of their territories*, preserved their health for six hundred years, and soothed their infirmities by the use of this vegetable alone.

A LIGHT, rich soil, abounding in vegetable mould, produces the *earliest* peas; but a strong loam, inclining to clay, yields the *largest* crop.

Ladies' Department.

ORIGINAL DOMESTIC RECEIPTS.

BREAD No. 1.—To MAKE THREE LOAVES.—At night add to three quarts of sifted flour one table-spoonful of salt, two quarts of sweet milk scalding hot; stir to a batter; when milk warm add one cup of good hop yeast, or, less if brewer's; in the morning early, mould thoroughly with flour, not stiff; stand till well cracked open in the pans; bake one hour.

BREAD No. 2.—At noon, boil and mash six or eight potatoes, turn over them nearly one quart of boiling water, half pint flour, one table-spoonful of salt, and one of sugar; when milk warm add one cup of good yeast; at night stir this with one quart of warm water to two and a half quarts of flour; mould in the morning as above.

SODA CRACKER PUDDING.—To one quart of warm milk add three pulverized crackers, three eggs, salt-spoonful of salt, (or four crackers and two eggs;) spice to your taste; bake thirty minutes; served with sugar and butter.

OYSTER SOUP.—Two quarts of water, one of milk, one table-spoonful of salt, two full spoons of flour stirred in a little cold water and add when boiling; then add two quarts of oysters; when boiling turn it over six or eight pulverized crackers, with half cup of butter; pepper to your taste.

To PICKLE RIPE CUCUMBERS.—Pair the cucumbers and take out the seeds; turn over them a weak brine; let them stand twenty-four hours; rinse them; then turn boiling alum water over them; cover with cabbage and peach leaves and let them stand till cold; slice them; to two quarts of vinegar add one pound of sugar, and cloves, cinnamon and ginger root to your taste. Turn the vinegar over hot.

PRESERVED PUMPKIN.—Cut a good pumpkin in strips like citron; sprinkle sugar on them over night, pound for pound, and the juice of four lemons, in the morning; boil the peel and a little ginger root, and add to the syrup. Boil the pumpkin till tender, then turn on the syrup boiling hot.

SODA CAKE WITHOUT EGGS OR BUTTER.—Three cups of flour, one and a half of sugar, two small tea-spoonful of cream of tartar, one tea-spoonful of salt, one cup of cream—all added to the flour with extract of lemon, one tea-spoonful of soda dissolved in hot water; stir briskly; bake in a quick oven.

FRUIT CAKE WITHOUT EGGS.—One cup of molasses, one cup of brown sugar, one cup of butter,—heat together sufficiently to melt the butter; two tea-spoonful of cloves, two of cinnamon, one of nutmeg, one coffee-cupful of raisins, (with or without currants,) citron; then add one tea-spoonful of soda dissolved in hot water; one cup of sour milk or butter-milk and one quart of flour; bake one hour.

LEMON PIE, No. 1.—Seed and chop one cup of raisins, with one large lemon; pulverize four soda crackers, one cup of sugar, a little salt; stir into one quart of boiling water, a small lump of butter; this quantity will make two pies; bake with upper and under crust.

LEMON PIE, No 2.—To one cup or half a pint of scalding milk add one soda cracker rolled fine; four table-spoonfuls of sugar; three or four eggs, a small lump of butter; put in cold milk enough to fill a plate that holds one quart, then add the grated rind of one lemon; bake with under crust.

GOOD PUMPKIN PIE WITHOUT EGGS.—One quart of boiling milk; two soda or Boston crackers rolled fine, put to the boiling milk; two tea-cups of strained boiled pumpkin; little salt; one cup of sugar; extract of lemon; little ginger. If this quantity will not make two pies put in a little cold milk. Bake in a hot oven.

H. H. M.

Liverpool, N. Y.

RECIPT FOR RUSK.—To one quart of milk add one pound of sugar and half pound of butter; one pint of the milk must be warmed to make a sponge of, with yeast and flour, about as thick as pancake batter, let it rise all night. When risen enough warm the other pint of milk with the sugar and butter, put it into the sponge; knead it, but not very stiff. Let it rise again; when risen enough, mould it into cakes as large as biscuits, place them in tins and let them rise; rub them over with sugar and milk. Bake them in a quick oven. When baked rub them again with sugar and milk to give them a gloss.

MOLASSES COOKIES.—One coffee cup of molasses; half a cup of butter; three tea-spoonful of soda; one and a half of cream of tartar; flour enough to roll out.

CRACKER PIE.—Two soda crackers soaked in one cup of warm water; one small tea spoonful of tartaric acid, or lemon juice; one cup of sugar. Season and bake as an apple pie.

MY WEDDING CAKE.—One pound of flour; one pound of sugar; one pound of butter; two pounds of raisins, stoned; three pounds of currants well washed; one and a quarter ounce of mace; one ounce of nutmeg; one and a quarter pound of citron; half gill of brandy; a few cloves. Bake in large loaves three hours.

SNOW BALL PUDDING.—Pare and core large, melon apples, and enclose them separately in a cloth spread with boiled rice; boil them one hour; dip them in cold water before turning out. Serve them with cream sauce.

CRACKERS.—Four tea-cups of flour; half cup of butter; half tea-spoonful of soda, in a spoonful of boiling water; one pint of milk and water; knead it as hard as dough; roll thin and prick with a fork.

FOR PRESERVING CITRON.—Soak them in salt water three days; change the water every day. Let them remain in clear water one day, after which boil them in water with oyster shells until tender; take them out and put them in alum water, let them soak one hour. Make syrup, allowing one pound and a quarter of sugar to a pound of citron. Let them boil in the syrup half an hour. The citrons are best kept until the month of February before preserving.

MOLASSES PIE.—Take nine table-spoonful of molasses; six table-spoonful of good vinegar; one and a half table-spoonful of flour; a small piece of butter; a few slices of lemon, or grated lemon-peel; cover with a rich paste. This is decidedly the best substitute for apple pie.

J. L.

Westmoreland, Oneida Co., N. Y.

Editor's Table.

MURIATIC ACID IN MANURE HEAPS.—Our opinion has been asked in regard to the value of muriatic acid in "fixing" ammonia in manure heaps. Muriatic acid will convert all the volatile carbonate of ammonia that is already formed in the manure heap into the fixed salt, muriate of ammonia; and, so far, answers the purpose admirably. But there is this objection to its use: *it arrests fermentation.* It will prevent the escape of the ammonia present at the time of its application, but it has a strong tendency to prevent the formation of any more. If it could be spread over the heap in such a way that the ammonia would have to pass through it as it was attempting to escape, free muriatic acid might be useful in fixing the ammonia in manure heaps. But this cannot be done. The acid is brought into direct contact with the mass of the manure, and arrests fermentation, doing, as we think, (and we have had some experience in this matter,) more harm than good.

If muriatic acid can be obtained cheap enough, it might pay to use it for fixing ammonia in manure heaps, by first using it to convert bones into superphosphate of lime, which, saturated with acid, may be scattered over the surface of the heaps. We are not sure, however, that this would be profitable.

PHOSPHATE OF LIME IN GUANO.—"A crop of wheat requires more phosphate of lime than is contained in ten hundred pounds of Peruvian guano.—*Exchange.*"

Such assertions as the above are a disgrace to our agricultural literature. The most unscrupulous vender of "phosphatic guano," "improved superphosphate of lime," &c., could not make a statement more utterly at variance with fact; and we are surprised to find the above in the editorial columns of a respectable agricultural paper. A crop of wheat of fifty bushels per acre, straw, chaff, &c., does not contain more than seventy-five pounds of phosphate of lime; while ten hundred pounds of Peruvian guano contains upwards of two hundred pounds of phosphate of lime.

GREAT CHEESE FACTORY.—The *Louisville Courier* tells of a gigantic cheese dairy in operation in Trumbull county, Ohio. The proprietor does not keep all the cows from which his cheese is made, but contracts with all the farmers within eight or ten miles to furnish the curd from their cows at prices which net them a larger amount than if they manufactured it into cheese themselves. He annually pays about 4½ cents a pound for it. He keeps six or eight teams employed in collecting the curd from the neighboring farmers—some two hundred in number. Two rooms are occupied for curing the cheese, capable of holding 350 tons of cheese. In these rooms the services of three men are constantly required. When ready for sale the cheese is principally put up in tin boxes for the Californian and Australian markets. About 200 tons of cheese have been manufactured the past season.

BEES.—Look to your bees at this season; clean off all dead bees and live moths from the board of the hive, and feed any hive that is short of honey. A few days neglect of this may cause the loss of the hive.

PRICE OF LABOR IN ENGLAND AND AMERICA.—I see in your Hints on Spring Work, an observation that the high price of labor renders the general introduction of the system of soiling adopted with such advantage in some parts of England and the Continent, of questionable economy with us. Now, as to the price of labor in England I am not very minutely posted; but, from what information I can get, the expenses of farming in England are higher than they are in this country, for, in addition to the amount paid for hired help, the farmers have heavy rents and taxes to pay besides. Their rent varies from ten shillings to three pounds, English money, per acre, and their taxes are to be paid besides. Now, cannot American farmers afford to hire labor as well as English farmers, when the most of them have no rents to pay at all, and their taxes are very light? and then, too, they have a market nearly as good in many respects as the English. I did not write this article to provoke a controversy, but merely to draw out your views on this subject. I am very strong in the faith that we can farm as well in this country as they do in England, and at as much profit for the labor employed. I hope you will notice this subject as soon as convenient.

Dryden, March, 1857.

W. A. FORSBYTH.

[We have not time or space this month to give our views on this subject. The amount of rent and taxes paid by English farmers does not affect the question. We pay our hired help in this country about as much again per day as the English farmers. Let us assume that it costs, per annum, three dollars less to feed a cow on the soiling system than in the ordinary way. If the extra labor costs two dollars per cow per annum in England, and four dollars in this country, it is evident that, other things being equal, the English farmer can adopt soiling with more profit than the American farmer. Nay, it is possible, even, that the system will yield the English farmer one dollar per cow profit, and the American farmer one dollar per cow loss.]

—Eds.

LIQUID MANURES.—Mr. PORTER, in his report on "The Saving and Application of the Liquid Manure of a Farm," gives the following general result:—"The urine-manure of the farm is easiest managed, and pays best when mixed with the dung; but as there will generally be plenty to do to carry the half of the dung to the fields, we must therefore dispose of the remainder some other way. The next best mode I have found is to mix it with composts, as before described; and this is, doubtless, the preferable plan for all sorts of an inferior description. When compost, however, is difficult to get, and the land of a fair average nature, the urine may then be applied in the liquid form to new grass or corn early in spring, and always in damp rainy weather. By giving a dressing of 2,000 to 3,000 gallons of the diluted liquid, I have sometimes succeeded in increasing the hay crop to nearly double the average quantity; but the nature of the weather affects it so much, and it is so difficult to regulate its application, that I think it better to dispense with the system as far as possible, and to mix the urine with the dung and compost heaps."

THE APRIL PREMIUMS.—Our agents will please bear in mind that the time for competing for our large premiums, expires on the fourteenth of April. The competition is very close, and it should be borne in mind that a single additional name may secure a prize.

FEEDING COWS.—A correspondent thinks there has been a good deal of talk in the *Farmer* lately in regard to milking the cows, and very little in regard to feeding them. His practice is as follows: Give them as much hay as they will eat; water them early in the morning; give each cow per day four quarts of carrots, beets, or potatoes, and one quart of Indian corn meal; feed them three times a day; water again at sunset. See that they are properly fastened; curry them, and keep the stables clean, and well littered with straw. The meal adds materially to the quality of the milk, and keeps the cows in a good, healthy condition. Cows cannot be kept profitably on dry fodder, without roots. The lice are sure to find a poor cow; it seems as if they held a heavy mortgage on all half-starved animals, and it is not an unfrequent occurrence for them to foreclose

SHORT-HORN BULL "MASTER BUTTERFLY."—This celebrated animal, winner of the First Prize at the last Fair of the Royal Agricultural Society of England, and at the Universal Exhibition in Paris, and which was sold to Mr. WARE, of Camperdown, Australia, for the unprecedented sum of 1,200 guineas, arrived at his destination in safety, and in good condition. We gave an excellent portrait of Master Butterfly in our last volume, page 280. We chronicle his safe arrival with the more pleasure, from the fact that many fears were entertained that he would not survive the voyage. Indeed, it was rumored sometime ago that he had been thrown overboard a few weeks after leaving England.

"FEEDING COWS FOR BUTTER—NEW VIEWS."—We have received an article, under this caption, from a scientific gentleman in Philadelphia. It contains some good ideas, but none of any great importance, we believe, that have not been presented to the readers of the *Genesee Farmer*. Why they should be termed "new views," we do not exactly see. They are not new to us, or to any one acquainted with the agricultural literature of the last decade. The results of the experiments referred to as "recently" made in England, were given in a book which we read ten years ago.

YOUNG FARMERS SHOULD TAKE THE GENESEE FARMER.—A friend writes:—"As well might the young student succeed without his dictionary in learning the meaning of words, as those who are in the incipient stages of agriculture or horticulture without the timely aid of a well directed and able periodical, whose every page is devoted to enhance the interest, not only of those who cultivate their acres of acres, but the mechanic or professional man who wishes to make the most of his one or two acres. As such, we have welcomed the *Genesee Farmer*, as a timely friend from month to month for the last two years, often feeling the reading of one number amply paid us for the cost of the volume."

TO DESTROY WEEDS.—On some soils, a good method of destroying weeds is to plow, in the fall, as shallow as possible the first time, and then shortly afterwards to plow again quite deep, being careful to bury completely the first furrow.

G. G.

[The Michigan double plow would effect the above at one operation.]—Eds.

LIME AS A MANURE.—A Canadian correspondent writes, that on clayey soil, lime should be applied in the caustic state, on the wheat fallow, about the middle of July, and immediately harrowed in, and the land plowed up into ridges as soon after as possible. Let it lie in this state five or six weeks and then sow the wheat. He finds from experience that lime so applied enriches and mellows clayey land. On sandy soils he thinks lime is best applied "in a mortered state, as it cools the land and it makes it firmer." For pasture or meadow, it is better to compost it with soil and barn-yard manure, than to apply it in the clean state. His opinions are derived from forty years' experience.

CULTIVATION OF POTATOES IN WASHINGTON TERRITORY.—JAMES F. HUNT, of Laport, Washington Territory, sends us an article on the cultivation of potatoes, from which we make a few extracts. "The cultivation of potatoes requires considerable care; the soil should be thoroughly plowed and manured, and if dry irrigated. Plant about the first of May, and when the plants are about four inches high plow them under; and when they get out of the ground the second time about four inches high, hoe them thoroughly, and repeat the process three or four times during the summer."

FALL PLOWING TO KILL CANADA THISTLES.—H. B. WHITE, of Sterling Village, C. W., writes us that a neighbor of his had a piece of land completely covered with thistles. He plowed up a portion of it in the fall, and a portion in the spring, and sowed both with oats. "That plowed in the spring was all thistles, while on the part plowed in the fall there was scarcely a thistle to be seen." It is supposed that the thistles were killed by the severe cold.

TO SECURE MALE OR FEMALE PROGENY AT WILL.—I have seen several articles on this subject lately in the agricultural papers. It is stated that a heifer calf is invariably produced when the cow is put to bull before milking, and a male calf if put to bull immediately after she has been thoroughly milked. What do you think of it?

A CONSTANT READER.

[We think it is all nonsense.—Eds.]

PINK-FLESHED APPLE.—H. F. DELANY, of Valley Forge, Pulaski Co., Ill., writes that he has an apple tree in his orchard which produces fruit of "a pale yellow on the outside, but when cut open is of a beautiful bright pink, and some quite red. It is an early autumn apple, very good for eating, but does not cook well. It is quite a curiosity in this part of the world."

CHESTER WHITE PIGS.—In our allusion to the beautiful "Chester White" pigs exhibited by Mr. THOMAS WOOD, at the Fair of the United States Agricultural Society last fall, we made a mistake in the post-office address of Mr. WOOD, which is Penningtonville, or Steelville, Chester Co., Pa., instead of Remington.

LICE ON CALVES.—A correspondent writes that he finds nothing so good for killing lice on calves as a strong decoction of tobacco—say about half a pound to each calf. Wash the calves all over with it once, and again, if need be, after two weeks.

DRYING FRUIT.—Our method of drying fruit is to take four sticks, three and a half feet long, halved together at the ends and pinned; then take black ash splints and weave on basket fashion, leaving half an inch between each splint; this we lay on poles over the kitchen stove, or attach strings to the corners and bring them together at the middle, and attach to a pulley over head; this we can raise or lower at our pleasure. We dry our apples in January. We consider the *Baldwin*, *Greening*, and others, if dried in January, much better for sauce than if dried in October, and there are no flyspecks on them then, and a warm fire soon dries them. On these mats you can dry peaches, plums and pears, when too ripe to be dried on the string, and it saves considerable labor. Our mats have been in use over fifteen years, and are good yet.

Wesleyville, Erie Co., Pa.

R. S.

CURE FOR THE HOG CHOLERA.—A correspondent residing in Ohio, writes that he has discovered a remedy for the malady among hogs which has proved so fatal in that and other States. His remedy is two quarts of flax seed boiled in ten gallons of water till the seed is thoroughly cooked; let it stand till cold, then give it to the hogs as fast as they can drink it—turn it down if they refuse to drink. Repeat the dose for a week or so, and it will effect a cure. Pulverized charcoal and sulphur mixed in milk, I know to have cured the hogs of this fatal disease last fall in this neighborhood.

E. S.

Pittsford, N. Y.

LAYING OUT LANDS FOR WHEAT.—An esteemed Canadian correspondent says that "lands for wheat should run north and south, for if they run east and west the wheat will be the best on the south side of the land—especially if ridged up high—and thinner and of a poorer sample on the north side." Have others observed this effect?

GUANO IN ENGLAND.—Since the introduction of guano, in 1841, there has been imported into Great Britain 2,120,445 tons. The largest quantity in any one year was 305,061 tons, in 1855. Last year the imports were 200,000 tons. The price has recently been raised in England £2 per ton.

RACK FOR TOMATO VINES OR SMALL SHRUBBERY.—Take four staves and one hoop of an old barrel, turn the staves inside out, and nail them inside of the hoop with shingle nails. It makes a first rate frame. Sharpen the lower end of the staves, so that they can be driven into the ground a little. A. H.—*Leona, Ohio.*

THE WHEAT MIDGE DESTROYED BY A RAIN STORM.—A correspondent of the *Maine Farmer* states that the wheat midge was nearly exterminated in Maine last year by a heavy rain storm, which occurred just at the time the insect was depositing its eggs in the newly-formed grain.

WHEAT IN MICHIGAN.—A correspondent in Delhi, Ingham Co., Mich., informs us that the wheat looks exceedingly well in that section, and there is a good prospect of a large crop. The wheat midge has not, as yet, made its appearance in central Michigan.

JONATHAN HAWORTH sends us a dollar for the *Genesee Farmer*, but does not give his post-office address.

READ THE ADVERTISEMENTS.—Those who are about to purchase fruit or ornamental trees and shrubs this spring, should read over the advertisement of A. FROST & Co. of this city, W. R. PRINCE & Co. of Flushing, L. I., W. T. & E. SMITH, of Geneva, N. Y., and H. A. MISH, of Harrisburg, Pa. Orders may be sent to any of the above firms with confidence. Those in want of agricultural implements, threshing machines, horse powers, &c., will read the advertisement of WHEELER, MELICK & Co., of Albany, N. Y. This firm is one of the oldest and most respectable in the country, and their machines are all that they claim for them. Good seeds of all kinds can be obtained from J. M. THORBURN & Co., New York. This firm is too well known to need any commendation from us.

In this connection we would say that it is our object to make our advertising columns interesting to our readers, and as our space is very limited, we should be glad if our friends would make their advertisements as short as possible. We believe the circulation of the *Genesee Farmer* is larger than that of any other purely agricultural or horticultural paper in the world, and though our terms for advertising may be considered high, they are low in proportion to our circulation—far less than many of our contemporaries, and the pressure upon our advertising columns proves that this is well understood.

EWES AND LAMBS.—As lambing time is getting near, a few hints may not come amiss. In the first place, provide the ewes with a comfortable building, and when the ewes commence lambing be sure to give plenty of time before interfering; if straining very much, she must have some help, but first ascertain if the lamb is all right. As soon as the lamb is drawn, lay it before its mother so that she may lick it; then examine the ewe if she has milk in both teats. Next take the lamb and let it get its belly full of milk, and there will not be much fear but that it will stand more cold than any one might imagine. I had ewes come in to lamb last year in the middle of February, which never took any harm. This year they came in the same time, but being such beautiful weather it gave them a good chance. Give plenty of roots, and a few peas and oats mixed, and a little hay. Ewes should have a plentiful supply of water or their milk will soon fall off. Be sure and feed the ewes well;—the better fed the more profit in both wool and mutton. J. K.—*Guelph, C. W.*

PRIZE ESSAYS.—We have received a vast number of communications on nearly all the subjects included in our prize list. The Prize Essays will be published next month, and our readers may expect a rich treat.

BREAKING COLTS.—One of our readers is desirous of hearing from our experienced correspondents in regard to the best method of breaking colts.

CORRECTION.—In the article on page 95 of last number, read "sow a little white mustard," instead of *winter mustard.*

ERRORS IN MAILING.—If any of our subscribers fail to get their papers, we hope they will immediately make it known.

DURHAM CATTLE FOR CALIFORNIA.—Messrs. B. & C. S. HAINES, of Elizabeth, N. J., have just made a shipment of Short-horns to GEORGE H. HOWARD, of San Francisco, the first of this breed of cattle sent to that State. The lot embraces one bull, two years old, and one about six months old; and two heifers, a year and a half old. We shall look with much anxiety for the success of this first undertaking to introduce improved cattle into that great State, so well adapted to the business of stock raising.

A GOOD COW.—I began feeding a small-boned grade Durham cow, five years old, the fifteenth of October last, with half a bushel of oat and corn meal per day, and fed until the second of March, when she was butchered. Her live weight was 1,450 lbs.; dressed weight, 1,075 lbs., as follows: the four quarters weighed 838 lbs, tallow (rough) 165 lbs., kidneys 80 lbs., hide 72 lbs. This cow raised a calf last season, and gave milk until three weeks before being killed. S. N. FRAKKLIN.

Ledyard, March, 1857.

A PRAIRIE FARMER'S OPINION OF THE GENESSEE FARMER.—Before closing this communication, permit me to say that I have been a constant reader of the *Genesee Farmer* for seven years. Perhaps it would be extravagant to say that it is worth its weight in gold; but I will say that its value cannot be estimated by dollars and cents. I have received more information from this journal, than from experience, observation, and all other sources combined. W. H. BENTLEY.

Brimfield, Ill.

Inquiries and Answers.

(O. L. BAER, Milford, Ind.) **ORCHARD GRASS.**—You can obtain Orchard grass seed from E. D. HALLOCK, of this city, for three dollars per bushel. The botanical name is *Dactylis glomerata*. There are a great variety of opinions in regard to its value, and we should be glad to hear from our correspondents on the subject. It is called Cocks-foot grass in England. SINCLAIR, who conducted the celebrated Woburn experiments on grasses, says that "if one species only is thought preferable to another in the alternate husbandry, that species is the *Dactylis glomerata*, from its more numerous merits." This is higher praise than the experience of farmers generally will sustain. LONDON says of orchard grass: "It has been found highly useful as an early sheep feed. It is early, hardy, and productive, but is a coarser plant than rye grass, and requires even greater attention in regard to being cut soon or fed close." American as well as English writers agree that it must be eaten close, or mown when quite green, or it becomes coarse, hard, and unpalatable. A writer in the *Ohio Cultivator* tried it, and says: "It grew tolerably well, and certainly is the best grass I ever had to keep, for nothing will eat it." This is owing, probably, to neglect of close cropping. At all events, we have seen this grass on good farms in Ohio, yielding three tons of hay per acre, and those who raised it spoke of it in the highest terms. It is well adapted for sowing with red clover, as it matures about the same time.

It flourishes best on deep, rich, moist soils, (not wet,) and does not object to a little shade. It is on this account, probably, that it is termed "orchard grass." Many appear to suppose that it is less injurious to orchards than any other grass, but of this there is, to say the least, no proof.

(J. C. A.) **"HARD WATER"** contains sulphate and carbonate of lime; seldom any free acid. When potash or soda is added to water containing sulphate of lime (plaster), the sulphuric acid leaves the lime and unites with the potash or soda, and the lime falls to the bottom, and the water is rendered "soft." If soap is used, the same change takes place, except that the lime unites with the oil of the soap and rises to the surface. Water which is "hard" from containing carbonate of lime, may be reduced soft by adding a little quick lime to it, and allowing it to settle before it is used.

(S. S. SARGENT, Girard, Penn.) Dwarf apple trees will bear in three years from the bud. You can purchase trees from the nursery this spring and obtain a little fruit next fall, though it is not advisable to let them bear so soon. The same variety is said to be larger and finer on dwarf than on standard trees. You can obtain almost any varieties you wish.

(B. F. B.) The cut of the "properly trained hedge" in the *Rural Annual*, is not "a fancy sketch." It is a correct representation of a beautiful osage orange hedge growing in front of the grounds of Messrs H. E. HOOKER & Co., of this city.

(CHARLES ROCKWELL, Hadley, N. Y.) **ITALIAN BUCKWHEAT.**—The "Italian buckwheat" proved to be nothing more nor less than Italian millet.

(J. W.) The fluke and buisicuit potato is the same. J. S. CLARKE, of Greece, Monroe Co., N. Y., has them for sale, we believe at \$1.50 per bushel.

(J. W. A. K.) We cannot insert your advertisement at any price, believing your receipts to be a lunbug.

(T. S. T.) See advertisements of the Chinese Sugar Cane Seed in this number of the *Farmer*.

(B. F. BARTLET.) **VINES IN THE COLD GRAPERY,** that were not disshudded in the fall, had better now be allowed to remain until they have started into growth and have made shoots four or six inches long, or leaves two or three inches in diameter. Then those buds that should have been cut out in the fall may be broken out now without danger of causing the vine to bleed, as the rapidly expanding foliage will take the super-abundant sap. But where there are two shoots starting from the same bud, as it were, or double bud, then the shoot to be taken away had better be cut away to half an inch of its base, as the breaking of the one is liable to break the other. JOSIAH SALTER.

SOWING LOCUST SEED.—In answer to J. L. MILLER'S inquiry I would state from twenty years' experience what I conceive the best method. Put the locust seed in a shallow wooden vessel and pour on boiling water from a tea-kettle till covered, at the same time stir briskly with a wooden spatula until the water cools;—repeat the second and third time. Plant in the spring, and the seed will all vegetate as readily as corn. The like treatment destroys the osage orange. L. A. MEEKER.

FOOT CORN PLANTER.—I want some information about the "Foot Corn Planter." Is it what it is represented to be, and will it do the business as it ought to be done? Where can it be obtained, and at what price? By answering the above, you will confer a favor on your Canadian subscribers. L. LEWIS.—*Sparta, C. W.*

Will some of our readers—who are not interested—answer the above?

HEDGES.—I want to plant out some hedges to a considerable extent, and not thinking the Osage Orange to be hardy enough for our locality, would like the opinion of your correspondents in regard to the Buck or Hawthorn—where to obtain it, and how to plant the seed; also in regard to the Norway Spruce as a shelter for orchards, and if the thorn would not do well planted between them for a fence, thereby obtaining two objects. P. E. WILLIAMS.—Palermo, C. W.

ADVERTISEMENTS,

To secure insertion in the FARMER, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. TERMS—Two Dollars for every hundred words, each insertion, PAID IN ADVANCE.

NEW YORK STATE AGRICULTURAL SOCIETY.

PREMIUMS ON FARMS—1857.

Grain Farms,.....Premium \$50 and \$50
Dairy and Grazing,....." 50 " 30

Competitors are desired to give notice to the Secretary before the first of July, so that the farms can be visited by a Committee appointed for that purpose.

FIELD CROPS.—Competitors should obtain the Regulations of the Society, so as to have their statements properly prepared. H. Greeley's Premium on one acre of Carrots is continued. Regulations will be furnished on application to the Secretary, and also a list of Premiums for 1857. B. P. JOHNSON, Secretary.

AGRICULTURAL ROOMS, Albany, March 2, 1857. April 1.—31.

C. M. SAXTON & CO., AGRICULTURAL BOOK PUBLISHERS,

140 Fulton Street, New York,

HAVE just added to the number of books published exclusively by them the following valuable works:

Waring's Elements of Agriculture,.....	75
Dadd's Anatomy and Physiology of the Horse, plain plates,.....	\$2.00
do do do colored do.,.....	4.00
Dadd's Modern Horse Doctor,.....	1.00
Cole's American Veterinarian,.....	50
Cole's American Fruit Book,.....	50
Schenck's Gardener's Text Book,.....	50
Leuchars on Hot Houses,.....	1.25
Breck's Book of Flowers,.....	1.00
Bridgeman's Young Gardener's Assistant,.....	1.50
Bridgeman's Kitchen Gardener's Instructor,.....	50
Bridgeman's Fruit Cultivator's Manual,.....	50
Bridgeman's Florist's Guide,.....	50
Stansbury's Chinese Sugar Cane and Sugar Making,.....	25
Hyde's Chinese Sugar Cane,.....	25
The Cotton Planter's Manual,.....	1.00

Sent free of postage on receipt of price. April 1.—1t.

BOOKS FOR THE SEASON.

FRUITS AND FLOWERS.

Sent free of postage on receipt of price.

Chorlton's Complete Grape Grower's Guide: For the Vineyard, Cold Grapery and Forcing House,.....	60
Allen on the Grape: A well known and reliable work,.....	\$1.00
Reemelin's "Vine-dresser's Manual,".....	50
For out-door Culture and Wine-making,.....	50
Perron's New Process for the Culture of the Vine. Paper,.....	25
Elliott's American Fruit Grower's Guide: The latest work on Fruits,.....	1.25
Cole's American Fruit Book,.....	50
Eastwood's Cranberry Culture,.....	50
Farlee on the Strawberry,.....	60
Bulst's Kitchen Garden,.....	75
Bulst's Flower Garden Directory,.....	1.25
Breck's Book of Flowers,.....	1.00
Bridgeman's Young Gardener's Assistant,.....	1.50

Catalogues of all our Books sent free to an address.

C. M. SAXTON & CO.,

Agricultural Book Publishers,

140 Fulton street, New York.

April 1.—1t.

"CHINESE SUGAR CANE AND SUGAR MAKING."

NOW READY, AND SENT FREE OF POSTAGE FOR 25 CENTS, and for 8 cents additional, enough seed to plant two square rods.

C. M. SAXTON & CO.,

Agricultural Book Publishers,

140 Fulton street, New York.

April 1.—1t.

New Northern Chinese Sugar Cane Seed.

(SORGHUM SACCHARATUM.)

JUST RECEIVED,

A LARGE QUANTITY,

PURE AND GENUINE,

From the original source, and for sale at \$1 per pound, and in packets, prepaid by mail, at 25 and 50 cents each.

Two pounds are required to seed an acre.

J. M. THORBURN & CO.,

16 John St., New York.

VEGETABLE, FLOWER, FIELD, FRUIT, AND TREE SEEDS,

Of the most approved sorts and best qualities, at Wholesale and Retail.

FRUIT AND ORNAMENTAL TREES

INCLUDING

EVERGREENS, the finest collection in the Union; 1,700 lbs. *Chinese Sugar Cane*, and also parcels of 8,000 Seeds, postpaid, for \$1.25; *Chinese Imperial Rice White Potato*, the most valuable of all esculents, and the only ones for sale of American growth, at \$3 per dozen, \$5 per twenty, \$20 per hundred; Imported Tubers, uncertain varieties, \$1 per dozen; Osier Willows, eight finest kinds, \$2 to \$5 per thousand; Lawton Blackberry, \$18 per hundred, \$3 per dozen; Grapes, Gooseberries, Raspberries, Currants and Strawberries, at lowest rates; Linnaeus and Victoria Rhubarb, \$9 per hundred; Arbor Vite, small, for hedges, and up to eight feet high; all the species of Evergreens, of small sizes for Nurseries; all the new varieties of Native Grapes; Tree and Shrub Seeds; Vegetable, Flower, and Evergreen Tree Seeds; Earth Almonds; Yellow and Honey Locust, and Osage Orange Seeds.

Priced Catalogues of every department sent to applicants who enclose stamps.

W. R. PRINCE & CO.

Flushing, N. Y., April, 1857.—1t.

TO NURSERYMEN AND OTHERS.

FOR SALE AT

GENESEE VALLEY NURSERIES, ROCHESTER, N. Y.

WE offer to the trade the following Nursery articles at extremely low prices, affording rare inducements to Nurserymen and Dealers:

10,000 Fontenay Quince stools—the best stock for dwarfing Pears—three years old, strong plants. These plants yielded 50,000 well-rooted layers this past summer. This is the only sure method of propagating Quince stocks. Price, \$25 per thousand.

20,000 Plum Stocks, extra fine. Price, \$18 per thousand.

10,000 Pear Stocks, two years. Price, \$15 per thousand.

25,000 Western, or Wild Plum Stocks. Price \$12.50 per thousand.

25,000 Quince Stocks—Angers and Fontenay—first choice. Price, \$20 per thousand.

25,000 Peach Trees, one year old, very fine and choice budded varieties. These trees are perfectly free from Yellows and other diseases. Price, \$70 per thousand.

5,000 Apricots, one year old, extra. Price, \$10 per hundred.

10,000 Cherries, second size, two years old, three to five feet high, part with heads, best varieties. Price, \$3 per hundred.

10,000 Pears, dwarf, second size, one and two years old, 2½ to 3 feet, best sorts. Price, \$14 per hundred.

8,000 Pears, standards, second size, two years old, 3 to 4 feet, very best varieties. Price, \$160 per thousand.

10,000 Horse Chestnuts, one year. Price, \$10 per thousand.

25,000 Arborvite, 2½ to 3 feet, for hedges, very fine plants, and very cheap. Price, \$60 per thousand.

60,000 Norway Spruce, two years old, suitable for transplanting, four to six inches. Price, \$18 per thousand.

500 Deutzia gracilis. Price, \$12 per hundred.

1,000 Wigelia rosea. Price, \$18 per hundred.

1,000 Bignonia radicans. Price, \$3 per hundred.

3,000 Dahlias, splendid collection, dry roots for propagating.—Price, \$10 to \$25 per hundred.

2,000 English Yews, 6 inches. Price, \$8 per hundred.

1,000 Siberian Arborvite, 6 inches. Price, \$8 per hundred.

600 Cryptomeria Japonica, 12 to 18 inches. Price, \$25 per hundred.

500 Eucalyptus Japonica, variegated, 12 to 18 inches. Price, \$3 per hundred.

For more full and complete information, the proprietors refer to the following Catalogues now ready, gratis, to those who enclose a one cent stamp for each:

No. 1. Descriptive Catalogue, Fruits.

No. 2. Descriptive Catalogue, Ornamental Trees, Shrubs, Roses, &c.

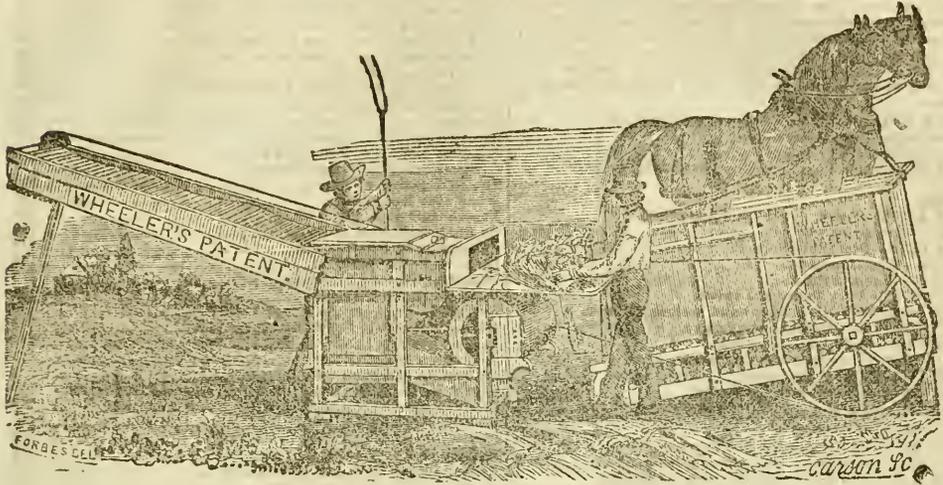
No. 3. Descriptive Catalogue, Dahlias, Verbenas, Green-house Plants, &c.

No. 4. Wholesale Catalogue or Trade List.

A. FROST & CO.,

March 1.—2t. Genesee Valley Nurseries, Rochester, N. Y.

**NEW YORK STATE AGRICULTURAL WORKS,
BY WHEELER, MELICK & CO.**



DOUBLE POWER, AND COMBINED THRESHER AND WINNOWER, IN OPERATION.

WE are Manufacturers of Endless Chain Railway Horse Powers, and Farmers' and Planters' Machinery for Horse Power use, and are owners of the Patents on, and principal makers of, the following valuable Machines:

WHEELER'S PATENT SINGLE HORSE POWER, AND OVERSHOT THRESHER with VIBRATING SEPARATOR.

This is a One Horse Machine, adapted to the wants of medium and small grain growers. It separates grain and chaff from the straw, and threshes about 100 bushels of wheat or twice as many oats per day, without changing horses; by a change nearly double the quantity may be threshed. **Price, \$125.**

WHEELER'S PATENT DOUBLE HORSE POWER, AND OVERSHOT THRESHER with VIBRATING SEPARATOR.

This Machine is like the preceding, but larger, and for two horses. It does double the work of the Single Machines, and is adapted to the wants of large and medium grain growers, and persons who make a business of threshing. **Price, \$160.**

WHEELER'S PATENT DOUBLE HORSE POWER, AND COMBINED THRESHER AND WINNOWER.
(SHOWN IN THE CUT.)

This is also a Two Horse Machine. It threshes, separates the grain from the straw, and winnows it at one operation, at the aver-

TO FARMERS AND GARDENERS,

THE Subscribers offer for sale 40,000 barrels of their New and Improved **POURETTE**, manufactured from the night-soil of New-York city, in lots to suit purchasers. This article (greatly improved within the last two years) has been in the market for eighteen years, and still defies competition as a manure for Corn and Garden Vegetables, being *Cheaper, more powerful than any other*, and at the same time *free from disagreeable odor*. Two barrels (\$3 worth) will manure an acre of corn in the hill, will save two-thirds in labor, will cause it to come up quicker, to grow faster, ripen earlier, and will bring a larger crop on poor ground than any other fertilizer, and is also a preventive of the cut worm; also, it does not injure the seed to be put in contact with it.

The L. M. Co. point to their long-standing reputation, and the large capital (\$100,000) invested in their business, as a guarantee that the article they make shall always be of such quality as to command a ready sale.

Price, delivered in the city free of charge and other expense—

One barrel,	\$2.00
Two "	3.50
Five "	8.00
Six "	9.50

And at the rate of \$1.50 per bbl. for any quantity over 6 bbls.

A Pamphlet, containing every information, will be sent (FREE) to any one applying for the same. Our address is—

THE LODI MANUFACTURING CO.,
Office, 63 Cortlandt St., New York.

Feb 1—4t

age rate of 150 bushels of wheat and 200 bushels of oats per day. In out door work, and for persons who make a business of threshing, it is an unequalled Machine. **Price, \$245.**

ALSO,

Clover Hullers, Feed Cutters and Sawing Machines.

Our Horse Powers are adapted in all respects to driving every kind of Agricultural and other Machines that admit of being driven by Horse Power, and our Threshers may be driven by any of the ordinary kinds of Horse Powers in use. Either are sold separately.

To persons wishing more information, and applying by mail, we will forward a circular containing such details as purchasers mostly want—and can refer to gentlemen having our Machines in every State and Territory.

Our firm have been engaged in manufacturing this class of Agricultural Machinery 22 years, and have had longer, larger and more extended and successful experience than any other House.

All our Machines are warranted to give entire satisfaction, or may be returned at the expiration of a reasonable time for trial.

Orders from any part of the United States and Territories, or Canada, accompanied with satisfactory references, will be filled with promptness and fidelity. And Machines securely packed, will be forwarded according to instructions, or by cheapest and best routes.

WHEELER, MELICK & CO.,

April 1.—4t.

Albany, N. Y.

FRUIT, ORNAMENTAL TREES AND SEEDLINGS.

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Contents of this Number.

Cultivation of Barley.....	105
Cultivation of Oats.....	107
Cultivation of Spring Wheat.....	107
Cultivation of Carrots.....	107
An Interesting Letter from Professor Lee.....	108
Items Suggested by the March Number.....	109
Notes for the Month, by S. W.....	109
Ten Rules to be observed in Making Butter.....	110
Cultivation of Carrots.....	111
Plowing.....	111
Sow Lettuce with Cabbage.....	111
The Best Method of Fencing a Farm.....	112
Cultivation of the Mangel Wurzel.....	113
The Management of Sheep.....	113
When does Wool grow?.....	114
Experiments on Indian Corn.....	114
On the Management of Swine.....	114
Cultivation of Potatoes.....	114
Large vs. Small Beans.....	115
Objects of Plowing.....	115
Farm Houses in Michigan.....	115
Average Injury from the Wheat Midge.....	118
Sowing Parsneps in the Fall.....	118
Buying Western Lands.....	116
Cultivation of Artichokes.....	117
Cultivation of Indian Corn.....	117
Devon and Durham Cattle.....	117
Beans as a Field Crop.....	117
To Kill Bugs in Seed Peas.....	117
Cultivation of Indian Corn in Kentucky.....	118
Fall Plowing for Spring Wheat.....	118
Raising Clover Seed in Massachusetts.....	118
Fating off Wheat in the Spring.....	118
Hoven in Cattle.....	118
Summer Management of Sheep.....	119
Cultivation of Indian Corn in Maine.....	119
Stables for Horses.....	119
Poll Evil.....	119
Best Means of Destroying Weeds.....	119
Agricultural Papers.....	119
Flying Morgan.....	120
Sheep should not be Kept too Long in a Small Field.....	120
To Prevent Smut in Wheat.....	120
Sowing and Reaping, (Poetry).....	120
Design for a Farm House.....	121

HORTICULTURAL DEPARTMENT.

Cultivation of Dwarf Peas.....	122
Garden Seeds should be Sown in Drills.....	123
Transplanting Garden Vegetables.....	123
Horticultural Operations for April.....	124
Flowers for Spring Sowing.....	125
Birds—their Usefulness, &c.....	125
Fruit Growing in Oregon.....	127
Making an Osage Orange Hedge.....	127
"My New Garden,".....	128

LADIES' DEPARTMENT.

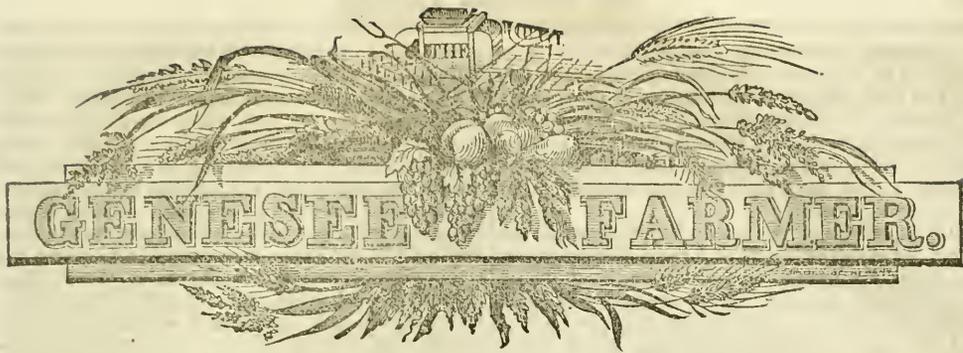
Original Domestic Receipts.....	129
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EDITOR'S TABLE.

Muriatic Acid in Manure Heaps; Phosphate of Lime in Guano; Great Cheese Factory; Bees; Price of Labor in England and America; Liquid Manures; The April Premiums.....	130
Feeding Cows; Short-horn Bull "Master Butterfly;" "Feeding Cows for Butter—New Views;" Young Farmers should take the Genesee Farmer; To Destroy Weeds; Lime as a Manure; Cultivation of Potatoes in Washington Territory; Fall Plowing to Kill Canada Thistles; To Secure Male or Female Progeny at Will; Pink-fleshed Apple; Chester White Pigs; Lice on Calves.....	131
Drying Fruit; Cure for the Hog Cholera; Laying out Lands for Wheat; Guano in England; Rack for Tomato Vines or Small Shrubbery; The Wheat Midge Destroyed by a Rain Storm; Wheat in Michigan; Read the Advertisements; Ewes and Lambs; Prize Essays; Breaking Colts; Correction; Errors in Mailing.....	132
Durham Cattle for California; A Good Cow; A Prairie Farmer's Opinion of the Genesee Farmer; Inquiries and Answers.....	133

ILLUSTRATIONS.

Seven Figures, representing different varieties of Barley.....	105, 106
Flying Morgan.....	120
Farm House, with Diagrams for First and Second Floors.....	121
Drill-Rake.....	123
Transplanting Fork.....	123
Transplanter.....	123



ROTATION OF CROPS.

THAT there is no absolute necessity for rotation of crops in all cases, is abundantly proved. Indian corn has been grown on many of the rich bottoms of the West, year after year, for half a century. Onions are grown every year on the same land, with manifest advantage. On the Rothamstead experimental fields, wheat has been grown on the same land for fourteen successive years, and in 1855 the yield on one of the plots was fifty-five bushels per acre. Turnips have been grown annually on the same land for fourteen years. Beans, peas, tares and potatoes are also grown on the same land each year, without any ill effects being observed.

The *advantage* of rotation cannot be doubted, and many theories have been propounded to account for it. DECANDOLLE thought that plants excreted matter from their roots, which was injurious to plants of the same species and beneficial to some others of a different species. This may be true in regard to some plants, but the facts we have alluded to above prove that it is not true of all; and we may safely conclude that nearly all our commonly cultivated agricultural plants do not excrete matter at all injurious to the same plants when sown the following year on the same soil. However great the advantages therefore, there is no *necessity* for rotation of crops.

All agricultural plants require the same food, with this difference: that one needs *more* of this or that particular element than another. For instance, turnips require more phosphoric acid than wheat, wheat more ammonia than turnips, beans and clover more potash than either of the former, &c. It is easy to see that these crops can be alternated with each other to advantage; that the soil which does not contain sufficient phosphoric acid for a good crop of turnips may contain enough for a large crop of wheat, and that the soil which lacks sufficient ammonia for the production of a maximum crop of wheat may yet have enough for a maximum crop of turnips.

Barn-yard manure contains *all* the elements of plants. We may, therefore, by its use in sufficient quantity, grow the same crop, on a soil having the requisite mechanical conditions, every year. But it is evident that this would entail a loss of some of the elements of manure. For instance, if we add sufficient barn-yard manure to a soil to furnish the requisite quantity of ammonia for the growth of a large crop of wheat every year, we provide in this manner much more carbon and more phosphoric

acid than the wheat requires. If, on the other hand, we add enough barn-yard manure to a soil to furnish the required amount of phosphoric acid for the growth of a large crop of turnips every year, we add more ammonia than is necessary. But if, instead of growing wheat after wheat, we grow turnips, or some other similar crop, the excess of carbon and phosphoric acid provided in the barn-yard manure for the wheat crop is taken up by the turnip plants, which, as we have said, require more of these substances than wheat. On the other hand, if we grow wheat after turnips, instead of turnips after turnips, the excess of ammonia which it was necessary to add to the soil in the barn-yard manure in order to supply sufficient phosphoric acid for the turnip crop, will be just the very thing required for the wheat.

The same remarks hold good where little or no barn-yard manure is used. The soil contains *all* the elements of plants—if it did not, no agricultural plant would grow—but this food is held in an insoluble condition, and we have to till the land and expose it to the influence of the atmosphere in order to render this insoluble matter available for plants. Now if, by summer fallowing, we render enough of this plant-food soluble to furnish the wheat plant sufficient ammonia for the growth of a good crop, it is quite probable that we render more phosphoric acid soluble than the wheat requires. And hence, if we were to follow up the system of summer fallowing for wheat, without taking any intermediate crop, we should lose more or less of this valuable fertilizer. But if we should grow an intermediate crop of clover or turnips, this phosphoric acid would not only be saved, but prove very beneficial to either of these crops—especially the latter.

There are scarcely any two plants that require the elements of their food in precisely the same proportion; and hence, by substituting some other of the fourteen elements of which all plants are composed for the ones we have instanced, the above remarks will hold true for nearly every crop we cultivate. It is easy to see, therefore, that, at present, a judicious system of rotation lies at the very foundation of all good practical agriculture, though, when we have learned from carefully conducted scientific field experiments what are the exact requirements of our different crops, we may be able to dispense with it by supplying the particular manure which the plant requires. This, according to LIEBIG, is the "single problem worthy of scientific agriculture at the present time;" and he justly remarks: "How simple a form would the labors of the farmer assume, could

he continually cultivate the same plant on the same field." The efforts of this great chemist to attain this end have hitherto failed, because he propounded his scheme on the assumption that the manurial requirements of plants were correctly indicated by their chemical composition. This idea has been proved erroneous, and we have to obtain this knowledge by inductive experiment.

Our knowledge of this matter has been greatly enlarged by the experiments of LAWES, BOUSSINGAULT, and other agricultural chemists who have united "practice with science," but we are still very much in the dark; and these able writers themselves tell us that, at present, practical experience is our safest guide. In fact, their experiments, up to this time, have done little more than to explain the *rationale* of systems of rotation which experienced farmers had already adopted.

Where artificial manures are not used, we may safely assume that it is poor economy to sow one grain crop after another. Science and practice alike teach that all the cereals should be alternated with root crops, or with clover or other leguminous plants. Of course, the precise method of the rotation will vary with the nature of the soil and climate, and with the price of the various farm products.

We are aware that good wheat is frequently obtained after Indian corn and after barley, and that this fact militates against the law we have laid down. We are also aware that there are several practical difficulties to be encountered if we adopt the rule of never sowing two grain crops in succession. Still, it is a violation of sound theory, and farmers should endeavor to meet and overcome these difficulties, as far as possible. An esteemed Canadian correspondent gives us the following rotation, as well adapted to a light, loamy soil: 1, hoed crops, either roots or Indian corn, well manured; 2, spring grain, either barley, spring wheat or oats, and seeded down—(the latter are not as good for seeding down with as the former); 3, meadow; 4, pasture; 5, pasture with sheep; 6, wheat after one plowing. We should prefer to seed the barley or spring wheat with clover, and let it lie only two years, following with wheat also seeded down with clover. For a heavier soil, our correspondent recommends: 1, fallow, or peas; 2, wheat; 3, hoed crops, either roots or corn; 4, spring grain, seeded down; 5, meadow; 6, pasture. We should, in most cases, prefer to seed the wheat with clover, and let it lie one or two years, instead of following it with corn.

Mr. H. H. TAYLOR, of East Rodman, Jefferson Co., N. Y., gives us the following rotation, which he says is decidedly the best system for that section of country, and which may safely be followed wherever clover and timothy thrive well. We give it in his own words: "First year turn over the sod in the fall or spring, (we prefer fall plowing,) and plant with corn, potatoes and beans, or sow with peas. Plow in the fall after the crop is taken off. The second year sow with spring wheat or barley. Plow again as soon as the crop is secured. In the spring, give it a coat of barn-yard manure, well plowed in. If the previous crop was wheat, sow barley: if barley, sow oats or spring rye, and seed down with timothy and clover. Mow or pasture from three to seven years. Sow a bushel of plaster per acre, at least every other spring. When the grass begins to run out, turn over the turf

again, and go through with the same system of rotation, and, with thorough cultivation, the land will pay well, and increase in productiveness. Soils, like animals, require rest, which they obtain while in grass—especially if in pasture. A few years since we came into possession of a piece of land which was considered entirely run out by bad cultivation and successive cropping. The year previous the oat crop was not considered worth harvesting, and the cattle were turned in to secure the crop. We plowed the land two or three inches deeper than it had ever been before, sowed it with oats early in the spring, and seeded down with timothy and clover, and harvested twenty bushels of oats per acre. We then let it lie in pasture five years, the most of the time fed by sheep, when it was turned over in the fall, and the next spring planted with corn and potatoes, yielding sixty bushels per acre of the former, and two hundred of the latter. We plowed again in the fall, and the next spring sowed with wheat and seeded down again. Not having any manure to put on, the yield was twenty-five bushels per acre. The next spring we sowed one bushel of plaster per acre, and cut a ton and a half of hay. The land is now in good condition for meadow, or any kind of grain."

ITEMS SUGGESTED BY THE APRIL NUMBER.

THE month was ushered in by a snow storm, but none the less prompt was the *Genesee Farmer*. Nearly a hundred practical articles are contained in this number. Let me remark, as usual, on a few of them.

CULTIVATION OF BARLEY.—Among the first crops to be sown comes this, now popular, grain. It should be sown if possible in April, but not before the soil is fit for working. Barley has been sown in this vicinity in March the present year, but in miserable order, on fall-plowed land, without previous harrowing. The culture you recommended agrees with the practice of our best farmers, and has been generally successful. Last season we seeded our barley sowing to clover, but with very poor success. I think grass seed does much better with wheat and rye than with any spring grain. In any case, a dressing of plaster should be given to insure a better growth.

CULTIVATION OF OATS.—On sod ground we seldom have very good crops of oats. Last year, we thought by plowing early, and harrowing and gang-plowing before sowing, to get a good crop, but it was a very poor one. On mucky soils we have had very good success, when the season suited, but the oats are generally of light weight. I have tried the White Poland oats for several years, but got only small crops—generally of first rate grain, however.

TEN RULES FOR MAKING BUTTER.—These rules agree with our practice very well, except in regard to skimming milk and working butter. We had rather the milk would be *loppered*—take off a little of the sour milk, it will do no harm. *Wash* the churn as much as you please, but keep the water out of the butter. Working it as much as is here recommended will get out all the butter-milk—at least we keep butter for months thus made.

CULTIVATION OF CARROTS.—I tried to raise twenty bushels of carrots last year, and got about four, at a cost of some seventy-five cents a bushel. Shall try it again on a different plan, and think E. S. H. gives

some valuable suggestions on the subject. Will he tell us how to keep them through such winters as we have lately?

WHEN DOES WOOL GROW?—This question receives a very plausible answer from J. D. C., and if generally believed would tend to a better care of these animals. Don't let sheep get poor in the fall or early winter, if you would have them keep easily, and prove profitable either in wool or lambs.

LARGE VS. SMALL BEANS—The question of beans with me is, "Will they ripen early and evenly?" and then *size* is to be considered. But is it profitable to grow beans and corn together? Both crops cannot be good ones—as good as they would be grown separately.

BUYING WESTERN LANDS.—Talk as you will, friend SANFIELD, capital will look out for the most profitable investments. If money can be made in buying Western lands, there is no infraction of the law of honesty in thus investing it, *as a speculation*. Too great greediness, however, defeats its own ends.

CULTIVATION OF INDIAN CORN.—From repeated trials, I am satisfied that good corn can be raised in the way described by S. S. B. I would plant earlier, if the season allowed, and top dress with ashes after the first hoeing, *without fail*. It "gives corn a good start," which is very important.

EWES AND LAMBS.—One snowy morning in February, I found an ewe with twin lambs in my flock at the barn. It was altogether unexpected, but the little fellows seemed smart, and determined to make the best of it. So I partitioned off a roomy shed for them and their mother, and have fed the sheep once a day with one pint of oat meal, (containing one-third corn), scalded and salted, watering once a day besides, and supplying all the hay she would eat. The ewe and lambs are doing well—the latter growing finely, and they will be worth almost a year's growth more than May lambs, next season. I never knew that sheep required half the attentions which J. K. recommends, and still have some doubts about it.

DWARF APPLE TREES.—I had one of these, but it did not bear under six years from the bud, and then died a year afterward, though cared for to the best of my knowledge and ability. But it was a very beautiful object when full of ripe apples. The crop was not a very large one, nor would it prove profitable to depend on such trees for fruit, in my opinion.

Niagara Co., N. Y. B.

NOTES FOR THE MONTH, BY S. W.

BIRDS—THEIR USEFULNESS, &C—BEMENT's article on this subject, in the last *Farmer*, should be read, learned, marked, &c., by every one who tries to grow a tree or vegetable. But he has neglected to notice how much of the blame for the paucity of birds about the house, fruit-yard, garden and orchard, is to be attributed to the murders of the domestic cat. Where a vigilant grimalkin and her kittens are domesticated, no robin and sparrow has any resting place, either on bush or tree; and their fledglings are almost invariably devoured by these feline mousers, either before or after they begin to have the use of their wings. If we could contrive to prevent the marauding horde of rats from invading the premises, so that the watchful cat might be dispensed with, robins, sparrows, blue birds, &c., would increase and

multiply, and, in addition, every house would have its swallows and martins. If it is provoking to have a May Duke cherry tree stripped of its fruit in one day by birds, it is still more so, after driving off the birds and picking the fruit, to find your tree dying the next year, its inner bark completely eaten out by concealed worms. But *a propos* of insectivora, I have lost within the last two years three out of four young bearing apple trees, killed by invisible borers, although the trees were washed with strong su's, and and the caterpillars burned out. Not a peach tree can I grow of late that is not stung on all sides as soon as it has attained the size of a whip-stock. Trees that got their growth before insects were so destructive still continue to live, both trunk and limbs full of sores, bearing only a little sickly, wormy fruit. Yet I remember the time when it was no more trouble to grow peach trees than pig weeds; in Ovid and Romulus, thousands of bushels of peaches were fed to the hogs—now, owing to the insect enemies of the tree, very few peaches are grown.

THE PROFITS OF HIGH FARMING.—Our amateur farmer, JOSEPH WRIGHT, who has so long astonished the cigar makers by his extra large, superior crops of well cured tobacco, sold the last week to SHEDDEN, a New York drover, eleven yearlings, coming two years old, for \$60 each. Such veal as some of us were favored with to-day from one of his yearling calves might founder an alderman. It had all the appearance of young beef, only fatter; it was completely mottled with that carbonaceous tissue which represented the sugar of the perfect corn fodder on which the animal had been fed and wintered—Ohio Dent corn, sown in drills, and cut and cured as soon as its full saccharine state was attained.

APPLE TREES.—The best apple trees, and the best fruit in this county, grow on the friable clay loams near the deep ravines which debouch in the lakes. On digging into the side of one of those ravines, apple tree roots were found more than twenty feet below the tree's base. This fact shows that apple trees require a very deeply drained soil, and that they should never be planted where spring water rises nearer than twenty feet to the surface. The famed Wayne county apples grow on gravelly ridges of the Onondaga group, the richest of all loose soils in organic remains.

SAXONY SHEEP.—It is said by a man of experience in the premises, that no sheep would be more profitable to the farmer, if he would only take good care of them, and separate them from other sheep to keep the blood pure, than the Saxony; but when crossed with the Merino, the progeny is less hardy, and materially deteriorated both in constitution and wool; hence the notion that the Saxon is not a hardy sheep. Ten years ago, PERKINS & BROWN, of Akron, Ohio, had a large flock of pure Saxony sheep, which, by good treatment, became both hardy and large sized; many of their fleeces weighed six pounds, and such wool has now, in our day of amalgamation, become rare indeed.

LETTERS FROM THE SOUTH AND WEST—It was pleasant to read in the last *Farmer* Dr. LEE's very interesting letter from Georgia, the more especially as he now dilates with satisfaction on the rise and progress of the *Genesee Farmer*, a paper which he so long and ably conducted. Letters from farmers lately removed to the far West, would be of double importance if almost every man or woman there *did*

not write as if they wished to encourage emigration. They describe the matchless soil, the tall corn, the redundant prairie grass, the prairie hens, the pigs and poultry; but they neglect to complain of wet prairies, the mosquitoes, fever and ague, and the paucity of timber. They tell us how fat the prairie fed cattle are in autumn, while they neglect to say how much of their corn rotted for the lack of shelter, how many of their sheep were killed by prairie wolves, or how many of their bovines had to be lifted up by the tail in the spring, after the winter's exposure to the bleak winds and low temperature of the prairies. The whole truth, if told, would give an interesting panorama of life in prairie-land, which would enliven the scene, and add that romance to isolated monotony by which alone the young and energetic make a play-spell of the battle of life. Evidently under this spell a man writes from Iowa, saying that "those who have failed to succeed at the East may honorably succeed there, and experience that joy which the world cannot give."

EARLY PLANTING.—It is time now, (April 10th.) if not done before, to sow onions and plant peas and potatoes. Beans, although wanted early, should not be planted, owing to their tender nature, until the 20th of May, as we generally have the last white frost as late as the last days of May. But some Limas, and a few rows of Early Dwarfs, may be planted by the 10th, if care is taken to cover them on the night of a frost; an inch board is effectual, while they freeze under cloth. Limas may be covered with the hoe when two inches high; a sprinkling of soil on the leaves will protect them. Early planted beans, like early planted corn, attain strong roots and go ahead of the late planted, particularly in warm dry weather.

Waterloo, N. Y.

CHINESE SUGAR CANE—JAPAN PEAS

MESSES. EDITORS:—Having of late seen some doubts expressed in regard to the successful culture of, and manufacture of sugar and molasses or syrup from, the Chinese sugar cane, as well as to the profitability of its culture for its saccharine products, I have concluded to give you an account of an experiment I made with it last year.

Between the 20th and last of May, 1856, I received a small package of seed of the South African, or Caffrarian, variety, which I planted the day I received it, on *one rod* of land, as near as it could be measured, three feet apart one way by about two to two and a half the other, ten seeds in a hill. All that vegetated (say five out of seven) I let stand, and cultivated carefully, same as corn or broom corn. Owing to the extreme dryness of the season, and the coolness of the weather in August, together with the closeness of the plants, only about one-half of the seed matured. I saved, however, about seven pounds of tolerably well matured seed, besides losing eight of the best seed-heads, which were taken from the lot before cutting.

On the evening of the 14th of October, anticipating a heavy frost, I cut the canes and placed them in a heap in a secure place, under shelter. About a week after I manufactured the whole into syrup, or molasses, by passing a few of the canes by hand through a tinner's cylinder, by which means I expressed about two quarts of juice, making about one

quart of thick syrup, or molasses, in about thirty minutes' boiling. The balance of the canes were cut into pieces from one to three inches long, and boiled in pots of water, (only being put through that process twice, and not pressing the stalks in any manner whatever,) which, after removing the stalks, was boiled down to syrup, making in all about *three gallons* of an excellent article, equal, if not superior, in color and flavor, to the best quality of Boston syrup. My yield was equal to *four hundred and eighty gallons* per acre, and I am satisfied that if I could have thoroughly extracted the juice, it would have exceeded five hundred gallons per acre.

I expect to plant six or seven acres this season, and more fully test its profitability, both for saccharine purposes and as a forage plant; and would be glad to procure information respecting the purchase or manufacture of a cheap and effective machine for extracting the juice. Perhaps you, or some of your correspondents, could give me the information.

JAPAN PEAS.—I planted about fifty Japan peas last year, in the latter part of May, which grew luxuriantly and bore profusely, considering the intense drouth of the season. I gathered about a peck of mature peas in the fall, after having a part destroyed by my own and my neighbors' fowls. We used some of these peas last winter, and found them good for culinary purposes. Our fowls also seem to esteem them highly, as they eat them with avidity. There can be but little doubt of their maturing in this climate, if planted in May.

E. HALL.

Berlin, Ohio.

POTATO RAISING IN IOWA.

MESSES. EDITORS:—The potato loves a loose soil, with decaying leaves, grass roots, or other vegetable matter. If the ground be foul with grass and other weed seeds, plow early, and in a week farrow out. As often as weeds start in the furrow, run the furrow afresh, till time to plant; and just before the potatoes are up, straddle the rows with a cultivator, set narrow, and the front tooth out. Work them often and deep till the blossoms begin to show, *and not afterwards*. If the weather is very dry plow often, or else your potatoes will grow shallow and precocious, being affected by the vicissitudes of the weather, and will be ill-shaped—knotty and forked, with watery ends. Plow the last time with a ten or twelve inch shovel plow, as deep and as close to the row as possible. Move the hills a little, but not tear them loose. Split the rows with a shovel plow, big enough to loosen all the middle. You will have a surer and better crop to leave the ground as level as possible; but if your variety grows scattering in the ground, you will dig with less work if the row be ridged.

MANNER OF PLANTING.—If the ground is loose, not inclined to cake and bake, drill—one foot is a good distance. If the ground is heavy, cross three feet one way and two feet the other. Plow mostly the wide way, but once at least across, to break the ridge under the row.

Plant early as possible, if you fear the rot; but the first of June planting brings a better crop than a month earlier. Early varieties do well here planted as late as the twentieth of June. Potatoes will keep better, and be of better quality for spring and sum-

mer use, to be planted so late that the tops will be a little green when frost comes. As a precaution against rot, I should, *in theory*, thoroughly ripen the seed. I have not experimented in that particular.

VARIETIES.—The Neshannock is early and productive, and, when raised on new ground, is of good quality, but is, both in growth and keeping, and in every way, a tender potato. The white fleshed Pink Eye is a late and excellent-keeping potato, but grows scattering in the ground, making laborious digging, and is usually small; but in grounds highly manured two or three years previously, and planted with pieces of from one to three eyes in a hill, if well cultivated, produces a good crop of good sized potatoes, of the very best quality. It will bear as rich a soil as Indian corn. It is in every particular a hardy potato, and will bear more plowing, more manure, more drouth, more wet, more heat, and more cold, than any other kind, and is always of good quality. These two are the leading varieties here. Neshannocks are most popular in the market.

I have done best with seed ends of large potatoes cut into pieces of two or three eyes, and dried a little before planting. Dig with a bright steel hoe.

Muscatine, Iowa.

DAVID PURINTON.

MANAGEMENT OF A PRAIRIE FARM.

The first operation in making a prairie farm is to turn the sod over, which should be done from the first of May to the first of August, or while the grass is growing and full of juice—the green grass causing the sod to rot and be in good condition for crops the next spring. If it is broken earlier, it does not rot as well, and the grass and weeds grow up and make the land foul; if broken later, it does not rot so as to produce a good crop the next season. The sod is sometimes turned over in the spring and immediately planted to corn, which sometimes produces fifteen or twenty bushels per acre, but frequently fails to produce anything. There is a field of thirty acres in this vicinity that did not produce half as many bushels. From two to seven yoke of oxen are generally used in breaking, but sometimes two, three or four horses are used.

The plows used in breaking turn from ten to thirty inches wide, and are made of steel; the share and cutter are kept sharp, by filing and hammering. In breaking, thin furrows turned up rough are generally preferred, as they harrow up mellow than thick, flat furrows. The proper way is to turn the furrows medium depth, and not very smooth. Particular care should be taken to cut and turn over all the sod.

After the ground is broken, it is better to let cattle run on it at pleasure, as they feed down all grass and weeds, and tread the surface down, which has a good effect on the crop. Our soil, instead of being too hard and heavy, is too mellow and light; consequently, packing the surface makes it produce better crops.

The ground that is broken one summer should be sown as early as possible next spring. Where old ground is sown to small grain, it should be plowed the previous summer or fall; the best way is to plow it immediately after the crop is off, so that what grain is scattered will come up and make excellent pasture. The ground should be thoroughly rolled after the grain is sown. The roller should also be

used on corn ground after the corn is planted, as it leaves the ground smooth and mashes all the lumps, so that the cultivator can be used in the corn when it is quite small, and before the weeds get the start of it. The best way to keep our soil rich is the proper rotation of crops—corn, wheat, clover, &c.—Every prairie farmer should plant groves of timber around his buildings, for a protection against the cold winds of winter. Cotton wood and locust are well adapted for that purpose; the former is raised from cuttings, the same as currants, and the latter from seed. Four or five years are sufficient to raise a grove that will be a great protection and ornament to a residence.

L. GIBB.

Near Wyoming, Jones Co., Iowa.

BORERS—VINE BUGS—SULPHUR ON CORN, &c.

MESSEES EDITORS:—My apple and peach trees, especially those growing upon a loose gravelly soil, have been much infested, just at the edge of the ground, with the borer. I have tried many experiments to destroy them; and once I succeeded admirably by the free application of spirits of turpentine to about a dozen fine peach trees; and from actual experience I can recommend it as a certain remedy to *kill grubs*, only it had this *little drawback*—it killed the trees. Last year I tried ashes around my peach trees. I removed the dirt down to the roots and heaped a quart of unleached ashes around the body of the tree and then drew the earth back again. Thus far I have seen no grubs, and the trees have received no injury from the application. I have used soft soap and Scotch snuff upon my apple trees, applied from the roots upwards about a foot. If applied two or three times during the summer, no eggs are deposited.—Before taking these precautions I lost many trees, and those that lived made but little growth.

VINE BUGS.—I preserved my vines last year from the ravages of this little pest by placing little wads of cotton saturated with spirits of turpentine among the vines near the roots, using care not to have them touch the vines. The turpentine should be renewed from time to time.

Crows.—The time is near at hand to bring out the scare crows, (which never scare any crows.) Three years ago I planted a piece of corn in a small lot bordering on the road, and right opposite my house. I supposed it would be safe, but I soon found that the crows were earlier risers than I, for at the earliest dawn of day they would be in the field. I put up a frightful image with an old musket resting across a stump. As if to show their contempt, they pulled up the corn under its very muzzle. I then tried twine without success, for they still continued to make their morning visits. I then soaked some corn in water with arsenic, and strewed it about the field, which was soon picked up. The next day there appeared to be quite a disturbance in the camp over among the hemlocks. From the amount of "cawing" and fluttering among the tree tops, I concluded they were holding a coroner's inquest, or perhaps confabulating as to the safety of pulling up corn. I think it must have been decided to be a *safe operation*, for they were soon at it again. The result was, by planting over two or three times, I got less than half a crop. That trouble is ended now, for I have found a scare crow that is effectual. For the last two years I have applied about a pound of sulphur to the acre, mixed

with plaster and ashes; a handful thrown upon each hill, just as the corn begins to prick through the ground. Although crows were daily flying over and around my corn field, never during that time have I seen a spear of corn pulled by them, or one light in the field. Farmers try it. S. MITCHELL.

Cameron Mills, Steuben Co., N. Y.

CULTIVATION OF BEANS.

MESSRS EDITORS:—Beans are not cultivated as a field crop so generally as they deserve to be, when their value for table use as well as for other purposes is considered.

SOIL.—Any soil that is dry, and rich enough to produce corn, or wheat will answer for beans. Sward ground that is intended for wheat will not be impoverished any more by growing a crop of beans during the summer before sowing to wheat, than by following in the fore part of the summer, and laying exposed to the scorching rays of the sun until fall.

PREPARATION.—In plowing sward for beans, be sure to turn the furrows down flat, so that the grass may be smothered and prevented from growing. Harrow lengthwise of the furrows, taking care to pass around the land just as the plow went. Harrow thoroughly in this direction and then across, if you can without disturbing the sod. Next use the gang plow, taking care not to let it run so deep as to disturb the furrows.

PLANTING.—Plant from the first to the middle of June. Where the quantity to be planted is large, procure a machine for that purpose, to be drawn by horses. A man and boy with a machine will plant about twelve acres per day. The usual distance apart to plant is thirty inches one way, and ten the other. The only kind recommended for general field culture is the White Medium. Keep the ground well stirred, and free from weeds.

HARVESTING.—If the season is favorable they will be ready to harvest in about ninety days. Commence harvesting when the pods are about two-thirds ripe. Pull and throw five rows in a winrow, in dry weather, and let them remain three or four days; then turn them and let them remain until the beans are perfectly dry; then throw in bunches of convenient size for pitching. They should never be housed until perfectly dry.

THRESHING.—This is done with horses. A man and a pair of horses will average about forty bushels per day, if the crop was housed dry.

Average yield per acre, about twenty bushels.—Average price \$1.00 per bushel. Fodder worth \$2.00 per acre.

JOHN G. SAMPSON.

Laceyville, Harrison Co., Ohio.

REASONS WHY PREMIUMS SHOULD NOT BE OFFERED TO LADY EQUESTRIANISM.—1st. It does not tend to improve the intellect, or promote good morals. 2nd. It attracts the attention from the more important objects, for which agricultural societies were formed.—3rd. It is uncomely and undignified for a woman thus to expose herself. 4th. The horse jockey is undesirable and unbecoming in man, much more so in woman. Many more reasons will suggest themselves, to a delicate mind, which we would not put on paper.

Aurora, Cayuga Co., N. Y.

M. S. B.

CHEESE MAKING IN A SMALL DAIRY.

STRAIN the milk in a tub or kettle at night, and if the weather is so warm that the milk will be in danger of souring before morning, add the rennet immediately, and break up the curd in the morning previous to setting the morning's milk. If the weather is not very warm, let it stand until morning and stir the morning's milk with it. Some of the milk should be put in a kettle and warmed sufficiently, that when added, it may all be about milk warm.

After the milk is set let it stand about an hour, or until the whey separates from the curd, which can be told by running a knife through it. Break the curd up fine with the fingers or curd-breaker; dip it into a strainer placed in a cheese-basket; let it stand until the whey has drained off. Take some of the whey and heat it until the hand can scarcely be held in it. While this whey is heating, cut the curd into small pieces; put the hot whey into the kettle or tub and put the curd into it—stirring it continually, that it may scald even. As soon as the curd will squeak between the teeth, it is sufficiently scalded.

Then place it again into the cheese-basket and press out the whey; put the curd into a tray or wooden bowl, and cut it fine with a knife. Salt to the taste; put it into the hoop and press it an hour; take it out, turn it and press again until night.—Then turn it again and let it remain in the press until morning.

Set the night's and morning's milk the same as before, and after the curd is scalded take the cheese from the press. Cut off the outside of the upper surface, and put it into the hot whey from which the curd was taken. Take the pieces which have been cut from the cheese, cut them up fine, put them into a bowl and pour on some hot whey, and let them stand. Put the cheese into the hoop, with the cut surface up, and put the new curd on top, with the pieces from the bowl in the middle, and press as before. If you have but few cows, and the cheese is not yet large enough, you can add again, as before, as often as you choose.

Newfane, Niagara Co., N. Y. MRS. S. M. W.

Genesee Farmer Prize Essays.

ON THE CULTIVATION OF BARLEY.

BARLEY, like most other grains, has been known and cultivated from the earliest times; and in countries and localities that are favorable to the growth of wheat, rye and oats, it is, and always has been quite extensively raised. It also succeeds in certain soils that are not favorable to the production of the above named grains.

The main qualities to be looked for in the selection of ground on which to sow barley, are (1.) A *deep, rich* soil. A black loam, if not too loose and porous generally produces a good crop of barley. (2.) It should be a light soil. Stiff and heavy soils that produce tolerable good wheat, seldom produce anything more than a second rate crop of barley. (3.) It should be moist, but not a wet soil. The preparation of the soil should be thorough. If barley be sown on ground prepared in the manner that land is

frequently prepared for wheat, (by persons calling themselves *farmers*,) it will most certainly result in a partial, if not an entire, *failure*. A clover sod, if plowed in the fall or during the winter or first spring months, so that freezing and thawing may assist in mellowing and pulverizing the earth is nearly certain to produce a good crop of barley, if the soil and location be judiciously selected and the ground prepared in the best manner in the spring, before the seed be sown, and then thoroughly harrowed in.

There are several varieties of barley—the most prominent of which are the “two-rowed,” the “four-rowed,” the “six-rowed,” and the *beardless*. The “six-rowed” is generally supposed to be the best, from the fact that it is the hardest, and withstands the rigors of the northern latitudes better than either of the other bearded varieties. The beardless is as yet, not much known. It was discovered in the gulches of the Himalayan mountains, and it promises to be a valuable acquisition, as it is entirely *free* from beards.

Barley should be sown as early as the season will admit of the necessary preparation. The amount usually sown per acre varies from two to three bushels—poor soils when sown early, requiring *less*, and rich, well prepared soils, especially if sown a little late, requiring *more* seed. Generally there is more danger from sowing *too much*, than from a lack of seed.

|| In harvesting barley, it is very important that it be cut at the proper time. If it be cut too green, the grain will shrink, and consequently lose in weight, and if too ripe, it will waste in the cutting and handling, as it shells out very easily.

The main use to which barley is applied in this country, is in the manufacture of malt liquors; but there are other ways in which it can be used that will ultimately give a better return to the *consumer*. In Europe it is quite extensively used in feeding horses. When boiled and mixed with cut straw, it acts as an excellent *aperient*, as well as *sudorific*—opening the system, and softening the skin. The prejudices which have long existed in this country against it as food for horses, (from the supposition that it is too heating for them) would vanish if these persons would reflect that the best horses in the world are raised where barley forms one of the principal ingredients in their food. It is also an excellent food for hogs, if ground and mixed with their swill.

The average number of bushels per acre is about twenty-five—costing the producer about fifty cents per bushel. It ranges in price at present from \$1.00 to \$1.37½ per bushel, leaving a net profit of from 50 to 87½ cents per bushel. It leaves the ground in good condition for wheat. There should not be two successive crops of barley raised on the same field.

Laceyville, Ohio.

JOHN G. SAMPSON.

ON THE CULTIVATION OF ROOT CROPS.

BEETS.—I have had some experience in the cultivation of all the different kinds. For field culture, Mangel Wurzel, White and Yellow Sugar; for garden, Long Blood Bassano and Blood Turnip are the best varieties. For garden culture, the seed may be sown early in April for early, and in June for fall and winter use. The Bassano is the best early, and the Blood Beets follow soon after. They all require a deep, warm, rich soil, and should be sown about twenty inches apart in rows, and stand about four or

six inches apart in the rows. The field beets should be sown about the first of June on a well prepared soil, on ridges about three feet apart, and thinned to eight inches in the row. The seed should be soaked in warm water three or four days before sowing; then roll in plaster, sow, and tread in the seed as you sow, and cover lightly with a rake. This method of sowing will make sure work, if the weather and ground are dry; if wet, the treading in may be omitted. The beets will make their appearance in from four to eight days. As soon as large enough, pass through the rows with a hoe, and weed and keep them clean. The proper time for thinning, is when the plants are about two inches high, when the ground is moist after a rain. The cultivator can be profitably used as soon as the plants are large enough, and the last working should be with a small shovel plow or horse hoe. I know of no better way of harvesting than pulling them by hand and topping with a knife, and this should be done before hard frosts in the fall.

PARSNIPS.—Very little attention has been given to the parsnep as a field crop, it being confined principally to the garden in a small bed, designed chiefly for the table, and in my opinion is one of the best garden vegetables raised for winter and spring use. Cannot they be profitably grown as a field crop? I think they can. Its culture requires much the same treatment as the carrot, but should be sown very early, as soon as the ground is warm and dry, and in the same manner.* The seed should be sown dry. You must wait patiently for them to come up, for, as every one who has raised them knows, it takes some-time for them to vegetate, but if once up and clean from weeds, they will grow most luxuriantly. They should be thinned to about four inches in the row. They should be kept clean through the summer, and they will grow till snow comes, and can be left in the beds all winter without injury, which is convenient if you are short of store room. When the frost begins to come out of the ground in the spring they are ready for use; or if wanted in the winter, some may be dug in the fall and covered over in the cellar with dirt. A good crop will produce five or six hundred bushels per acre; and as food for cattle and hogs, they are most excellent. They may stand where they grew till the ground is wanted for another crop, and then harvested and fed after all other roots are gone. Working cattle are very fond of them, and will eat them as greedily as they will corn meal. If small, they may be fed whole; if large, slice them with a spade. They usually grow deep in the ground, and may be readily harvested by plowing close to the side of a row and pulling them out, and then plowing again till all are finished.

RUSSIA BAGA.—This crop is not cultivated extensively in this country, although a profitable crop for a farmer to raise. Still, it is not without its drawbacks. The first is, they are a very small plant when they first come out of the ground, hardly discernable, and many times the small black ground flea devours them before the cultivator gets sight of them, and more than likely he will say that the seed was bad and never came up, when the fact is it came up the second time before he thought of looking for it. This flea is a great drawback to the cultivation of

* See an article on the Cultivation of Carrots, in last number, page 110.—Eds.

ruta bagas, turnips, cabbages, &c. Several remedies have been proposed, one of which I will mention: Soak the seed in tanner's oil two days, and roll it in plaster before sowing. I have tried it, and sometimes it failed and sometimes not, so that I cannot say that the remedy is certain. A great help is to watch about the time the seed is coming up, and scatter plaster on the rows. If they get two or three days ahead of the flea, there is not much danger. Second, some seasons they will not make good bulbs, and produce light crops. The reason I cannot give, but it is attributed to old seed, and sometimes to dry, hot weather.

The best soil for this crop is a deep black muck, manured lightly, and well incorporated with the soil. The ground should be ridged about two feet apart, and seed sown on the ridges and raked in. It will come up in three or four days, if the weather is good. Sow about the fifteenth of June. Keep them clean, and thin, when quite small, to about six inches in the rows. Use horse and cultivator when large enough, and for the last time use double mould-board plow or horse hoe. If the season is good, eight hundred bushels per acre may be expected, and will not cost more than four or five cents per bushel. The best way I have tried for harvesting is to pull and lay two rows in one, laying the tops all one way; then take a sharp spade, and walk along and clip them off. A man will top in this way from three to five hundred bushels per day. Drive your wagon along side and throw them in, and the work is finished. They make good feed for fat cattle during fall and spring, and mild weather in winter. Sheep will do well fed with them during winter and spring. Cows like them, but if giving milk they impart to it an unpleasant flavor, and also to the butter made from it. They are first rate winter and spring turnips for table use, and will keep good in the cellar till June.

TURNIPS.—The common turnip is raised more or less by almost every farmer and gardener in this country, or at least they sow some seed expecting to find turnips in the fall. Some very wisely sow extensively for feeding cattle; others scatter a little seed in the garden, corn or potato field, hoping to raise some for table use. This crop, seemingly neglected more or less, and so little trouble taken to prepare a piece of land on purpose for it, may be made a very profitable one by proper attention and selection of varieties. It will grow on almost any soil, if well pulverized; but the best is black muck, new land, sandy and chestnut loam. They may be sown from the first of July to the fifteenth of August. After wheat, oats and barley, plow the ground immediately after harvest, harrow thoroughly, and wait for the grain to come up; after it has well started, cultivate thoroughly to destroy it, and then sow your turnips broadcast; harrow them in, and roll if the weather is dry. Soon as up, sow plaster, and if the ground is clean nothing excepting thinning will be required; but if weedy, use the hoe, and weed. A good crop may be expected, and not to cost over three or four cents per bushel. The best varieties are the White Stubble, Red Top, Strap Leaf, and White Dutch. They may be fed to all kinds of stock except horses. If fed to milch cows, the tap root should be cut off and not given to the cows, and the milk will not taste. Feed fat cattle once a day, about three pecks each, and once with corn meal, and they will thrive well.

Brighton, N. Y.

B. S. HAYWARD.

ON THE CULTIVATION OF BEANS.

The cultivation of the white bean as a field crop, does not receive the attention in this country, that its importance demands. As a rotation crop, especially with wheat, its value is not properly estimated. Beans impoverish the soil but little, yet are rich in nitrogen, and more nutritious food can be obtained from an acre of beans than of almost any other crop.

Beans flourish best in a light, warm soil. They will thrive on any soil that will grow corn. If a clover sod, it should be turned over as soon in the spring as the ground is in good condition; and, for beans as well as for any other crop, the surface should be well pulverized. The soil should be moderately rich; if too rich they grow too much to vines, and do not bear well.

Some recommend planting as soon as the middle of May, but in most seasons this is too early. They should not be planted till late spring frosts and long, cold rains are over—say from the 25th of May to the 5th of June, when the ground is warm and dry. The seed should not be covered more than one inch. The plants will be up in five days, and in two weeks will be ahead of those planted earlier.

Beans should be cultivated in drills two and a half feet apart, that the cultivator or shovel plow may be freely worked between them; and if the land is free from weeds the hand hoe need be little used.

Planting beans by hand, is a slow and tedious job. Where they are extensively cultivated, of course the planter will be used, but the small farmer who has not the facilities afforded by these implements, can yet grow his half acre or acre of beans profitably.

The labor of dropping may be greatly facilitated by a little Yankee ingenuity. Take an old tin coffee pot or tin pail, (one with a cover is better;) fix it to a handle sufficiently long to enable you to walk erect, while holding the dish near the ground. Punch a hole in the bottom large enough to let the seed through freely, and you have an implement that will not have cost you half an hours labor, and will do the work quite efficiently.

Mark out the drills, drop the seed from three to six inches, (the richer the soil the less seed) in the drills, when they may be covered by hands, or an expert plowman will cover them with a common or shovel plow.

Beans should be well cultivated; the ground frequently stirred and kept free from weeds, and my word for it they are a crop that will pay well. Try it farmers and report the result in the *Genesee Farmer*.

A. L. HOYR.

Walton, Delaware Co., N. Y.

ON THE CULTIVATION OF SPRING WHEAT.

SPRING WHEAT is now cultivated to a much greater extent in this section than it ever has been before. Not having the severe winter to battle against, it is generally a more certain crop than winter wheat. The modes of cultivating spring wheat are various. If persons expect to raise good crops, they must prepare the land well. Land that is intended for spring wheat, should be summer fallowed and manured the previous year. Plow the land three or four times

during the summer, leaving it ridged up in the fall. Or where people cannot afford, or have not time, to summer fallow as much as they require for spring wheat, they can often raise very good crops by taking pea or potato land, plowing it as soon as the crops are off, giving it a dressing of manure, and ridging it up before frost sets in. In the spring, run a cultivator over it until it is well stirred up to the depth of three or four inches. Spring wheat requires a fine, mellow soil, *but not deep*; hence it is better to cultivate in the spring than to plow. Sow about the tenth or fifteenth of May, and you will generally evade the midge, the fly being gone before the wheat is far enough advanced for them to injure it.—Sow one and a half bushels per acre. If your land is in good order, this will be plenty thick enough.

The Fife wheat is the favorite among the farmers here, as it never rusts, however late it is sown.

Newcastle, Durham Co., C. W. J. E. BEMAN.

ON THE CULTIVATION OF RYE.

OF this grain we have but one species and but two varieties in this section that we know of, namely—winter and spring rye. Land containing a large proportion of sand is best adapted for rye, which is said to be the only grain that will mature on land containing over eighty-five per cent. of sand. Lands of this nature may be very properly called “rye lands.” But rye is not confined exclusively to sandy soils; it will grow on almost any soil that is dry enough for cultivation. While it will produce better than any other cereal on poor lands, the richer the soil the more vigorous and luxuriant will the crop be.

Perhaps your Genesee farmers would do well to substitute winter rye for wheat in some instances. As a general rule, land that will produce but a light crop of wheat will produce a heavy crop of rye. It may be sown about the same time as wheat, not less than two bushels per acre, well harrowed in. It needs but a slight covering, and the land should be well pulverized with the harrow before sowing. Good land will generally produce thirty bushels per acre. We think rye is the most certain crop that can be sown on all soils. Rye may therefore be considered a great boon to the inhabitants of sandy and poor countries. Without it, many districts would have been almost uninhabitable. When fully ripe, the grain is easily shelled; therefore rye growers should observe CATO'S maxim: “Secure your crop two days too soon, rather than two days too late.”

H. H. TAYLOR.

East Rodman, Jefferson Co., N. Y.

ON THE CULTIVATION OF OATS.

THE common white oat is most generally cultivated with us, and is probably best adapted to the soil and climate of this latitude. The chief peculiarities of this grain, and which distinguish it from nearly all others, is that it will grow on almost any soil, and may be sown year after year on the same soil with tolerable success. It will flourish on the coldest soils and on the most tenacious clays, as well as on poor sands and gravelly land. The reason of this probably is that oats appropriate to their nourishment every particle which the soil will yield, and which would not be absorbed by other plants without time and

tillage. When cultivated on a fertile soil, however, they are much more profitable.

Oats may be sown from April to June, but like all other spring grain, the earlier the better after the soil is dry enough to work. It is a well established fact that early sown spring grain, with very few exceptions, is heavier and better than late sown. A good way to raise oats, is to plow the land in the fall, and in the spring cultivate thoroughly with a two horse cultivator, and sow not less than three bushels of good clean seed per acre. Harrow in and roll down, and when a part of the heads are turned, cut and cure well, and the straw will make very good fodder especially if not more than half threshed.—The yield will be from ten to sixty bushels per acre, according to the season, richness of soil, &c.

H. H. TAYLOR.

East Rodman, Jeff. Co., N. Y.

ON THE CULTIVATION OF BROOM CORN.

THE first thing of much importance in raising broom corn is the selection of a soil, and its proper preparation for the seed. It is asserted by some that any soil upon which Indian corn will grow and thrive, is equally as good for broom corn. This, however is hardly true. All cold, stiff, and wet soils should be avoided, also those which are infected with roots or noxious weeds. A warm, rich and finely pulverized soil is needed for the growth of broom corn, and after it has got started, great care must be taken to subdue and keep the weeds down, or the weeds will subdue the broom corn, and instead of tall, handsome stalks, you will have a few pale, sickly looking plants. Take my word for it, if you would have your broom corn tall and thrifty, you *must* subdue the weeds.

The ground should be manured, plowed and harrowed the same as if prepared for Indian corn, except perhaps, a little more pains must be taken in preparing and mellowing the soil. Plant as early as the weather will permit, say from the 20th of April to the 15th of May, in rows three feet and a half apart, and hills about twenty inches apart in the row. I generally plant about a dozen seeds in a hill, and at the second hoeing when the broom corn is about eighteen inches in height, thin out each hill to seven or eight stalks.

Ashes are very beneficial to broom corn, if strewed around each hill, but care must be taken not to have them lie against the stalks, or they will do more harm than good. The ashes will serve to keep the corn ahead of the weeds, which otherwise might over-run and destroy it.

I cultivate my broom corn three times during the summer, hoeing it each time, and at the last time hill up the plants a little as this will serve to keep them from being blown over by the August winds.

As soon as the seed has perfectly ripened, I go through my fields and “table” the head, which in other words means the breaking down of the top of each plant so as to remain in a horizontal position. Before severe frosts come on, I go through the field with a good sharp knife and cut off the brush just above the upper joint. The brush is spread out on a kind of rack or trellis prepared for the purpose.—As soon as the brush is perfectly dry, the seed should be separated from it which is done in various ways. I use the “comb,” which is made by sawing a board

in the end so as to make teeth, through which I draw the corn until it is cleaned of its seed.

Last year I raised two acres of broom corn, but this year I intend to plant about five acres.

Lockport, N. Y.

J. B. CLEMENT.

ON THE MANAGEMENT OF MILCH COWS.

SOME difference of opinion prevails among dairymen as to the best method of managing milch cows. In this article I shall simply give my views, which are the result of some fifteen years' experience and observation. First, then, I prefer what is termed the native cows to those imported, as being more hardy, easier kept, and producing more milk, butter and cheese, with the same amount of feed and care.

To make cows profitable for butter and cheese making, they should come in about the first of March, and be furnished with good warm stables, plenty of pure water, all the salt they will eat at least once a week, plenty of good hay twice or three times a day, and half a bushel of yellow carrots, each, once a day, until there is abundance of good feed in the pastures. Some feed corn meal, but carrots are decidedly preferable. The meal will increase the flesh, and is preferable to any other feed for fattening purposes; but carrots will produce more milk and better butter than any other feed, and at one-half the expense of feeding meal. Every dairyman should raise carrots enough to feed his cows from the time they come in, in the spring, until they are turned out to pasture.

Cows should be milked at six o'clock in the morning and at six o'clock in the evening, thus dividing the time equally. The milk should be drawn as quickly as possible by the milkers, and every cow stripped perfectly clean, as the last gill contains more butter than the four first; and if any milk is left in the udder, its effect will be to dry up the cow. Cows that come in the first of March, should be dried up about the first of December, and fed all the good hay they will eat through the winter.

Good native cows treated as above indicated will pay well until they are from fifteen to eighteen years old, when they should be well fattened on corn meal, and they will sell for as much as they cost when five or six years old, which is the best age for dairymen to buy.

H. H. TAYLOR.

East Rodman, Jefferson Co., N. Y.

ON THE MANAGEMENT OF YOUNG STOCK AND WORKING OXEN.

IN the first place the calf should be kept growing, and never suffered to get poor and stunted in its growth. If the calf is permitted to suck the cow, it will no doubt do well enough; but as the milk is generally wanted for butter, a cheaper way should be pointed out—which can be done by taking the calf from the cow—the sooner the better—and learning it to drink new milk. After it is accustomed to drinking, its feed can be gradually changed to skimmed milk, warmed to the proper temperature, with the addition of a little buckwheat flour or Indian meal, with a little salt occasionally.

Should the calf get the scours, a feed or two of new milk will generally cure. When the calf is two weeks old, if in winter or early spring, give a little hay as it will by that time begin to eat. As soon as the grass

is sufficiently grown, let it have the run of the calf pasture, and change its feed gradually to sour milk. In about three or four months wean it from milk, but continue to feed meal, and under no circumstances, let it fall away and get poor, but keep it continually growing.

The first winter the calf should have all the hay it will eat, together with oats, bran or meal, or little of each mixed together, and a few carrots or other roots once a day, will well pay for the trouble; and your calves will come out in the spring as slick and spry as race horses; and by the next fall, will be as large as two-year olds generally are.

The second winter they can have the run of the yard and coarser feed; but at this period a little meal with roots, once a day, will pay better than money at interest.

A young, and growing animal of any kind, in the winter season, needs a greater variety of food, and of a more nourishing character than the one of mature age. While the animal that has its growth, only needs food enough to keep up the natural wear of the system; the young one needs food sufficient, and of that character, as will furnish an increase of bone and muscle, in addition to the natural wear of the system. And here I would speak of the advantages of good warm sheds and stables for all kinds of stock. The food answers the same purpose for the animal, that the wood does for the stove; the warmer the room, the less wood will be required for the stove; the warmer the stable, the less food will be required to keep up the animal heat; and if a young animal, the greater will be the balance, to give a supply of bone and muscle to increase its growth.

WORKING OXEN should be stabled nights in the winter, especially towards spring, before the working season commences. If they are not worked much in the winter, they will not need grain until about the first of March, when they should be stabled and fed grain, or meal, but by no means feed corn, as it is too heating and produces fat, when muscle is what is wanted. They should be kept up either in the stable or yard, until the spring's work is all finished; and should not be turned out to grass while it is young and tender. If you want them to stand the heat, keep them up and feed them oats, as you do your horses; or perhaps a better way would be, to cut hay, wet it and sprinkle on oatmeal, and you will not only be astonished at seeing them plow, "bout for bout" with your horses, but they will also hold their tongues, and keep them in their mouths, where they should be.

Newfane, N. Y.

C. C. WILSON.

ON THE MANAGEMENT OF BEES.

I SUPPOSE that you wish as many to write on the subjects mentioned in your list as will, so I will write you a few lines on the honey bee.

THE CONSTRUCTION OF PROPER HIVES.—I make my hives of common inch boards, two about fourteen inches wide, and two sixteen inches. This makes the hive just square. I make them twenty-two inches high with a partition eight inches from the top.—This gives plenty of room for the bees, and also for good sized boxes. I make a notch in the front board at the bottom one-third of an inch deep and three inches long. Then four inches above this I make one half inch hole, and another in the back side close up to the partition. These are for the free circulation

of air in the winter when the front entrance is liable to be closed up with snow. I find that hives where there is a free circulation of air are not so liable to be destroyed by frost. Unless there is some outlet for their breath it will soon form ice and freeze them to death. Always before hiving, be careful to see that the boxes are bottom side up. If this caution is not taken, the bees will sometimes commence to work in the boxes, and form their brood comb there. The boxes may be turned over the third day, as by that time they will have begun to work below.

ON THE HIVING OF BEES.—Our bees commonly settle on a bush or tree. If on a low bush, I place a board on the ground and place the hive on that; but if a high bush or tree, I use a table. At all events, I place my hive with the front side next the bees, and raise it on two small blocks about an inch. Then bend down the limb in front of the hive and jar them off on the board. They will soon all be in the hive. If the limb cannot be bent down in front of the hive, it is a good plan to spread a cloth on the table; that prevents hurting the bees when they fall on the board. I always keep perfectly still while they are swarming and let them have their own way.

ON THE MANAGEMENT AFTER THEY ARE HIVED.—Our bee house stands east and west, with an open front to the south. As soon as it begins to grow dark, I take them and place them in the house where they are to stand, with their fronts to the south.—After this they need no further care, except to examine for millers and worms, and give them frequently a lump of salt. In the spring I turn them up and examine them, and break out about one half of the comb, taking it clean as far as I go. The next spring break out the remaining side, in this way the bees always have new comb. The bees may be kept quiet during the operation by blowing some tobacco smoke into the hive previous to turning it over. They will soon come to activity again and feel as well as ever.

Home, N. Y.

C. A. HOWE.

ON THE MANAGEMENT OF WOOD LAND.

WOOD LAND where there is plenty of wood for fuel and other purposes, as in new and unsettled districts, generally receives but little, if any attention; but in older settled places, where the native forests are becoming scarce, and wood is in demand for fuel, the farmer begins to turn a little attention to his wood land, and finds to his sorrow that all his best and nicest timbered land is cleared and he has not an acre of good wooded land on his farm. The above is the condition of a number of farms in this vicinity, but it will not apply in all cases.

All wood land that is desirable to save requires some attention, especially where fire is apt to be let out into the woods in dry times by some careless or knavish person, and burn the woods over every few years. I would say guard wood lands with a watchful eye against fire; and in cutting timber for fuel and other purposes, be sure and not cut young and thrifty trees, if there is timber down and decaying trees that will answer your purpose. In cutting trees out of your wood lot, cut first those in the most exposed situation that are liable to be blown down by hard winds. Preserve with care young and thrifty sprouts and saplings. Cattle should be kept out of woods of small growth where young sprouts are continually

growing up and forming new trees; and I should recommend to keep all cattle out of wood land; and keep the underbrush thinned out where it is growing up thicker than it should stand to form a nice second growth grove.

By a judicious management I think a reasonable sized wood lot will keep a farm in fuel and timber, and grow all the time sufficient to replace that which is taken out for use.

ISAAC RANDALL.

Masonville, N. Y.

ON THE MANAGEMENT OF BARN-YARD MANURE.

The great object to be attained in making manure is to preserve all the *strength* (I will not use any big, blinding terms) of the manure. This comprises the whole thing, and it is easily done by never letting it *ferment* above ground. Horses, cows and oxen should always be stabled in our cold climate in winter. Their stables should have plenty of space behind them, a *tight* floor so as to place muck, saw dust, chip dung, or some other absorbent to retain the urine. The young stock, sheep and hogs should have a large yard, tight, warm sheds and plenty of straw, and other absorbents. There should be a tight bin or box under the shed and through the yard, having cross pieces two or three feet apart, so that one animal should not intrude without some difficulty on the next ones rights. These bins will prevent the fodder from getting "under foot" and prevent the hogs from rooting it. After the stock have eat what they will, clear the bins out, scattering it over the yard. To this add the manure and refuse from the stables and a quart of shelled corn to each hog. The hog is a wonderfully industrious animal, if there is plenty of corn for pay. They will turn the whole contents of the yard over once at least every day, mixing the whole together and add something into the bargain. Add to this in the winter as much swamp muck as you please—the more the better.

In the spring take this whole mass clean to the ground and carry it on to your land *before it ferments*. This is the secret. Spread it over the land intended for spring crops, or your summer fallow, and plow the ground six or eight inches deep, taking special care to haul into the furrow and cover it all up. Here it will decompose; the roots of vegetables will find it and you get it back again to your garner without any loss of the organic substances.

Some advocate the doctrine of *top dressing*. There may be very wet seasons when it may do good, but I venture to say that one load of manure plowed in fairly below the surface is worth six loads laid on top of the ground to dry and blow away. Look at the droppings of cattle and horses on meadows, lying all summer in a dry mass and the grass no larger near them than any where else.

JOEL HOUGHTON.

Adams' Basin, N. Y.

ON THE MOST ECONOMICAL MODE OF OBTAINING FERTILIZERS, OTHER THAN BARN-YARD MANURE.

This subject is too important and extended to be fully discussed in one short article, and I hope some of your able correspondents will do it full justice.—Having had some experience in the use of the various artificial fertilizers I will give you my views, not so much in hope of taking the "premium" as from a

desire to contribute my mite to the general fund of agricultural knowledge.

PERUVIAN GUANO.—I consider this one of the most valuable fertilizers yet discovered. It is used to an enormous extent in England, and all the efforts which have been made to manufacture an artificial fertilizer equal to it for wheat and other grain crops, have as yet proved abortive. Its use on the impoverished soils of Delaware, Maryland and Virginia has increased the value of these lands in the aggregate millions of dollars over and above the cost of the guano. On this point there can be no doubt.—Yet it must not be inferred from this that the use of guano on all farms will be profitable. In fact I am well satisfied that it will not. If the land without any manure will produce fifteen bushels of wheat per acre, 200 pounds of Peruvian guano would make it yield twenty bushels per acre. The guano would cost \$6, and where wheat is worth not more than \$1 per bushel, the use of guano entails a loss of \$1 per acre. If wheat is worth \$2 per bushel, there will be a gain of \$1 per bushel. The economy of using guano on such lands, therefore, depends on the price of wheat. The case is somewhat different on the impoverished farms of Delaware, Maryland and Virginia. The land there, in many instances, produces little more than the seed, and its cultivation would have to be abandoned but for the aid of artificial fertilizers. The use of 200 pounds of guano costing \$6 produces a crop of fifteen or twenty bushels per acre, on land that could not be profitably cultivated without it.—Farmers there must either use guano or abandon their farms, and it is easy to see that we should be wrong in concluding from the fact that guano is there used with profit, and has doubled and trebled the value of farming lands, that its use would be profitable in sections where wheat can be grown with profit without the aid of artificial fertilizers.

But cannot guano be used with advantage on other crops than wheat, in sections where the land will yield fair crops without guano, but which nevertheless will produce much larger crops by the aid of guano? *I believe it can.* Take for instance potatoes: In ordinary seasons an acre of potatoes yields more money, (not, necessarily, *profit*), than wheat. In the case of wheat, we have assumed that 200 lbs. of guano increase the crop *one-third*. If the same amount of guano will increase the crop of potatoes *one-third*, and a crop of potatoes is worth more than a crop of wheat, it follows that there is more profit from the application of guano to potatoes than to wheat. This is not a speculative conclusion merely. I have known 300 pounds of Peruvian guano increase the field of potatoes 100 bushels per acre. In other words, without guano, the yield was 100 bushels, and with guano 200 bushels per acre; and I might mention that the potato growers around Albany are perfectly satisfied that the use of guano is very profitable on their poor sandy lands.

The same remarks apply with equal truth to onions, carrots, tobacco and many other crops. On onions especially, I have found guano a very effective manure, and the relative high price of the crop makes its use very profitable.

SUPERPHOSPHATE OF LIME.—I have not had much experience in the use of the manures sold under this name in nearly all our large cities; but I have made superphosphate from bones, burnt and ground, and

used it with considerable advantage. I made it after a receipt given in the *Genesee Farmer*. Take 100 pounds of *ground bones*, (the finer the better,) and wet the bone dust with thirty pounds of water, and then add forty pounds of common oil of vitriol. In a few days this will form a plastic mass of rich manure, which I dry by mixing with it coal ashes, (wood ashes will injure it unless they are leached.) For lettuce, turnips, cabbage, celery, cucumbers, melons, and nearly all garden vegetables, except potatoes, this manure will be found very beneficial. It may be placed in immediate contact with all seeds without injury, and has a remarkable effect on the production on the small fibrous roots of the plant and pushes it forward rapidly to maturity. This effect is very marked on turnips.

I may here say that I would not be without superphosphate of lime or guano for my garden vegetables if it cost double its present price. Both these manures act rapidly, and are therefore under more immediate control. They can be applied at any time during the growth of the plant either in the dry or liquid state. They have the additional advantage too of being free from weeds.

POUDETTE, TAFEU, &C.—Every farmer should manufacture this article for himself, and not *lose his money* in purchasing the commercial article sold under these names. I have no hesitation in saying that a good, cheap commercial poudetre has yet to be made.

COMPOST HEAPS.—No farm or garden should be without its compost heap. The limits prescribed to this article, precludes allusion to their management in detail, or to the substances of which they might profitably be composed. I may be allowed to say, however, that leaves, weeds, and decayed vegetable and animal substances of all kinds should find their way to the compost heap. The soap-suds and other waste liquid from the house should be thrown upon it, and if you have sufficient loamy soil to prevent all possibility of escape of ammonia, the spare wood and coal ashes, lime, &c., might be scattered on it from day to day as they accumulate. Pieces of woolen rags, scraps of leather, hair, dead animals, &c., when thoroughly decomposed without loss, as in a compost heap, afford the best of all fertilizers—more powerful even than the best Peruvian guano. I consider the compost heap one of the “most economical modes of obtaining fertilizers, other than barn-yard manure.”

MINERAL MANURES.—Ashes, leached and unleached, lime, plaster, marl and other mineral manures, may be so used as to add much to the fertility of the farm. As a general rule, they are most useful applied to clover, peas, beans, turnips and other crops which obtain nearly all their ammonia from the atmosphere. Mineral manures seldom benefit wheat and other grain crops, but when applied to clover, peas, grass, &c., they increase their growth; and these crops, consumed on the farm, furnish an increased quantity of fertilizing matter of great value to the high priced cereals.

IRRIGATION.—In England and many European countries, nearly every farm has its water meadow, which is made to produce an immense amount of hay by irrigation. BOUSSINGAULT considers these irrigated low lands the most economical source of manure. There can be no doubt that we have in this country thousands of acres of land that might be irrigated at little expense, and which would furnish, without man-

ure, immense crops every year. Hay so obtained would not only be valuable food for stock, but the manure obtained from its consumption would serve to enrich the upland portions of the farm. The same remarks apply to low land which only needs a little draining to make it produce immense crops. Nature has locked up in many of our swamps and swales, mines of fertilizing matter.

PEAT AND SWAMP MUCK.—On many farms it is easy to get these valuable organic manures. I have had but little personal experience in their use, and should be very glad to hear from those who have, especially in regard to the best manner of using them.

BONES.—I had nearly forgotten the old bones which might readily be obtained in considerable quantity in many districts merely for the picking up. That they are a valuable manure all who have used them admit, and it cannot be doubted that if collected and crushed they would be a "most economical" fertilizer.

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ON THE USE OF LEACHED ASHES AS A MANURE

THE time has been when leached ashes were considered a great nuisance, so much so that ash hoppers were placed in some out-of-the-way place, and let remain there until the leached ashes formed such an embankment that it became absolutely necessary to remove the hopper to some other place. But those days have passed away, and leached ashes are now as highly esteemed here and elsewhere as plaster, and they do not cost farmers anything except the hauling and spreading on the ground. They have been found excellent for gardens, if put on at the proper time, and in the right quantity. I would recommend putting them on in the fall, and digging them in; if put on in the spring, there should not be as much used, and great care should be taken to have them *well mixed* with the soil. There is nothing better for grape vines: apply them every spring and fall, with other manures.

No farmer or gardener should be without a compost heap, and leached ashes should always be one of the principal ingredients. Leached ashes have been found valuable for wheat, if sown over the ground in the fall. Let a field be all of precisely the same kind of soil, sow it to wheat, and then ash one half and leave the other half unashed, and the difference is distinctly visible as far as the wheat can be seen. The part on which the ashes were applied will be greener and more thrifty during the whole summer, and when harvest comes the difference will be of that character which will convince you that ashes are not to be *despised* as being a *nuisance*; and unlike most other manures, their benefit lasts from three or four years, at least. On a slaty loam, leached ashes will perhaps have as much effect as on any other. On this kind of soil, if one half of the field is left without a dressing of ashes, and they are applied to the other half, there will be a marked difference in the two grain crops; and if then sown to clover, the half on which the ashes were put will yield at least one-third more hay than the other.

In the cultivation of the strawberry, leached ashes are very beneficial as a manure, as they make the ground open and porous,—a very desirable consideration.

Leached ashes are used with advantage on almost every class of crops, but especially as a dressing for

grass, grain and Indian corn, though their immediate effects are most perceptible on clover, peas, beans, &c. Meadows that have lain out until they have become covered with moss, and consequently produce but small crops of grass, may often be renovated by the application of leached ashes. Indian corn will be very materially benefited by the application of a little around the hills, while it is small; they should not be suffered to come in contact with the plants. They may be applied to thin, sterile soils, in small quantities, with good effect; larger quantities would be too exhausting, and should be applied only to soils that are rich in vegetable matter, unless in connection with other manures. They should not be applied after lime has stimulated the land to the utmost, nor two years in succession, unless mixed with other manures supplying organic matter to the soil, and thus benefiting instead of exhausting it. In those soils which already contain much alkali, the soluble parts of ashes will be of little utility, and the leached parts will be very beneficial, if judiciously applied, for few soils contain so much phosphoric acid as not to be benefited by its application. JOHN G. SAMPSON.

Laceyville, Harrison Co., Ohio.

ON THE USE OF UNLEACHED ASHES AS A MANURE

UNLEACHED ASHES, in my humble opinion, are of far more value than many people imagine. I have used ashes as manure every year since I commenced farming, and so satisfied am I of their fertilizing value that I would not sell a bushel for twice or thrice the price paid for them at the asheries. I will give a little of my experience in the use of them, as the best that I can say in their favor. The greatest increase caused by ashes that I have known, by actual measure, was on potatoes, used as a top dressing, in the year 1846. After dressing my corn with ashes that year, I had one bushel left, which I put on eight rows of potatoes, which yielded at digging time one bushel to the row more than any other rows in the field. It was a sod land, turned over in the spring, and planted without manure of any kind. I have no doubt that the one bushel of ashes increased my crop of potatoes eight bushels. The rows were about fourteen rods long.

For corn, I think ashes and plaster, mixed at the rate of two parts of ashes and one of plaster, and a small handful of the mixture put into each hill, the best way to use them. This mixture I prefer to either alone, or both, used as a top dressing. I think it has made one-half difference in the value of a piece of corn, judging from one row left without the ashes and plaster, not from actual measurement. It was on ground without manure of any other kind. Ashes alone, as a top dressing, are very beneficial to corn. After it has come up, I find where I have used it so the stocks are larger and taller, the ears usually longer and better filled out, and the corn sounder and some earlier.

For spring wheat I have found ashes beneficial, sown broadcast as a top dressing, but my experience has been small with them on wheat,—limited to a couple of trials.

On grass, such as meadow, (I have never tried ashes on any other,) if it has run out, so that it yields but light crops, a dressing of ashes, fifteen or twenty bushels to the acre, has increased the crop of hay

two, three, and even four fold, and for several years after good crops of grass have been obtained.

I have never used ashes on wet land, nor with any other manure, with the exception of plaster.

I. RANDALL.

Masonville, Delaware Co., N. Y.

ON THE USE OF SALT AS A MANURE.

SALT has been used as a manure for grass lands, meadows, &c., in all parts of the world, with varying success. It is said to sweeten the herbage, and it is well known that when salt is sprinkled over a portion of a pasture, cattle, sheep, and horses will immediately repair to the salted part in preference to any other portion of the field. It evidently renders grass more palatable to live stock. Upon consulting the old treatises on agriculture we find that salt has been used in various agricultural operations from a very early period. Salt renders the earth capable of absorbing the moisture of the atmosphere, a property of the first importance, since those soils which absorb the greatest proportion of the moisture of the atmosphere, are always the most productive. Salt when applied to land in small quantities promotes the decompositions of animal and vegetable substance; and it destroys vermin and kills weeds, which are thus converted into manure. It is a direct constituent or food of some plants, and it has been clearly ascertained that if salt is applied to a soil the vegetables afterwards growing thereon are found to contain it in increased proportions. It acts upon vegetables as a stimulant and preserves them from injury by sudden transitions in the temperature of the atmosphere. That soils do not freeze so readily as usual when salt is applied to them is well known. Salt also preserves crops of turnips, cabbage, &c., from injury by frost.

JOSEPH LEE.—C. W.

ON THE RELATIVE ADVANTAGES OF EMPLOYING HORSES OR CATTLE IN FARM LABOR.

ALTHOUGH I am decidedly of the opinion that cattle are the *cheapest* animals of the two, yet horses cannot be dispensed with; and the farmer should employ both. Horses are quicker and will get over more ground in a day than cattle, and this may be considered one advantage in employing them. But if cattle are slow, they are *sure*, and they have many great advantages over horses for farm labor. They can be kept at a much less expense; are not as liable to accidents as horses; will not run away if you cannot be close to them all the time; can be taken through the woods, swamps and other places where horses would be almost sure to get injured in some way. As a general thing they are truer at a heavy load, and are *much more easily managed* than horses. Suppose a farmer has a span of fine, well-trained horses which he uses in his farm labor, and changes drivers, or in other words, employs new hands, ten chances to one, they will soon be ruined by the awkwardness or ignorance of their new masters, for no two men manage horses just alike; and there are comparatively speaking, *very few* who know how to "pull" horses properly. I have seen steady, valuable animals almost ruined by the ignorance of new drivers who would balk and overload them. To "start" a pair of horses with a heavy load, especially if one is a little the "quickest," requires an amount of judg-

ment which many hired men will not exercise. Instead of having the dull, sleepy drones which farmers generally have, when they *do* use horses, they should have the best kind, strong, active and spirited; but it must also be remembered that every ignoramus who hires himself to the farmer at ten or fifteen dollars a month, *cannot work them*, and the farmer must either employ dull horses, or always drive them himself.

These difficulties are in a very great measure obviated by using cattle. An ignorant hand can be taught to work them easier than he can horses. They are not half so liable to be injured under his management, and there is not so much difference between men in working them, so that they soon understand a new hand. They are so slow and steady that they are not worried with a heavy load like horses, and consequently do not need so much attention. Horses are also liable to a great variety of diseases, from which cattle are entirely free. DAVID STREET.

Salem, Ohio.

ON CUTTING HAY, CORN-STALKS AND OTHER FODDER FOR HORSES AND CATTLE.

THE general way of feeding hay, straw, corn-stalks, &c., is very wasteful, and far from economical. Hay and straw are generally fed by the fork-full, and the stock are left to eat what they choose and trample the rest under their feet. But if all their feed is cut and mixed with a little meal, they will eat it up clean; and the amount thus saved would appear almost incredible. Even though a farmer raise the most abundant crops, he cannot expect to "get rich" if he *wastes* them; and there is a vast amount of money thrown away every year by careless feeding. Cattle will not eat corn-stalks up clean in their whole state, but when cut into pieces an inch or two in length and mixed with shorts or corn meal, they are eaten very readily. "A penny saved is two pennies earned," and I know from experience that cutting "long feed" for stock is an *excellent* way of saving pennies. It also prepares the food better for the stock, as it requires much less mastication.

Unless a horse-power cutting-box is used, the old fashioned long-knife box is the best I have ever met with, and I think I can cut as much with one of them in good order, as can be done with any patent, high-priced machine.

Salem, Ohio.

DAVID STREET.

ON THE BEST SYSTEM OF ROTATION.

It is useless at this day to adduce any arguments to prove the propriety, economy or necessity of a rotation of crops, this being, I believe, universally conceded, except, perhaps, by the possessors of the rich prairies or alluvial bottoms of the West.

The subject, then, comprises only the *best* rotation of crops; and this will vary according to the products cultivated in different sections of the country. Where Indian corn, oats, wheat and hay are the staple productions, and where grazing is practiced or cows kept for dairy purposes, the best rotation undoubtedly is the cultivation of those products in the order they are named, it being understood that the farmer depends on his own barn-yard manure as a fertilizer.

The first crop, then, should be Indian corn, planted

on the oldest pasture land—universal experience having proved that such land is the best adapted to this crop, owing, no doubt, in a great measure to the long rest of the soil from cultivated crops, and to the rich food furnished by the decaying sod. And in order to preserve the fertility of the farm, no more land should be plowed for corn than can be manured at the proper time in the course of the rotation.

The next crop should be oats, because they will grow on the partially exhausted soil better than any other crop. Some farmers sow wheat after corn, but it is not advisable, as the crop cannot generally be got in until too late in the season; and because it is attended with a great deal of labor, and when done the produce is generally small, unless the ground is manured; and because, if the land is sown with grass seed, grass will follow too soon after grass. Again, some farmers let the land lie fallow till the following season; but a sufficient objection to this practice is the length of time the ground remains unproductive. Oats, however, are a crop soon got in, and on ordinary land they are remunerative, and are harvested in time to give ample opportunity for getting in the wheat in season. Besides, the additional plowing and pulverising of the soil prepares it better for the grass which follows.

It is the practice with some to sow clover seed with the oats, and in the following season to plow down either a crop of clover or the depastured sod, and sow with wheat. This will almost always insure a better crop of wheat than can be raised on oats stubble; but grass does not succeed so well after it, and that is a very important matter. I pursued this course for eleven years, but was obliged to abandon it on account of the grass; for although the grass sometimes took finely and produced well for a year or two, yet it always would run out sooner than when sown along with wheat after oats. It is objectionable, also, because sowing clover with the oats and again with the wheat is clovering too much, and the land is apt to become "clover sick." Again, it is objectionable because the year that the ground lies in clover is in a measure lost. It is true it may be pastured in the fore part of the season, but cattle are not fond of clover alone, and do not thrive so well on it as on a mixed pasture; and if a crop of hay be taken off, it will at best be light, and will also be exhausting.

Wheat, then, should succeed oats, the ground having been well manured. With wheat, timothy seed should be sown, and, in this latitude, at the same time, and clover seed in the spring following. The grass, in ordinary seasons, will be good, and the timothy, or natural grass, will keep a sod on the ground till it is again plowed for corn.

Farms on which this system of rotation is adopted should be divided into seven or eight enclosures, having one for each of the crops of corn, oats and wheat, and the rest for hay and pasture. Here in Chester county, where this rotation is practised, and where farmers mostly turn their attention to grazing and feeding cattle, as well as raising grain for market, and where, too, it is customary to apply a coat of lime once in every course of crops, the land maintains its fertility, and large tracts of worn out land have been redeemed from sterility and made highly productive.

L.

Chester County, Pa.

ON CHEESE MAKING.

THERE are three principal objects to be kept in view in making cheese. (1.) To obtain as much cheese as possible from the milk. (2.) To make the cheese of such a flavor as to suit the prevailing taste, and (3) to make it so as it will preserve its soundness till market time.

The quantity of cheese depends upon several items: (1.) The preserving of the nights milk so as to prevent the rising of cream. (2.) The care used in working in the cream. (3.) The care in breaking the curd, and (4.) Settling it so as to prevent any of it from passing off in the whey and in the first pressing.

The flavor depends: (1.) Upon the quantity of rennet. (2.) The care in keeping the nights milk from the least souring. (3.) The finely pulverizing of the curd. (4.) The height of the scald, and (5.) The quantity of salt. In large dairies the nights milk should be strained into a tin vat, which is placed in a wooden one a few inches larger, so as to admit a quantity of cold water to stand around it to keep cool. In case there is not a stream of running water, in very warm weather it is best to change the water once before retiring for the night. In the morning what cream is up should be skimmed and warmed, and then added after the mornings milk is strained in.—Some take off the cream. This not only reduces the quantity of cheese from two to two and a half pounds for every pound of butter the cream will make, but materially injures the quality.

The milk should be at about 70° Fahr. when the rennet is introduced, and enough rennet used to bring it to curd in thirty-five to forty minutes. When it is properly curdled, cut it up finely and carefully with a curd cutter, and after setting a few minutes, work it up carefully with the hand until the curd begins to harden and becomes well separated from the whey, dip off the most of the whey and raise the the heat to about 100° (many say 115 or even 120) by hot water around the vat, stirring it constantly. Then dip it into a sink in the bottom of which is a rack with a strainer cloth over it; some prefer scalding in this sink. The whey is then drawn off, and the curd well pulverized by rubbing with the hands. The salt is now introduced and thoroughly mixed with the curd. The curd is then put in the hoop in which is a cloth of rather close texture, and pressed moderately for two or three minutes; then press harder, increasing the pressure gradually for about five or six hours. Then take it out of the first cloth, put on the bandage, which should be drawn over the corners about an inch, put a fine cloth, cut to shape about as large as the cheese, on the top and bottom, turn the cheese the other side up and press from six to twelve tons, until the press is wanted for the next cheese.

South Rutland, Jeff. Co., N. Y. H. HECOX.

ON UNDERDRAINING.

UNDERDRAINING, though practiced but by comparatively few, is one of the best investments a farmer can make, if he has land which requires it. Its effects are almost magical; if properly done it converts stiff clay and boggy mudholes, that would produce nothing but coarse water grass and "pollywogs," into a loose porous soil that will repay liberally the labors of the husbandman. Nature has been depositing her wealth in these low places during all time; and as they have not been cropped since ADAM was a little boy, we need not be at a loss to account for their exceeding

fertility, when the elements contained in them are developed.

In many sections of the country, draining tile cannot be procured at present without incurring great expense, but this need not be an obstacle in the way of underdraining, as a durable and effective drain may be made by filling with small stone. When stone are to be used, the drain should be dug one foot in width on the bottom, and in depth as the case may require, say from two and a quarter feet to three and a half feet. If the descent be not too great, lay a row of stones of uniform size, and as near square as they can be produced, on each side of the bottom of the drain, leaving a space of about four inches in width between the rows of stone; cover nicely with flat stone, and then fill with small ones, to within ten inches of the surface. Many who have had experience in draining, argue in favor of throwing all the stones in loosely in all cases. Where the descent is very rapid, this is decidedly the better way; but where there is no liability to wash, I prefer laying in a regular water course. When this method of draining is practiced on springy land, it serves a threefold purpose. It clears the land of small stone; it converts cold springy places into dry productive soil; and last, though not least, wherever a drain discharges, there will be good cold water for stock during the dry weather of summer.

Middleburgh, N. Y.

W. GARNSEY.

ON THE ADVANTAGES OF FORETHOUGHT IN FARMING OPERATIONS.

"Look ahead," says the tar to his comrade, when nearing the shore, "Watch the breakers." So say we to the farmer. In all your business, look ahead. No business can be successfully pursued without system, and least of all the management of a farm; and a well regulated plan of operations, is not the result of a random thought, but of reflection, based on knowledge, derived from experience, reading, or observation. The man who works his farm at random, labors to but little purpose. He may toil early and late—even to weariness, but disappointment will be the result. Much that he intended to do will be left undone for want of time, and what is undertaken will be but half performed, and often out of its proper season. Such a man wastes his time, his energies and his strength, in a round of toil and anxiety, without accomplishing much that is of any profit.

System requires a regular plan of business, properly digested by forethought, and the benefit of such a plan must be apparent, even at a casual glance. It saves time and money and strength, and a vast amount of vexatious care. Let a farmer, during the long evenings and stormy days of winter, aided by two or three reliable agricultural papers, plan his business for the coming season, and he will be prepared at the return of spring to enter upon it with vigor and rational prospect of success. He has well calculated the relative strength of his forces, and will therefore undertake no more business than can, in ordinary circumstances, be successfully accomplished. His work, therefore, invites rather than drives him. He has settled beforehand what fields to plant, what to sow with the various kinds of grain, where and in what manner to apply his manure and other fertilizers, and the best method of cultivating the various crops.—Each branch of business is therefore attended to at the proper season and in the best manner. The vari-

ous crops are not cultivated in a hurried and slovenly manner, but the work is well done.

He also reaps the benefit of forethought in another respect. He is not only up with his business in point of time, but his tools are all in working order at the proper season. Having a place for every thing, and every thing in its place, he knows where to find each article when wanted. His tools have been examined during his leisure, broken ones have been repaired, and new ones that are needed purchased. When ready to engage in any business, he does not have to waste time by running to the blacksmith or to the carpenter to get his tools repaired nor to his neighbor to borrow, where he is liable to disappointment, and to have his work thus hindered.

The same principle will lead him to have his seed in readiness for planting and sowing. Care is necessary in this respect, in order to have that which is free from a mixture of fowl seeds, and such as will readily germinate. The prudent, thoughtful farmer will save his own and not depend upon his neighbor. He thus knows the article he sows or plants, and is not liable to have his calculations disappointed by a poor one. If he wishes to exchange with a neighbor, or is under the necessity of purchasing, he does it in season, before the market is drained and is compelled to take an article comparatively valueless. He secures the best that can be obtained, and is not therefore liable to disappointment in harvest.

As a part of a systematic course of farming, the fences will all be put in repair at the opening of spring; timber will be cut at the proper time, and not left until the moment needed; and thus the owner is not necessitated to leave his plow standing in the furrow, nor his scythe in the swath to mend a dilapidated fence, to keep his own or his neighbors cattle out of mischief; he can lie down and sleep quietly at night, feeling that his crops are secure.

The advantages of forethought are also seen in the management of stock. The prudent farmer will keep no more than can be kept in a thriving condition.—He calculates well the amount of feed his farm produces, and therefore regulates his stock accordingly. He considers that an animal that is well housed, and regularly fed, and all its wants cared for will thrive on much less food than one that is fed at irregular intervals, and is left without shelter during storms and cold; he therefore provides comfortable shelter for his animals, as well as for himself, and a sufficient quantity of nutritious food. He is not obliged to spend all his income to purchase feed to keep his half starved stock through the winter.

Thus the advantages of forethought may be seen in every part of farm management; while the random farmer fails in his crops, exhausts his soil and spends his time in hurried, fretful, anxious toil, without hardly securing a comfortable livelihood, the man of pre-concerted system grows rich, his farm increases in beauty and value, he has more money in his pocket, more leisure for making improvements, and for the enjoyment of social life, and less anxiety and vexatious care. His farm becomes a model for imitation and he a benefactor to his race. His abundant harvests furnish a supply for his wants and those of his family, as well as the animals dependent upon his care; and when dreary winter approaches, they are all well cared for, and he can enjoy his comfortable fire side, and eye the gathering storm, or hear the tempest howl without, and heed it not.

HUBERT.

ON SUBSOIL PLOWING.

MUCH might be said on the subject of subsoil plowing; for instance, we might go on and state many experiments, and make many assertions, which should weigh very light unless backed up with reason. It is a well-known fact that soils vary much in character; hence it is necessary that a different mode of cultivation be adopted to suit different soils. Some soils are of a rich loam, on a subsoil of sandy gravel; to stir up this subsoil would be worse than useless, as the loam is already loose enough, and the surplus supply of water will readily sink in such a substratum and drain off. The same may be said of very sandy subsoils. But, on the other hand, if it be a *clay* soil, then the subsoil plow becomes necessary; and should the subsoil be what is commonly termed *hard-pan*, then the subsoil plow would be absolutely indispensable to good farming. For illustration, suppose we take a clay soil, plow it four or five inches deep, pulverize it well, and sow it with winter wheat; when the heavy fall rains come, the whole field will be covered with a bed of mortar; the wheat cannot grow; the subsoil is so compact that the water cannot sink; winter sets in, and the wheat is frozen up in a perfect bed of frozen mortar. When a thaw comes, then the soil is again almost in a liquid state; consequently, by the alternate freezing and thawing, the plants are nearly all destroyed. Then under the dry wind and hot sun of summer, the soil becomes perfectly hard, and the few remaining plants cannot grow. To prevent these evil consequences, very deep or subsoil plowing will have a good effect, by causing the water to sink below the roots, thereby causing the grain to grow vigorously; and when the drouth comes, this water will be brought back by capillary attraction to the support of plants. Such being the case, we may expect a luxuriant growth and a good crop.

Subsoil plowing also admits the air; the soil becomes deeply pulverized; consequently the roots will reach to a greater depth for food. The above reasons are applicable to all other grains, but more particularly so with respect to Indian corn. If the subsoil be deeply plowed, heavy showers will quickly sink, enabling you to attend the corn crop more steadily; and when the drouth comes, the water will again be brought back to the surface for the use of the plants. Hence it will be seen that deeply pulverizing all clay soils will greatly increase the chance of a good crop of any kind of grain.

Newcastle, Lawrence Co., Pa. WM. RENO.

ON THE ADVANTAGES OF STIRRING THE SOIL IN DRY WEATHER.

THAT frequent stirring the soil is the cheapest and most effectual way of protecting crops against drouth, is proved by the fact that a soil plowed or cultivated often in dry time is moist almost to the surface, while land that is neglected, is dry to a great depth. Some farmers from false reasoning infer that if a new surface is continually exposed to the sun and air, the effect will be to dry the soil still more. But the atmosphere in the hottest and driest weather is more or less charged with moisture, to prove which we have only to present a cold surface to the atmosphere, as a pitcher of ice water for instance, when the moisture of the air will be condensed and form in large

drops on the outside of the pitcher. By frequent stirring the soil it is kept loose and porous, the air can penetrate to a greater depth and coming in contact with the cold earth is robbed of its moisture by condensation, in the same manner as in the example of the pitcher given above. The oftener the soil is stirred the more new surface will be presented for action in the same manner; but when land is suffered to remain idle, a crust is formed on the surface which is impenetrable to the atmosphere and no such effect can take place.

C. C. WILSON.

Newfane, Niagara Co., N. Y.

ON THE ADVANTAGES OF SYSTEM IN FARMING OPERATIONS.

SYSTEM is very necessary and important to man, in whatever occupation he may be engaged, but especially so to the farmer, whose business is composed of so many parts. It is a thing of every-day occurrence to see plows lying in a corner of the field where they were last used, a hoe or a rake leaning against the fence, or a fork sticking in a manure pile in the barn-yard. Now this is not as it should be; every farmer should have, and every systematic farmer will have, a tool-house, and his tools carefully housed in it (except when in use)—a place for everything, and everything in its place—a time for everything, and everything in its time.

A farmer who thus manages his business, will find that he can get along without being hurried; he is always ready for his work as soon as it is ready for him—while his less systematic neighbor is in a continual hurry and bustle to keep up with his work, which, of course, is left in an unfinished state. Every farmer should adopt some regular system of business, and live up to it at all times, as he will lose more time and money in leaving his tools and utensils lying around exposed to the weather for two or three years, than would enable him to build a tool-house and do everything necessary to carry on his business with system and economy.

Mahoning, Pa. W. H. McCREERY, JR.

ON THE BENEFITS OF AGRICULTURAL FAIRS.

AGRICULTURAL FAIRS are calculated to have an influence of the most beneficial character upon intelligent farmers, affording them an opportunity of knowing what is going on in the agricultural world around them, and enlightening them by the experiments and improvements which are continually being made, and which are shown to the public at these places. Agricultural implements of every description are here exhibited; stock of all varieties and degrees of value meet his eye; and he has not only the advantage of perceiving the progress which is continually being made, but by comparing the different kinds of implements, and examining the comparative merits of stock, he may obtain great pecuniary advantages in his subsequent operations. If he wants any kind of stock, from a pair of fancy rabbits or Shanghai chickens to a blooded stallion or Durham bull, *here* is the place, and the only place, where he can find *any* and *every* kind, and take his choice from the *very best* of the country. If he wants an agricultural implement, from a cutting-box to a mowing machine or steam engine, *here* is the place to find *all* of

the *most improved* kinds together, and he is left to choose. In short, Agricultural Fairs are the great repositories of knowledge to the farmer, where he may improve his own condition by taking advantage of the skill and genius of his bretheren. When properly conducted, they are *among* the most valuable institutions of the country. DAVID STREET.

Salem, Ohio.

ON THE CULTIVATION OF PEAS.

THERE are several varieties of peas cultivated in this country, of which we think the large Black-eyed Marrowfat has the preference; it produces as well as any other, and is decidedly preferable for cooking, and commands a higher price in market, being worth at the present time two dollars per bushel.

Although it must be admitted that peas thrive best on a loose, well pulverized soil, yet they do well on some of the heavier soils. We generally get good peas on land that will produce corn or wheat. Sward land almost invariably producing good crops, provided it is turned over in the fall and plowed deep, thoroughly cultivated in the spring, and the peas sown as early as the land will permit, not less than three bushels per acre, well harrowed in and rolled down. They will yield from fifteen to thirty bushels per acre, and will be ready to harvest early, leaving the land in fine condition for winter wheat or rye.

Would not your Genesee farmers do well to turn under their clover in the fall, sow peas early in the spring, and follow with wheat, instead of summer-fallowing, and get their pea crop almost clear gain. If sown thick, say four bushels per acre, they will leave the land when harvested almost as clean and mellow as a summer-fallow. H. H. TAYLOR.

East Rodman, Jeff. Co., N. Y.

ON THE CULTIVATION OF THE PEACH.

FOR many years past the dwellers in Western New York have relied upon their peach trees to furnish annually a full supply of the choicest specimens of this most delicious of all fruit; and in former times this result seldom failed. The comparative exemption of this region from late spring frosts, and very severe cold in winter, have contributed much towards this state of things; and perhaps, more even than these, is the fact that we have been free from the destructive effects of yellows, which reduces the lifetime of orchards south of us to a few (say four or five) years duration. In this county it is not now difficult to find trees thirty years old and healthy still.

Of late years, we are aware of a very decided falling off in the productiveness of the trees, and also in the vigor of their growth; the trees do not retain that perfection of health in all cases which we formerly saw, and we look to the future with much solicitude.

The remarks which we have now to offer will have reference to cultivation of the fruit in our own region, and be somewhat affected by the facts above mentioned, but which we have not space to dwell upon. To succeed well in growing peaches, it is necessary first of all to secure a favorable location for the orchard; this should be upon land having a very thorough natural underdrainage; if sandy loam can be had it is preferable. A very thin sand will not give best quality of peaches; or most durable trees, but a warm, dry and rather rich soil should if possible be secured.

The earliest varieties should have warmest exposure to bring the fruit on in good season. Secure thrifty, one or two year old budded trees, of a few well poned varieties which will ripen in succession, from the earliest good hardy varieties, to the latest that is sure to ripen off handsome, well flavored fruit. There are many kinds of good peaches which are too unproductive to be worth planting, except to the curious amateur. If practicable secure the judgment of an experienced man in making up your list, and buy trees where you will be sure to get the *kinds* correct. Plant the trees in April, or the first of May, shortening the heads well back, and using care that the roots are never exposed to wind or frost.

The land should be deeply plowed before planting, and cultivated with some hoed crop all the time until the trees are in bearing, when no crop should be taken off, but the land kept clean and mellow with plow and cultivator, manuring with stable manure if the trees are not vigorous enough. Avoid planting too closely—twenty feet apart each way is near enough, and twenty-four is better.

When the trees come into bearing do not spare a little pains in thinning the fruit on very heavily loaded trees, do this when the fruit is half grown and the superior size and quality will be reward enough; overloaded trees always have insipid fruit.

Examine the collar of every tree in June and see that all the grubs are dug out, follow them under the bark with a stout knife and kill them. They destroy many trees, but never give them the "yellows."

Peach trees require but little pruning besides the removal of dead wood; we do not approve of the system of "shortening in," except in case of very rampant limbs, which disturb the proper form of the head. The fourth summer after planting a fine crop may be expected, and with good care ten years of bearing ought to be secured from hardy sorts.

The obstacles to peach culture here are mainly the curling of the leaf, which occurs just after the commencement of the growth of leaf and blossom, and the destructive effects of cold upon the tree and fruit. I am not satisfied that the curl is not caused by the cold of winter so affecting the buds as to prevent a healthy development of leaf. But whatever be the cause, the effect upon the tree is very injurious, causing the loss of foliage and a large share of the fruit. If it be very severe, the tree languishes for a considerable time, and only regains its vigor after a new growth of leaves and wood. I am not able to give any *remedy* for this disease; but the best counsel I can give is to plant only those sorts least affected by it, (for there is a great difference,) and to plant trees enough to answer as a protection to one another, it being always found that detached trees are far worse affected than those standing in the orchards; indeed, this has become so manifest that we cannot help observing crops upon the peach orchards, while our garden trees are entirely destitute of fruit. The effects of winter and spring frosts upon peach trees we have so little power to avert, that we can only say, plant and run the risk. The following varieties answer very well for the cultivator for market purposes:

Early York, (serrated leaf).....	25
Crawford's Early.....	25
Oldmixon Freestone.....	25
Oldmixon Cling.....	10
Red Cheek Melocoton.....	15

To these I would recommend the amateur to add Fay's Early Autumn, Early Newington, or George the Fourth, or Haines' Early, Cooledge's Favorite, Hill's Chili, Scott's Nonpariel, Langworthy's Late Rarripe, and Noblesse, or Malta. H. E. H.
Rochester, N. Y.

ON THE CULTIVATION OF APPLES.

LET your field have a northern exposure if possible. Spread, in the spring, at least fifty loads of good barnyard manure on the acre; let it remain until the grass is at least knee high, and then turn under; plowing at least ten inches deep. Back-furrow in beds sixteen feet in width, taking care to give the dead furrows sufficient descent to drain well, but not so steep as to gully. As soon as you have plowed under the grass and manure, sow one half bushel of buckwheat to the acre and harrow in well. In the fall just before the buckwheat gets sufficiently ripe to grow, roll down and plow under, plowing the same way, making the back and dead furrows come in the same places as in the first plowing. By so doing you will make dry beds for your trees, and the furrows will take off the surplus waters. In the spring plow same way as before, but not deep. Dig holes in the centre of the beds twenty-five feet apart, taking care to have the holes no deeper than the trees set in the nursery.— Place the tree in the hole and fill in with one-third compost and two-thirds soil, putting the dirt two inches above the level of the ground. Plant in the quincunx form, by doing which you save ground.

Now you may cultivate beans and root crops generally in your orchard, but never grain or grass. Manure once in three years, forking it in around the trees. Do this and you will never regret it. I know what I say.
G. C. LYMAN.

Lynn, Pa.

ON THE CULTIVATION OF THE PLUM.

THE great drawback to the cultivation of the plum, has been, and still continues to be, the ravages of the curculio, which is well known to every person who has ever attempted to cultivate plums. The next great evil is the black knot, which troubles trees in most localities. The best remedy for this is thorough cultivation, and to cut out clean all spots as soon as they appear.

It is generally known that the curculio will not deposit its eggs over paved walks, water, or any place where their young will not thrive when they fall to the ground. The most effectual way to exterminate this pest, (as practiced,) is to spread sheets on the ground, and jar the fruit that has been stung upon them.

The following scientific plan, which is not universally known, will bear considerable experimenting: It is well known that the plum is a marine plant, and where the salt spray breaks over them the whole crop ripens finely, while upon the heights above the whole crop is lost. For a remedy, apply salt lye or salt brine to the earth pretty freely, as far out as the branches of the tree extend. The young of the curculio cannot live in ground saturated with the above described liquid. If this proves to be an effectual remedy, it will be an important era in fruit culture.

Rochester, N. Y.

B.

ON THE CULTIVATION OF SMALL FRUITS.

STRAWBERRIES have excited considerable attention of late from horticulturists, and this has been increased by observing the improvement resulting from cultivation, and the enhanced value of the fruit. Much has been written about the necessity of selecting staminate and pistillate plants, or male and female; and so particular have some writers been as to prescribe precisely the number of each to be planted, in order that a specific ratio be observed. However true this may be *theoretically*, I am inclined to doubt the utility or superiority of the rule in its application. I believe that the following method of planting strawberries, and cultivating them, to be more practicable, certain and comprehensible than any I have seen: Prepare the ground (which should be rich, sandy soil,) by the application of good barnyard manure, leached ashes, or any other compost; after which plow deeply, mixing the manure well with the soil. When the ground is prepared carefully, as above stated, set your plants in rows, about four feet apart, the plants two feet distant from each other. If ever desirous of enlarging your strawberry bed, after the first plants are set out, go while the plants are bearing, and select the largest and healthiest, (those which bear the largest berries,) and if the weather is favorable you may immediately transplant them; and having sufficient female plants, the staminate, in sufficient abundance, will invariably be produced.

A far more important consideration than the pistillate and staminate rule in the culture of strawberries, is the *entire destruction of weeds*. I am inclined to doubt the advantages of that plan which prevents the vines from covering the entire bed, as I think experiments have demonstrated that they yield better when new vines are being added, and it is a known fact that in an uncultivated or natural state, this is the case. By the removal of the non-bearing plants and weeds, the remaining plants will have ample room for development, as well as being in a state to receive the light and heat of the sun.

RASPBERRIES are not so profitable as strawberries; and though they require less labor in their cultivation, are not so universally cultivated. A little exertion in planting some cuttings along your fence, and then of placing a slight frame to prevent them falling to the ground after they have attained a large size, will amply repay any one. To increase their number, you may thrust the tops of the bushes into the ground, and they will thereby take root.

CURRENTS generally thrive in almost any kind of soil, and are very easily cultivated. In setting currants, the soil, in the first place, should be well prepared by plowing or digging, and reduced to a very fine tilth, and should then be stimulated by warming and invigorating manure. A porous, or not too retentive subsoil, is desirable, with a small per centage of clayey matter in the surface soil. When the latter is deficient, it may be well to supply it. Into soil thus prepared, the cuttings from old plants—the fresh, vigorous wood of the previous year's growth—may be set, with an almost certain assurance of success. These should be cut off near the surface, and inserted in the lines or beds to the depth of six or seven inches, and the soil well compressed about them. The surface should then be covered with old, well-rotted chip manure, hay, leaves or straw, so as

to keep the ground at all times moist. They should be kept well weeded.

GOOSEBERRIES.—With good treatment, none of the small fruits produce more abundantly than the gooseberry. It succeeds best on a deep, sandy loam, with a northern aspect. It should be trenched, or else worked two spades deep, and enriched with well-rotted manure. To prevent mildew in gooseberries has been the object of horticulturists for several years past. If they are fully exposed to the rays of the sun, nothing short of mulching will prevent the mildew. In order to prevent the necessity of mulching, plant them on the north side of a board fence hedge or stone wall, two or three feet from either. Give them a liberal dressing of compost fall and spring, and keep down the weeds, in order that the air may circulate freely.

BLACKBERRIES, like all other small fruits, can be greatly improved by cultivation. The principal varieties are the Lawton and Highbush, the latter of which is a native of New England, and is generally very large.

JOHN G. SAMPSON.

Laceyville, Ohio.

ON THE MANAGEMENT OF A FARMER'S GARDEN.

BEING a farmer, and something of a gardener too, I thought I would attempt an article on the above important subject. I will premise by saying that no one should consider himself qualified to manage a farm until he has learned to manage a garden. The first thing in laying out a garden, is to select a proper site and soil. If a deep, rich sandy loam, with a southern or south-eastern aspect can be found within a reasonable distance of the house, there plant your garden. That the soil be rich and mellow is of the first importance, for few farmers will have the perseverance to make a good garden on a cold, compact, shallow soil.

The garden being located, do not enclose too much ground in your plot. The farmer must depend upon raising a good many vegetables upon a small space, otherwise his garden will very likely be overrun with weeds.

These cautions being observed, first select the ground for your permanent beds, such as strawberries, asparagus, rhubarb or pie plant, &c. If you care nothing for these luxuries yourself, the wife and children will, and the sight of their enjoyment will amply repay you for all your labor.

STRAWBERRIES.—You may transplant roots from last year's runners of the Large Early Scarlet, Burr's New Pine, Hovey's Seedling, or any variety that you know to be better than the above, in the poorest part of your garden, during the month of April. If you want luxuriant vines and few berries, plant on deep, rich soil, but if you prefer the berries to the vines, do as I tell you.

ASPARAGUS.—Make your asparagus bed as early as practicable in the spring, from roots two or three years old. Be sure to dig deep and manure heavy.

PIE-PLANT.—For your rhubarb patch, procure from half a dozen to a dozen plants two or three years old, and divide the roots according to the number of eyes, and set them in rows four feet apart, two feet in the row. By proper care you have here the material for the most delicious spring pie.

If properly attended to, these beds will keep good

for many years, with the exception of strawberries, which require renewing once in three or four years. The better way is to set a few plants every year, and then you are never without this delicious berry.

CURRENTS, GOOSEBERRIES AND RASPBERRIES should be planted in the garden—not round the fences—and kept cleanly cultivated. By the way, a correspondent of the *Genesee Farmer* asks for a remedy for the Currant Bush Worm. I had a row of currant bushes in sod along the fence, and several rows through the garden at right angles to that one. The latter were hoed several times in the season. For several years the bushes in the sod have been regularly stripped of their leaves during the bearing season, by a little green worm, while the cultivated ones have escaped untouched.

HOT-BED.—A farmer would do well to make a small hot-bed to forward a few York cabbage, tomatoes, cauliflower, celery, and a few hills of cucumbers.—The latter can be started on inverted sods and transplanted without injury. This process not only produces fruit much earlier, but enables one to get the start of weeds.

I would not recommend raising large beds of such vegetables as require much hand weeding, such as carrots, parsnips, beets, Black-seed onions, &c.; it costs too much labor. The English potato onion, or Top onions require much less labor and are earlier.

PEAS.—The farmer should have a succession of peas from the middle of June until the family gets tired of them. Beginning with the Early Kent, following with the Early Washington, and closing with the unrivaled Marrowfat.

BEANS.—I prefer the bush varieties of beans as you save the labor of poling them. Then, growing near them should be some of the best sweet corn, and then if the good wife don't make some succotash that will rejoice the children, it will be because she never heard of "down east."

But space will not permit me to notice all of the different vegetables which it is desirable to have in some nook or corner of the farmer's garden, so I will say in general, cultivate all the varieties that will be readily consumed in the family, and above all keep up a succession throughout the season—yes, throughout the year—and be assured it will improve the health, refine the taste, elevate the morals, and augment the happiness of the whole family.

Near Palmyra, N. Y. P. C. REYNOLDS.

REASONS WHY OUR AGRICULTURAL SOCIETIES SHOULD OFFER PREMIUMS FOR A PUBLIC EXHIBITION OF LADY EQUESTRIANISM.

YEARS ago, I remember to have seen a beautiful engraving of Cupid riding a lion, to show the power of love in subduing and controlling the most ungovernable of the brute creation. But may it not be questioned whether a skillful lady, riding a noble horse, does not present a more striking representation of power controlled by gentleness?

Ideas of beauty and taste are as varied as the human race, and yet I may safely assert that the sight of a woman gracefully, yet fearlessly, riding a spirited horse, having him entirely at her command, as if animated by her own ideas of grace and beauty, would excite admiration in every beholder.

More than this: female equestrianism is not only

a delightful art, but it is of all others the most invigorating and healthful. All intelligent physicians agree in the fact that horse-back riding is strongly conducive to health, and especially so to the health of ladies, whose occupations, for the most part, deprive them, by far too much, of the health-giving influence of pure, fresh air.

Why, then, should not every honorable inducement be presented to ladies to perfect themselves in the equestrian art? Why is it not only proper, but best, that our Agricultural Societies should encourage the "art?"

I know there are some whose ideas of "the eternal fitness of things" are somewhat shocked by the appearance upon our "Fair Grounds" of lady equestrians. But let me ask all readers, what rule of propriety is thereby violated? and what dictate of modesty is disregarded? You whose fine (?) sense of female delicacy is so much disturbed by a public exhibition of lady equestrianism, would be highly pleased with a private exhibition of the same; but where is the line of demarkation which makes the one censurable and the other praiseworthy?

I know that public exhibitions of lady equestrianism, like all other good things, are liable to abuse; but I most earnestly contend that, of themselves, they are "right and proper," and should be encouraged by Agricultural Societies. ANN H.

Madison, Ohio.

REASONS WHY OUR AGRICULTURAL SOCIETIES SHOULD NOT OFFER PREMIUMS FOR A PUBLIC EXHIBITION OF LADY EQUESTRIANISM.

1. *The place and occasion of these Annual Fairs are not suitable for an exhibition of lady equestrianism.*

The crowded state of the Fair Grounds with horses and carriages, and the throng of spectators surrounding a course of short curves, and many times actually blocking up the way, renders the place too much confined for a successful and safe exhibition of this kind. Under such circumstances, there cannot be, with either horse or rider, unaccustomed to such scenes, that unrestrained freedom which is essential to a fair and satisfactory trial.

Timid and shrinking, the rider is compelled to the most public display—to meet the gaze and hear the vulgar jest, often at her expense, of the lowest of the other sex. No young lady appears as a competitor under these circumstances, but does violence to those tender sensibilities which are a part of her nature, and to that delicate sense of propriety which she is so wisely taught to cultivate and foster.

2. *It proves inadequate to secure, in any tolerable degree, the object ostensibly sought.*

Few prizes are offered, and few therefore can be awarded. Few compete for the premiums, because few have been induced to prepare for the exhibition. These prizes, therefore, act as inducements to only a few to improve their equestrian skill. Those who are possessed of a well-trained pony are occasionally induced to try the experiment and compete for the prize. With much effort, from six to twelve have been found willing to brave the unpleasant circumstances of the exhibition at a State or County Fair; and these constitute the majority of all those who have been induced to pay any extra attention to the matter. Say from ten to twenty, in counties num-

bering twenty, fifty or one hundred thousand inhabitants, have spent a few afternoons to improve their skill, preparatory to the exhibition. At this rate, how very soon all the young ladies of the country will become expert equestrians! Let it not be said that all this is equally true of prizes offered for other objects. Other exhibitors have stronger inducements than the prizes, which rarely cover the unavoidable expense of the exhibition. The owner of a farm finds his inducements in the enhanced value of a "Premium Farm;" the owner of stock in the increased value of "Premium Cattle;" while the successful lady equestrian, in addition to a little silver, has the honor of a degree only of skill above her sisters, which will not greatly add to her market value.

3. *It is not necessary to secure the object.*

It may be desirable and important that this healthful and invigorating exercise should be more generally practiced, but no encouragement of this kind is needed to make it a popular recreation. If this is made to appear, no good reason can be adduced for offering premiums. And that this is true, will, I trust, require little argument to prove to the satisfaction of those who have observed (and who has not?) with what delight young ladies and girls seize every opportunity for a ride on horse-back. Indeed, they may be said to have a passion for this exhilarating exercise, so congenial to buoyant youth. Now, will such wait to have some Agricultural Society offer prizes before they will venture upon the experiment of a horse-back ride? They will wait so long as they are obliged to wait for a chance to ride, and no longer. How many fathers can testify to the impertunity with which they have been beset by their daughters to let them have "Old Dick" to go riding. We may, therefore, safely affirm that for fathers to furnish their daughters with pony, bridle, side-saddle, riding dress and whip, with an approving smile, are all the premiums needed to secure the practice to any desirable extent. If there are any young ladies so stupid, who, with these at hand, will not readily use them, no premiums need be offered. They will fail to bring them out.

If you wish your daughters to become skillful equestrians, furnish them with means of gratifying their love for this active sport. We ask not for prizes, nor for the honors of successful public contest. We are content with the privilege to gallop with our friends through the pleasant and quiet streets of our own dear village or neighborhood. With this, our success shall more than gratify the vanity of doting fathers, who may too much value this masculine amusement.

4. *There can be no object gained which will justify so questionable an innovation.*

We have seen that it is not necessary to secure the practice. What objects, then, are to be promoted by it? We see none, except it be to bring out the crowd, and to add a few dollars to the funds of the Society, by seeking to make its Annual Exhibitions more attractive by a display of lady equestrianism. This, we have reason to believe, is the real object sought in offering prizes. We cannot believe that intelligent men regard this measure at all necessary, even to make the practice universal; and we think they will not seriously pretend this to be their object. But, acting upon a well known principle, they hope to increase the interest, and fill the treat-

sury, by introducing a circus of ladies upon the course. Now, it requires no stretch of the imagination to see that this is a public endorsement of the circus. Why, these circusses must be useful institutions, to merit imitation and draw imitators from so high a source! They must soon become indispensable institutions of every town, so important are they! Is it well for these Societies to bedim their hitherto fair fame, even by a *seeming* recognition of so unworthily an aspirant for public favor and patronage, for the little that is to be gained to its funds? Is not this paying too much for the whistle? May not these exhibitions be made sufficiently attractive, in the pursuit of proper objects, to amply sustain them, without a resort to anything which can be regarded of doubtful propriety? Societies have not only lived, but flourished, before the introduction of this practice. What Societies have done, they may still do. So we do not find any good purpose answered by an exhibition of lady equestrianism.

5. *It is not the legitimate work of these Societies, and can receive premiums from their funds only in violation of the law creating them, and of the rules regulating their management.*

The New York State Agricultural Society, in conformity to the act of incorporation, has for its objects the "Improvement of Agriculture, Horticulture, Mechanic and Household Arts." The County Societies which have been organized under the law of 1855, and in conformity to it, have for their objects the "Advancement of Agriculture, Horticulture, the Mechanic Arts, and Household Industry." And the Board of Managers, in appropriating their funds, are restricted to these objects.

Now, to which of these departments belongs lady equestrianism? Very clearly it belongs to neither, and therefore can share the attention and funds of these Societies only in violation of their design and rules. This is a departure from the clearly defined pursuits of these Societies—a breaking over the barriers raised to secure the objects of their organization. It is opening a door through which other interests, of a more questionable character, may come in and claim their aid; for if they may leave their proper field of operations to promote one object foreign to their designs, they may also to promote others. And where can you fix a limit? It is readily seen, allowing this latitude, how easily the funds might be prostituted to the encouragement of cock-fighting, pugilism, horse-racing, and almost anything else which might promise aid in replenishing the treasury. Is it not better that these Societies be confined to their appropriate work, which is so vastly important, and not squander their energies and means upon foreign objects, however desirable they may be regarded?

6. *It will prove injurious to the proper objects and general interests of the Societies.*

Much of the interest felt in seeing the proper objects of the Society promoted will necessarily be transferred to this, as it becomes the predominant characteristic of the exhibition; and the time and attention so necessary to give success to other departments, must be divided with the Riding Match. This is true, not only in regard to the arrangements of the Board of Managers, but to the Examining Committees, and the exhibition itself. In these respects it is not only a neglect of the just claims, but an infringement of the rights of exhibitors, of which

they very justly complain. Its demands, also, on the attention of the community of spectators, draws them from the consideration of what is substantial and useful, and calculated to make them more successful farmers, fruit growers, mechanics and housewives, to what is mere amusement—thus defeating in a measure the grand object of these Societies. It will prove injurious to the interests and usefulness of these Societies, by repelling and driving from their support many of their most efficient friends and patrons. The admirers of consistency will neither support nor countenance the Society which leaves its ample, honored and proper field of effort, in violation of its great design, for the encouragement of any mere amusement, however specious. The cautious and prudent, the lovers and promoters of good order and morality, will not feel at liberty to give encouragement to anything of so doubtful a tendency. This alienation of so large a class of the friends and patrons of these Societies, cannot but prove injurious to their continued prosperity and success. A consistent and faithful adherence to the great design of these Societies, alone, can command the respect and secure the confidence of all classes of community.

Moscow, N. Y.

MARIA.

ON THE CULTIVATION OF FLOWERS.

EVERY woman has, or thinks she has, a taste for flowers; that is, she loves them when they are in bloom, admires their fragrance, their rich and gorgeous colors, and their endless variety of form and size. But, comparatively few know the real pleasure of cultivating flowers, and why? Because so many depend on their husbands, brothers, or gardeners to do for them what they ought to do for themselves, *viz*: prepare the ground, sow the seed, and keep the beds free from weeds. Now this would, for me, destroy half the pleasure of flower gardening. Nothing imparts more vigor to the body, and recreation to the mind, than a few hours spent early in the morning in the garden. I have heard many women object to this, on the plea that they could not find time in the morning. But let me say, few have had more cares than I have, with a family of nine children, all healthy and vigorous; and since my childhood I have ever had the care of a flower garden, doing the work with my own hands from first to last, with the help, in latter years, of my daughters—all busy, in doors and out, from the rising of the sun to the going down thereof. And well have I been repaid; for I have not only seen my flowers bud and blossom, but I have seen my daughters grow up healthy and active, their cheeks vieing in bloom with the roses they cultivate, and their minds improved and invigorated by appreciating all that is beautiful and lovely in nature, teaching them to "look from nature up to nature's God." Then let me urge all women, old and young, to cultivate flowers.

Perhaps some city miss will say, "Oh, some country woman wrote that, who has plenty of ground to cultivate." But let me tell such, that all my life time, till within the last three years, has been spent within the bounds of a city. Not a few have said to me, "How is it your children look so healthy, and unlike other children brought up in the city?" I only need to point to my garden and say, there is the secret—there is my fountain of health.

C. H. COLLINS,
Clay, Washington Co., Iowa.



Horticultural Department.

HORTICULTURAL OPERATIONS FOR MAY.

THE multiplicity of little things to be attended to this month, such as ventilating and shutting up green houses and hot bed frames, at sudden changes of the weather; shading, watering, fumigating with tobacco to kill the green fly on plants under glass; sticking and tying, cleaning and turning, washing the leaves, re-potting some and planting out other plants, make it for the gardener the busiest one in the year.

As a general thing, all the garden ground, where not already done, should be highly manured and spaded up as soon as possible; for this is the time for sowing the main crops of hardy vegetables. For small seeds and dwarf-growing crops, as onions, carrots, parsneps, dwarf beans, spinach, salsify, lettuce, radish, mustard and cress, &c., the ground should be laid out in beds five or six feet wide, with alleys two feet wide and their edges cut even to preserve a neat appearance. For tall growing plants, as peas, Lima beans, sweet corn, and others of procumbent habit, as cucumbers, melons, squash, &c., the ground can be laid out in large squares.

PEAS—As soon as the ground is ready, stretch a line across the square and draw drills, with a hoe, two inches deep and four feet apart; and if the drill be fifty feet long, it will take about one pint of peas.—To supply a family of six or eight persons with a dish every day, sow of the following varieties: Early Kent, Champion of England, and Knight's dwarf marrow. Three rows of each sown at the same time will come in succession and continue fit for use for a month or six weeks.

SWEET OR SUGAR CORN.—Hoe up little hills three inches high and one foot square and four feet from centre to centre. On the top of each hill sow the corn; bury it one inch deep; if three grow it will be enough; should it miss, sow again.

LIMA BEANS—Dig holes two feet square and one foot deep, and four feet from centre to centre; mix two or three shovelful of good rotten manure with the earth that comes out of the hole, and fill it in again; drive a pole ten or twelve feet long in the centre of each hole and plant five or six beans around it; bury them one inch. Three plants in a hill will be enough. Sow again if they miss.

STRING BEANS—In some sunny situation, sheltered from cold winds, draw a drill as recommended for peas, and sow early six weeks beans, about a pint to a drill of fifty feet. If more than one drill be wanted at the first sowing, make them two feet apart. To have a succession repeat the sowing in three weeks. As

these beans are very impatient of wet and cold, it is possible that the first sowing may partially fail. Examine them in five or six days and if found to be decayed, sow again directly.

ONIONS.—To secure a good crop of onions it is necessary that the ground be deep, rich and moist, and the seed sown early. Make the beds about five feet wide. Stretch a line six inches from the edge of the bed and the whole length, make a drill with a piece of stick, one inch deep; sow the seed thinly in the drill; draw the earth over the seed with the back of the rake. When up six inches, thin them to four inches apart in the row. These thinnings may be planted in rather poor ground or in the shade of low spreading trees, and will come in well for pickling.—Plant them in moist weather, or give a good soaking of water. Make the drills for the main crop one foot apart. Red Dutch and Red Portugal are good varieties; the former is the best keeper, but the latter the mildest flavored.

PARSNEPS AND BEETS.—Sugar or Hollow Crown parsnep, Early Bassano beet and the Long Blood beet may be sown in drills as recommended for onions, but two feet apart. When up two or three inches thin the parsneps to nine inches apart in the row, and the Long Blood beet to a foot apart from plant to plant. The Early Bassano beet may be thinned as wanted for use, pulling out the largest first and leaving the small ones to grow larger.

EARLY SHORT-HORN CARROT.—Sow in good ground in drills a foot apart, bury the seed from half an inch to an inch deep. When up keep clear of weeds; they may be thinned as wanted for use, pulling the largest first and leaving the smallest to grow larger.

SALSIFY.—Sow a good bed of salsify. It will be found very useful for winter and early spring use.—Sow thickly in drills one foot apart, as recommended for horn carrot; bury the seed about one inch deep; when up thin out to four inches apart in the row.

SPINACH—Sow a bed of round seeded spinach in drills a foot apart; bury the seed about an inch deep; when up thin out to eight inches apart from plant to plant; keep the ground stirred with the hoe, and clear of weeds.

CUCUMBERS.—For ridge cucumbers dig a hole two feet square and one foot deep; fill it with decomposed turfy sods and rotten manure, or mix rotten manure with the soil that came out of the hole and fill it in again. This will raise the hill three or four inches above the surrounding soil. Sow six or eight seeds about the centre of the hill and press them into the soil with the finger about one inch deep; cover them with soil and place a small frame, to be covered with glass, over them. It will also be well to cover the frame with milenet or gauze to keep off the bugs. Ventilate a little on all warm, sunny days, by tilting the sash or glass a little on the opposite side from which the wind blows, so as to prevent any cold air from blowing in and chilling the plants. Ventilate a little soon after the sun has begun to shine upon the glass, and shut up again about four or five o'clock in the afternoon, before the sun leaves the glass. Do not allow it to get burning hot in the morning before you ventilate, for it is the sudden changes which do the mischief. Where no milenet is used, they may require a little shading in very bright sunshine for a few hours in the middle of the day by shaking a little short grass or litter over the glass. Water when dry with luke-warm water. When they have made three

rough leaves pinch the top out of each plant to make them branch, and leave but three plants in a hill.

MELONS AND SQUASH.—These same remarks hold good for musk melons and water melons. Make the hills four feet apart in the rows, and the rows six feet apart for Cucumber and Early Christina musk melon; for Orange water melon six feet apart each way. The same remarks also hold good for summer crook-neck squash, and the Boston marrow or winter squash, only that they will require no pinching, and the latter planted eight feet apart each way.

TOMATOES.—About the first or second week will be time to plant out tomatoes. Plant them four feet apart each way. Choose the warmest and sunniest piece of ground that can be spared for them. Drive a stake, two inches square and four feet high out of the ground, at the foot of each plant; directions for training will be given next month. When planting, if it can be had, mix about a table-spoonful of Peruvian guano in the soil about their roots.

PURPLE EGG.—For vegetable egg dig a trench one foot wide and one foot deep; put in four or five inches of good rotten manure; fill the trench to its former level, with soil that came out of the trench; then dig and mix well together. The remainder of the soil lie along each side of the trench and form a sort of gutter to hold water, in hot weather. Plant your plants two feet apart along the middle.

CAULIFLOWERS.—Early cauliflowers may be planted in the same way, only make the trench two feet wide.

CABBAGE.—Early cabbage, or lettuce plants can be planted between the rows of peas of the second sowing. The spaces between the rows of peas of the first sowing should be left for the celery trenches; directions for which will be given next month.

JOSIAH SALTER.

THE APPLE TREE BORER AND BARK LOUSE.

MESSRS. EDITORS:—In reading the accounts of the ravages made by the borer and its kindred families, it occurred to me that perhaps a short account of the methods that had been successfully practiced as a remedy and protection, would not fall into utterly barren soil.

We all love good fruit; we all know that there is no fear of glutting the markets; we know, too, that paying \$1.50 per bushel for good, eatable apples, as has been customary the past winter, cannot be afforded by those of moderate means.

In Dr. Fitch's Report on Insects, in the *Transactions of the New York State Agricultural Society*, page 716, (1854.) it is stated that an intelligent fruit culturist at the West, (Illinois,) who had kept a pretty accurate account of his fruit trees, found that he had lost one in eight by the borer. A gentleman in the eastern part of this State, who had purchased a lot containing ten young apple trees, was told by the former proprietor that he must not expect fruit trees to do well there, as the soil was not congenial to them. On closely inspecting his purchase soon afterwards, and going to work with his knife, from these ten trees he dug out sixty worms. Several of the trees were almost girdled, and doubtless would have been so entirely, had not a timely check been put upon their operations. The same trees show for themselves that it was not the fault of the soil that they did not grow before.

The *borer*, in its winged state, as all observers are aware, deposits its eggs upon the bark, at or near the surface of the earth, but sometimes in the first forks of the tree. Each egg hatches a maggot, with no feet; this maggot eats its way directly downwards in the bark. At a later period of the season scrape off the outer dark colored surface, and you can easily trace the path of the young worm. A little blackish spot, like a wheat kernel, will show the place of deposit, and by cutting a little into the bark he may be found.

Now, how shall we protect our trees from his attacks? Experiments show that alkaline washes are directly poisonous to insects and their eggs and larvae, and one of the best of these, which every one has, or may have, is good common soft soap. A. B. DICKINSON says that a handful of it, placed in the axils (forks) of the lower limbs, is an infallible preventive. Whether it is so or not, experience shows it is beneficial. DOWNING recommended painting the body of the tree and the axils with a mixture of soap, sulphur and tobacco water. Dr. FITCH recommends a remedy, as tried by himself, as simple, sure, and easy of application: "The upper end of his burrow may easily be found by puncturing the bark with an awl, or even a stiff pin, directly above the orifice whence his castings have been ejected; then, with the point of a penknife, cut away the dead bark covering the upper end of the burrow, loosen the castings as much as can conveniently be done, and finish by pouring hot water from a tea kettle, or other convenient utensil, into the hole at intervals for a few moments, until you are certain, by its oozing out from the lower hole or otherwise, you have reached him." There is a beautiful instance of the application of a chemical fact in the above practice. Albumen (white of an egg) composes a large proportion of the substance of larvae and grubs. It is coagulated at a temperature of 180° Fahr., so that at a heat considerably below boiling water the destruction of the worm is certain!

The bark louse is probably the most destructive pest of all, and its ravages are increasing so rapidly, particularly at the West, that unless one is willing to work, and work faithfully, to defend his trees from their attacks in sections of country infested by them, he will reap but little reward for time and labor in planting out an orchard.

Mr. KIMBALL, of Kenosha, Wis., uses the following remedy: "He boils leaf tobacco in strong lye till it is reduced to an impalpable pulp, which it will be in a short time, and mixes with it soft soap, (which has been made cold—not the jelly-like boiled soap,) to make the mass about the consistence of thin paint, the object being to obtain a preparation that will not be entirely washed from the tree by the first rains which occur, as lye, tobacco water, and most other washes are sure to be. The fibres of the tobacco, diffused through this preparation, cause a portion of its strength to remain, wherever it is applied, longer than any application which is wholly soluble in rain water can do. He first trims the trees well, so that every twig can be reached with the paint brush, and applies this preparation before the buds have much swelled in the spring. Two men, strictly charged to take their time, and be sure that they painted the whole of the bark to the end of every twig, were occupied a fortnight in going over his hundred and fifty young trees."

THE EARTH, OR ANGLE-WORM

MESSEES EDITORS:—Most old gardens, and rich soils generally, are infested by the common earth, or angle-worm, much to the detriment of the appearance of the former, where neat walks and alleys are always desirable. These worms usually come to the surface after rains, bringing with them a portion of the soil, and leaving their casts and trails wherever they move. They also come up in heavy dews, (and are hence called dew-worm) with the same result. These facts are generally noticed, but few have studied their uses or sought out the part they perform in the economy of nature. The following, in substance, is drawn from competent authority.

A very important creature in the operations of nature, is the common earth worm (*Lumbricus terrestris*.) Destined to be the natural manurer of the soil, and the ready indicator of its improved state, it consumes on the surface of the ground, where they would soon be injurious, the softer parts of decayed vegetable matters; and conveys into the soil the more woody fibres, where they moulder and become reduced to a simple nutrient, fitting for living vegetation. It is also serviceable as furnishing the food of many animals, and is an example of an individual race being subjected to universal destruction. The very ant seizes it when disabled and bears it away as its prize; it constitutes throughout the year the food of many birds; fishes devour it greedily; the mole pursues it in the pastures and along the moist bottoms of the ditches, and burrows after it wherever it may hide.—And, though inhabiting the earth, many aquatic animals seem acquainted with it, and prey on it as a natural food whenever it falls in their way; frogs eat it, and the great water beetle is sometimes drawn up when it is the bait of the angler. Domestic fowls, having access to gardens, pursue it unceasingly; but with all the destroying agencies working against it, they seem constantly to increase in suitable situations.

These worms are tender creatures, and water remaining a few days over their haunts drowns them; they easily become frozen, unless they enter deeper into the earth to escape the cold. In the same way they go down to a depth of eighteen inches or two feet in extreme dry weather. We have found them knotted into a compact ball in the dry, hard subsoil—so hard as to require a pick to penetrate it. They are thought to deepen the soil—to make it more permeable, their holes serving as drains for surplus moisture. No doubt more is known of their habits, uses and abuses, but little or nothing is said of them by your gardening correspondents. We hope this imperfect attempt may call out something more satisfactory.

Niagara Co.

B.

PEAS SHOULD BE SOWN EARLY.—Peas can be sown much earlier than the usual time of making garden in the spring. I have sown them sometimes, in a warm spell in February, sometimes in March, and never failed having peas proportionably early from them. They need not be covered deeper than in the spring, with earth, but should have a covering of straw, leaves, or barn-yard manure. There is little danger of frost, as they bear cold equally with wheat, rye or the grasses. I once saw an experiment made of sowing peas in November; they grew well the next spring, yet I think they vegetate as early if sown in February as in November.

M. W.

Bradford County, Pa.

BLACK KNOT—HOGS VS. CURCULIO, &c.

MESSEES EDITORS:—For many years a good plum upon a farmer's table has been a rare sight in central New York, from the fact that the black knot made such havoc with the trees as to induce cultivators to give up in despair. But as we have been suffered to eat our fill from newly planted trees, for two or three years past, we will give our experience so that those who are hesitating whether to set out plum trees or not, may take courage. And here let me say that the most formidable antagonist to the plums is not the black knot, but the curculio.

We had given us a dozen nice young plum trees some years since, and after jolting the dirt off the roots in a twelve mile ride, replaced them in the soil, which was a good loan. They grew well and in due time blossomed, but in a few weeks the plums came tumbling from the tree. The next year we saved a few by sowing ashes and lime in the trees, and made a bed in the yard for a favorite rooster who disposed of the wormy plums as fast as they came down. The result was that the next year, despite the tumbling down of many, we had eight bushels of green gage and blue sauce plums.

Now if you have plum trees, or intend to set them out, fix your arrangements if possible so as to give hogs a chance to pick up all the wormy plums, which I think decidedly the surest way to circumvent the curculio.

Manure your trees with sink slops—they delight in that kind of treatment. Give them a sprinkling of salt, two or more quarts to a large tree, every spring, which will usually keep the knots from appearing, but if they do appear, and on some part of the tree which cannot be pruned off, then shave close with a knife, and rub on turpentine. It will "fix 'em." Now reader, if you can obtain some thrifty young plum trees, plant them; treat them as above, and if you do not feel repaid in a few years, I shall be disappointed.

N. D. C.

CULTIVATION OF CURRANTS.

MESSEES EDITORS:—The cultivation of currants does not come under the head of "Subjects for the Ladies," nevertheless, as it generally falls to their lot to gather them, prepare them for the table, and help to eat them, it is no more than just that they should know something about their cultivation.

Much has been written about growing currant bushes as standards. My experience goes to show that, in these parts where we have deep snows, this is not the proper mode, for two reasons: (1) the weight of the snow splits down the branches. (2) the insect often kills the bush outright by working in the body. I can point to rows of bushes nearly worthless from the first cause. One will say have them dug out of the snow. I have seen that tried, and the remedy was worse than the disease, for the limbs were broken and barked.

My plan is to place the cutting on rich, deep soil, with all the eyes in, and let them grow as they will. Every spring, after all the danger of mice is over, cut out all old and decayed branches and keep the sides of the rows raised on poles, which are let down in the fall, and the snow bears down the branches but does not break them. Keep them well mulched with chips or saw-dust, as that keeps the ground cool and moist, and they need no other culture.

Saratoga Co., N. Y.

MARY.

THE APPLE TREE CATERPILLAR.

MESSRS EDITORS:—The common apple tree caterpillar is becoming so prevalent that I think it should be noticed more frequently by the agricultural journals of the day, and the best means to extirpate the evil more thoroughly disseminated among farmers. I have seen a noble orchard entirely stripped of leaves by these insects. No orchard can flourish where these pests are allowed to have clean swing. Fruit cannot mature where the trees are stripped of their leaves, even if the blossoms escape, which rarely happens. The trees so infested must eventually die, and should it so happen that the insects become less in numbers by being "winter killed," or otherwise destroyed, the trees will require a number of years to recover the thrift and vigor lost by one season's neglect. One method of ridding ourselves of them is, when pruning in the spring, to give a little attention to this subject, and cut off all the eggs that may be discovered. They are easily distinguished, and once seen, will never be forgotten. They resemble a cluster of small eggs compactly glued together. If cut off at this time, the bud will not burst, so the little miscreants will starve before they can find food in another direction. Should you be so unfortunate as to overlook a few, they may very readily be detected by watching your orchard, when, on a bright shiiney morning before the dew has dried off, you will discover a small nest of a silvery appearance. These I invariably cut off with the twig to which they are attached and burn them. I think they will leave no seed behind them to perpetuate their kind, and if all would do so we should see but few of them in a few years, even on the wild cherry.

D.—*Gates, N. Y.*

CULTIVATION OF PLUMS

To have thrifty plums trees, and free from disease, procure stones from the common blue or horse plum. Freeze through winter, and in the spring crack what stones have not been cracked by the frost. Plant in beds close together. When two years old, take them up, cut off the tap roots, and plant in nursery form. If they grow thrifty, they will do for budding that summer. Bud about the 20th of July. If the buds do not grow, they can be grafted the next spring. When two or three years old from bud or graft, set them in your orchard, fifteen feet apart, always selecting a clayey soil.

Most varieties of the plum are subject to the black excrescence commonly called black knot. The best remedy for it is to cut off the diseased limb and destroy it, as soon as it appears.

The trees are often injured by slugs. They come on the tree about the end of June. If left on they destroy the leaves, which injures both the tree and fruit. They may be destroyed by scattering dry ashes or lime on the tree when the dew is on the leaves.

The curculio, one of the chief enemies of the plum, is a small brown fly, which stings the fruit when about the size of peas, causing it to fall soon after it is stung. There are several ways in which the fly may be destroyed and the fruit saved: one is to place a sheet under the tree, shake the tree, and the insects will fall on it, and they can be thus destroyed.

J. E. B.

Newcastle, Durham Co., C. W.

CULTIVATION OF PEACHES.

To BEGIN with, pits taken from healthy trees, natural fruit, are the best. Lay them out doors, where they will freeze, during the winter, and cover slightly with dirt to prevent their drying out. Crack, and plant in May, in rich soil. Bud from July to September, and cut the tops off the next spring. Transplant when two or three years old. Cultivate the ground very well every year, and prune off all superfluous sprouts.

When the trees commence bearing, enrich the ground well with manure, and sow a peck of ashes around each tree in the spring.

The orchard should be plowed sometime in May or the first of June, and again in the fall, after the peaches are gathered, taking care to disturb the roots as little as possible.

Beans and rye should never be raised in a peach orchard, and the grass and sods should be cleared away from around the trees.

High culture after the trees commence bearing will tell on the crops, both in quantity and quality.

Clarkstown, N. Y.

MYRON E. TANNER.

CURRENT BUSH WORM.—In the February No. of the *Farmer*, a correspondent asks for information respecting the currant worm. I think by the description it is the same that has appeared here in some gardens. They are easily got rid of, but require daily attention while they last, (which is a short time,) in order that none may escape. As soon as they show themselves, which they do generally in one colony, spread cloths under the bushes, and jar, when they will instantly web themselves down. Then with a stick break off their webs, and draw out the cloths and dispose of the worms. Follow this up a few days, and there will none be left to tell the tale.

They turn into a white miller that may be seen flying at night. There is also here a species of borer, that works in the stem, though I have never seen the insect. By the holes they make, they must be very small.

Mrs. I. C.

Saratoga Co., N. Y.

GROWING MELONS, &c.—In the February number, you ask for the experience of your readers on the subject of soaking seed previous to planting.—We used to practice that, but now have a better way for such as have no hot-beds. With a knife cut thin sods eight inches square, lay them on an old pan, or any vessel that can be kept in a warm place, with the grass side down. Put two or three inches of soil on the top and plant your seeds, a hill on each sod, a few days before you make garden. They will come up quickly. Transplant them by putting the hand under the sod and placing it in the hill. Cover the hill with a box having mosquito net on the top, which may remain on until the plants are too high for the box. This will protect them from the bugs, and keep the cold night air and winds from injuring them, and they will be much earlier.

A FARMER'S WIFE.

Saratoga Co., N. Y.

CELERIAC, or turnip-rooted celery, is cultivated in the same manner as celery, except that it does not need earthing up.

AN OHIO FARMER'S GARDEN.

TO MESSRS EDITORS:—In the first place I take one acre of ground, lay it off in strips six to twelve feet wide one way; back furrow each strip three or four times until a ditch is formed between them some eighteen inches lower than the bed. Then I back furrow a head-land at each end wide enough for two or three rows of potatoes.

Now the garden is ready for the manure. I fill the ditch with any kind of rough manure to the depth of six inches, one or two ditches at a time, as needed. I begin and back furrow, plowing from the center of the bed each way, and cover the manure to the depth of twelve inches, using a hoe and shovel a little, and make the ditch where the center of the bed was. Then I mark out lengthwise two feet, three feet, or any other width that I need, according to what I wish to sow or plant. I plant almost every thing in drills. I like a row or two of beets, a row or two of parsneps, carrots, peppers, cabbage, potatoes, corn, melons, cucumbers, &c., all deep rooted vegetables, over the center; beans, &c., in the side rows. When I wish any thing early, I go to the horse stable and with two good loads of horse manure fill a ditch, cover it as before, sow or plant over the center. This is my hot-bed: take two wide boards and set them along the rows, like the roof of a house, using them only when the weather is cold or during a cold rain.

I back furrow the head-lands for potatoes. I dress out a little with the hoe once, then with a small handy shovel plow. I plow almost every thing, even peppers.

The second year I fill, at leisure, the ditches with any kind of rough manure, except the one I wish for a hot-bed, and alternately change the center of the bed ever year.

I have uniformly had the earliest, largest and best of every thing that grows in the garden. One beet weighing (leaves trimmed off and washed clean) eighteen pounds; a cabbage head (every green leaf taken off and stump cut off close to the head) weighing fifteen pounds. When I commence my garden I deem 100 bushels of lime an indispensable requisite to make cabbages head, and make turnips sweet.

J. D. CHAMBERLAIN.

Waterford, Ohio.

CULTIVATION OF PEAS.—Plow or dig the land deep and mellow, and rake lightly; then plow or dig a trench one foot deep and one foot wide; cover the bottom of the trench with hog manure, two inches deep; then cover the manure with dirt four inches deep, and drop the peas lengthwise of the trench, about four inches apart, having two rows in a trench. Make the trenches about a foot and a half apart; cover the peas till the trench is nearly full. Sow about the last of April.

When they are about four inches high, hoe and bush them. At hoeing, fill the trench full.

A little plaster on the manure will improve the crop in a dry season.

Be careful to keep the weeds down between the trenches throughout the summer; it will take a good deal of pains, but the crop will be so much improved that it will pay. I prefer the Marrowfat.

E. G. ROCKWELL.

German, Chenango Co., N. Y.

CHERRY BIRDS.

MESSRS EDITORS:—Your correspondent BEMENT, in the last number of the *Farmer*, makes a very eloquent plea in favor of the birds, to which I give my hearty assent. But your correspondent has forgotten to name one, whose labors I have watched for several years. I refer to the Cedar bird, or as he is commonly called Cherry bird, or Currant eater. Although he may not destroy as many insects as some others, yet I assure you he is of vast help in gathering cherries. A few years since when my Baumann's May first came into bearing, I was fearful that some rogne might be tempted to steal them before I had a chance to taste, and so I covered the tree with a net. But one afternoon having occasion to leave home, I found on my return that the birds had crept under the net and taken every cherry; doubtless to keep them from the ravenous worms. A friend of mine had a fine large tree loaded with the same variety, and as soon as they began to turn red, the little warblers began their benevolent work, and although my friend would gladly have relieved them of a portion of their labors, yet with all his efforts he was hardly able to tell how a ripe cherry would taste.—But enough; I wish some of your able correspondents would give us a complete history of the life and labors of this insect destroying specimen of natural history.

J. P.

MY FIRST DAHLIA.

MESSRS. EDITORS:—Thinking it may interest and encourage some of your readers to persevere sometimes against hope, I will give a short history of my success in raising my first dahlia. I had but one tuber. After placing it in a box, only one sprout appeared; this I had put in the ground, and also the remaining part of the tuber, which was without a sprout, and apparently without an eye. In about six weeks it germinated, producing a feeble plant which struggled along for weeks. I concluded to assist it in its life struggles, and cut off all its under leaves and branches, retaining only the upper ones, and continued to prune it for a month. In September it had become—not a giant, neither was it a dwarf—but a medium sized plant, containing twenty-five blossoms and three distinct varieties, and about sixty buds, all on the stock at the same time. Many of the blossoms were quite circular, and so perfect were some of them that the eye, or disc, could not be seen; a few of them would have measured as large around as a common tea-saucer; but an untimely frost prevented many from blossoming. As this was my first effort, of course I was not capable of judging its comparative excellence, but I would like very much to have amateurs give their experience.

H. H. M.

Liverpool, March, 1857.

BLACK PEPPER, dusted on cucumber, melon and other vines, when the dew is on, is said to drive away the striped bug, and will do no harm to the plants.

“A GOOD HOUSEWIFE,” says PLINY, “will go into her herb garden instead of a spice-shop for her seasoning, and thus preserve the health of her family by saving her purse.”

Editor's Table.

APRIL PREMIUMS.—The following are the successful competitors for the premiums offered for the largest list of subscribers by the 15th of April.

1. I. W. BRIGGS, West Macedon, N. Y., 200 subscribers, \$50.
2. J. LITTLE, Seneca, C. W., 150 subscribers, \$30.
3. J. H. HANNING, Morristown, C. W., 103 subscribers, \$20.
4. JOHN HORTON, Eaton, Ohio, 100 subscribers, \$15.
5. SAMUEL GRAY, Reily, Ohio, 83 subscribers, \$10.

The above premiums are to be paid in agricultural books, and we desire the winners will inform us what works they wish and by what routes they shall be sent, and they shall be immediately forwarded.

PRIZE ESSAYS.—We have the pleasure this month of presenting our readers with a "Prize Essay number."—The essays are all short and practical, and cannot fail to be read with interest and advantage by every one interested in the cultivation of the soil.

We hope the respective writers of these prize essays will inform us what dollar book (or books) they wish and it shall be forwarded immediately.

OLD SEEDS.—We are not aware the fact has ever been physiologically accounted for, but it is certain that some seeds are much improved by keeping. For instance, gardeners not unfrequently carry melon and cucumber seeds in their pockets in order that the necessary maturation may be accelerated by the warmth of their bodies; and it is found that old seeds of these plants are more productive of fruit and less prone to run to vines than new seeds. Cauliflowers and most of the cabbage tribe are less liable to "bottom" or run prematurely into flower, while turnips bulb better, produce less top, and are not as liable to run to seed when grown from seed several years old as when raised from new seed.

THE POWERS OF REPRODUCTION BY SEED are immense. A single capsule of the tobacco plant contains about one thousand seeds; one of the common medicinal poppy, eight thousand; while the vanilla plant has been computed to contain from ten to fifteen thousand. Each of these produces from twenty to thirty capsules on each plant. Cryptogamous plants possess the power of reproduction to a still greater extent; common spleenwort is estimated to produce one million of seeds.

TO DETECT DISEASED POTATOES.—It is not always possible to tell by the eye whether a potato is entirely free from all disease or not. Prof. WAY says that a slice of a diseased potato will curdle milk in three or four hours if kept in a warm place, whereas a slice of sound potato has no such effect.

TO CANADA SUBSCRIBERS.—We understand that some of our subscribers in Canada have been compelled to pay postage on the *Genesee Farmer*. This is manifestly contrary to law and should not be submitted to.

ACKNOWLEDGEMENTS.—We are indebted to Prof. S. W. JOHNSON, of Yale College, for his excellent lecture "On the Relations that Exist between Science and Agriculture;" to C. L. FLINT, Esq., Secretary of the Massachusetts Board of Agriculture, for a copy of his address delivered before the Franklin County Agricultural Society, and also for a copy of the Transactions of the Board of Agriculture for 1855—(Mr. FLINT's article on the grasses we consider a valuable acquisition to our agricultural literature;) to the editors of the *California Farmer* for the "Official Report of the California State Agricultural Society's Third Annual Fair, Cattle Show and Industrial Exhibition, held at San Jose, October 7 to 10, 1856"—(it is an interesting pamphlet of 80 pages, and an honor to the State; to M. B. BATEHAM & Co., Columbus, Ohio, for one of the Spring Catalogues of their Nursery stock; to B. P. JOHNSON, Esq., for a pamphlet containing the proceedings attending the Dedication of the New York State Agricultural Rooms, at Albany, February 12, 1857; to EBEN WRIGHT, Esq., Corresponding Secretary of the Massachusetts Horticultural Society, for the Reports of the Committees of the Society for 1856, and a Schedule of Prizes for 1857; to ROBERT RUSSELL, Esq., of Kilwhiss, Scotland, for a copy of his lecture before the Agricultural Society of Scotland, on the Agriculture of Canada and United States; to the Hon. W. L. MARCY, for a copy of the Army Meteorological Register—a most valuable work, which we shall notice more at length at a future time; to J. M. THORNTON & Co., of New York, for a package of Chinese sugar cane seed.

WHO SHOULD DO THE MILKING?—Our offer of a premium for the best answer to the question, "Is it right to ask the women folks to do the milking during the busy season?" called out a number of replies. In the March number we promised to give extracts from these essays, and have to apologize for not doing so—at present. We still continue to receive articles on this subject. The essay of Mr. WOOD is the occasion of many of these communications. We give, at random, an extract from one as a specimen:

"Mr. D. S. WOOD says, 'shame on the man that asks a woman to milk the cows.' Now a few queries arise in my mind and I will give them vent. I wonder if 'Mr. W.' is married? I wonder if he built the house he lives in? and if so, if his heart did not exult over the thought that there he could cage his wife, and that although she might hop from base to dome at will, if she opened the outer door for any useful purpose she was 'out of her sphere.'" Furthermore, I wonder if Mrs. W. ever dare ask her leige lord to hold the baby, put some wood on the fire, or fetch a pail of water farther than the door? Wonder if said 'W.' does not think that the maidens of the olden time, who drew water for the camels, as REBEKAH, or gleaned in the fields, as RUTH, were rather low lived? I wonder if Mr. W. thinks there are bounds to the usefulness of either sex? He says, 'the question implies that this work does not properly belong to the women.' I grant it; and so indoor work, because esteemed less hard, is not considered man's business, but he is not a true man who feels himself insulted when in an hour of leisure he is asked by a hurried wife to assist her, and (the ladies at my elbow say) she is not a true woman who refuses to assist her husband or brothers in anything which she can do without slighting her accustomed work."

OUR columns are so crowded this month that we have been obliged to leave out several cuts engraved expressly for this number.

BEANS IN HILLS OR DRILLS.—One of our correspondents residing at Ashton, Wis., gives us the result of an experiment in planting beans in hills or in drills. The rows in both cases were three feet apart. The hills being two feet apart in the rows in the one case, and in the other the beans were scattered along the row "nearly as thick as peas." The result was that those planted in hills required much more labor to keep them clean, and the yield was only eighteen bushels per acre, while those planted in drills yielded thirty-six bushels per acre.

He finds it best not to plow the land till just before planting, say the first of June, as the land turns up loose and mellow and the beans get the start of the weeds.

THE PRINCIPLES OF AGRICULTURE UNIVERSALLY APPLICABLE.—Most of our farmers have an idea that the matter contained in an agricultural magazine published in Western New York is not applicable to *prairie farming*; but my experience is that good farming in the State of New York is good farming in Illinois or New Hampshire, and *vice versa*. With some allowance for soil, climate, and a hundred other things which the experience and judgment of every good farmer (in every location) will make, I am certain that our Northern Illinois farmers will lose nothing, and gain much, by having the experience and experiments of the able, scientific agriculturists and horticulturists of Western New York. HORACE STARKEY.

SPRING WHEAT IN KENTUCKY.—MR. B. DECKER, of California, Ky., sends us his method of cultivating spring wheat. Take a three or four year old blue grass or clover seed, break it up eight or ten inches deep the last week of August or first of September, and let it lie all winter.—The following March give another thorough plowing, turning the sod up again. Then harrow well, and about the middle or last of March sow from six to seven pecks of wheat per acre, and harrow crosswise or both ways.—The yield is usually from eighteen to twenty-four bushels per acre.

SPRING WHEAT.—An esteemed correspondent at Springhill, Bradford Co., Pa., writes that spring wheat is frequently sown too early in that section—the ground is plowed when too wet, and the consequence is that at harvest it is difficult to tell whether it was intended to sow wheat or timothy grass. In 1854 there was an unusual snow storm about the middle of April, and in consequence our correspondent did not sow his wheat till the 6th of May. This was considered entirely too late; but at harvest it was admitted by all to be one of the finest lots of spring wheat they had ever seen.

SOAKING BARLEY IN NITRE WATER.—Our esteemed correspondent, Mr. RICHARD FRANCIS, of South Cortland, N. Y., says he once soaked some seed barley in water containing saltpetre, and "was surprised at the increased length of the head, some having between ninety and a hundred kernels in them." It was the six-rowed kind. Soak about twenty-four hours.

SUBJECTS FOR PRIZE ESSAYS.—We intend to continue our offer of premiums for short essays, and shall feel obliged if our readers would suggest subjects.

MALE OR FEMALE PROGENY AT WILL.—I have noticed a number of articles on this question in the agricultural papers, and will give my experience, which I think will be a "settler" on this point. My practice is to put the bull to the cows after milking. Last season I had from five cows five male calves, but old "Spec" got in with the bull late in the afternoon, before milking time, and she produced a pair of bulls.

W. L. B.

Brandon, Vt.

THE RURAL ANNUAL should be in the hands of all about to commence gardening operations. It contains just the information they need, and more of it than many dollar books. Sent postage paid to any address, on the receipt of 25 cents in postage stamps. Bound in cloth 50 cents. Address JOSEPH HARRIS, Rochester, N. Y.

TO KILL LICE ON ANYTHING.—Take half a cent worth of Scotch snuff for each animal, dry it thoroughly and rub it into the hair the whole length of the back and both sides of the neck, just forward of the shoulders; repeat in eight or ten days, and the work is done.

Brandon, Vt.

THE wheat crop in this section does not look as promising as it did when the snow passed off in February. There are some complaints of winter-kill, yet as a general thing the prospect of a fair crop is favorable. Much less breadth of land, however, has been sown to wheat than usual in Western New York.

BLACK BEANS.—MR. D. VAN HORN, of Bennettville, Chenango Co., N. Y., sends us a sample of Black beans, which he obtained nineteen years ago in Sullivan Co., N. Y. He has cultivated them ever since, as well as many other varieties, but he thinks the *Black* the best string bean he has ever seen. We will give them a trial.

KEEP THE MILK ROOM SWEET.—Last fall, when the fruit was gathered, a quantity was placed in the milk room, and soon a change in the flavor was perceptible. Upon removing the fruit, no more of the unpleasant flavor was observed, showing conclusively its effect upon the butter.

E. A. T.

FALL PLOWING FOR BARLEY.—MR. ANDREW WILSON, of Prescott, C. W., informs us that he has made several experiments in regard to sowing barley on land plowed in the fall or in the spring, and in all cases the fall plowed land gave the heaviest and best crops.

THE quantity of water requisite to cause germination in some seeds is very great. DECANDOLLE found that a French bean, weighing 544 milligrammes absorbed 736 milligrammes of water.

THE promise of an early spring has proved delusive. We are now (April 21) enjoying (?) a heavy snow storm which will delay farming and gardening operations for some time, even under the most favorable circumstances.

CHOICE FLOWER AND VEGETABLE SEEDS BY MAIL.—See advertisement on last page.

A NUMBER of Book Notices, as well as much other matter, are necessarily omitted this month.

NEW ADVERTISEMENTS THIS MONTH.—A. GORDON & Co., of the Rochester Agricultural Works, manufacture PITT'S justly celebrated Horse Powers and Threshing Machines, with the latest improvements, as well as HYDE & WRIGHT'S Horse Hoe and Cultivator Plow, the Rochester Cutting Box, HILDRETH'S Gang Plow, &c. Farmers in want of any of these articles would do well to give them a call.

JAMES M. THORBURN & Co., of New York, offer a varied assortment of Agricultural Seeds, as well as of the Northern Sugar Cane Seed.

SAXTON & Co., of New York, the Agricultural Book Publishers, offer a number of valuable and reasonable Books, which they will send by mail, free of postage.

JOHN S. DYE, of New York, offers his Weekly Bank Note Detector, for one dollar a year.

Inquiries and Answers.

(A SUBSCRIBER.) We know of no certain remedy against the turnip fly. The best method is to sow them very thick, say one or two pounds of seed per acre, and thin out the plants when they are in the rough leaf and out of the reach of the fly. Anything that will stimulate the growth of the young plants can be used to advantage. Plaster will probably be of some benefit; but superphosphate of lime sown in drills with the seed is the best of all manures for turnips, and will push them forward so rapidly that the fly cannot hurt them. We have never seen a crop hurt when sufficient seed was sown along with superphosphate.

(A FARMER, Corinth, N. Y.) We know from actual experiment that sheep will not fat as fast when they are not permitted to drink all the water they wish. For an account of this experiment see *Genesee Farmer* for 1852, page 383.

(A YOUNG FARMER.) Plant the Chinese sugar cane as you would corn. Asparagus beds, if not already done, should be forked over and raked smooth, being careful not to hurt the crowns of the plants.

(A. I. P.) We have had no experience with unleached ashes as manure for broom corn, but think they would be beneficial. See prize essay on the cultivation of broom corn in this number, page 145.

(C. A. F., Newburgh, N. Y.) Your plums fall off the tree because they have been stung with the curculio.

The top branches of my cherry trees are affected with black accumulations having a grub inside. I should be glad if your correspondents would inform me of a remedy. R. F.—Trenton, C. W.

INFORMATION WANTED.—I am naturally a little inquisitive, and sometimes charged with asking foolish questions and being difficult to satisfy. If at present you think my questions foolish, you may answer me according to my folly or not answer me at all.

1st. If it is so (as many believe) that buckwheat will kill hogs and give old hogs the scratches; why is it? and would it remedy the evil to grind it or cook it?

2d Last fall while husking my corn I found several well formed cobs almost entirely without corn, three of them containing about as follows: No. 1, one grain; No. 2, two

grains; No. 3, twelve grains. If there is a natural cause for every thing, why is it that cobs are generally covered with corn, while some few grow with none or very little?

3d. Why is it that the rows of grain on corn-cobs are sometimes crooked, while as a general rule they are straight?

Last fall I found a middling sized ear on which the rows made a complete circuit of the cob, both ends being on one side, and the middle on the opposite side. I intend to plant a few grains from this twisty ear to see if it will produce twisty corn. J. H. HAMILTON.—Mercer Co., Pa.

ADVERTISEMENTS,

To secure insertion in the FARMER, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. TERMS—Two Dollars for every hundred words, each insertion, PAID IN ADVANCE.

NEW YORK STATE AGRICULTURAL SOCIETY.

PREMIUMS ON FARMS—1857.

Grain Farms,.....	Premium \$50 and \$30
Dairy and Grazing,.....	" 50 " 30

Competitors are desired to give notice to the Secretary before the first of July, so that the farms can be visited by a Committee appointed for that purpose.

FIELD CROPS.—Competitors should obtain the Regulations of the Society, so as to have their statements properly prepared. IL Greeley's Premium on one acre of Carrots is continued. Regulations will be furnished on application to the Secretary, and also a list of Premiums for 1857. B. P. JOHNSON, AGRICULTURAL Rooms, Albany, March 2, 1857. Secretary. April 1.—3t.

TO LOVERS OF FLOWERS.

BURIST'S FLOWER GARDEN DIRECTORY,.....	\$1.25
BRECK'S BOOK OF FLOWERS,.....	1.00

Will give you the directions you need for selecting the rarest and best flowers, and for their successful cultivation. These are the best books for amateurs.

Sent free of postage on receipt of price.

C. M. SAXTON & Co.,

Agricultural Book Publishers,

140 Fulton street, New York.

May 1.—1t.

NORTHERN SUGAR CANE SEED.

HAVING purchased from Mr. WRAY his importation of Chinese Imphee or Sorgho Seed, grown in France, under his own immediate inspection, (thereby insuring the utmost purity,) and described editorially by Mr. GREELLY, in the *Tribune*, we offer it for sale in quantities, at ONE DOLLAR A POUND, and in packets, prepaid by mail, at 25 cents, 50 cents, and \$1 each. This seed, so superior to any other in market, can be procured only from

J. M. THORBURN & Co.,

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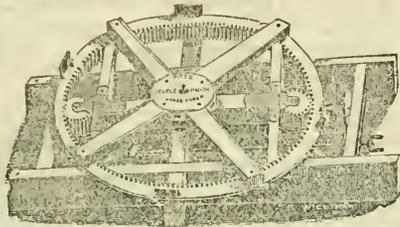
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Contents of this Number.

Rotation of Crops, 137
Items Suggested by the April Number, 138
Notes for the Month, by S. W., 139
Chinese Siskin Cane—Japan Peas, 140
Potato Raising in Iowa, 149
Management of a Prairie Farm, 141
Borers—Vine Bugs—Sulphur on Corn, &c., 141
Cultivation of Beans, 142
Reasons why Premiums should not be offered to Lady Equestrianism, 142
Cheese Making in a Small Dairy, 142

GENESEE FARMER PRIZE ESSAYS.

On the Cultivation of Barley, 142
On the Cultivation of Root Crops, 143
On the Cultivation of Beans, 144
On the Cultivation of Spring Wheat, 144
On the Cultivation of Rye, 145
On the Cultivation of Oats, 145
On the Cultivation of Broom Corn, 145
On the Management of Milch Cows, 143
On the Management of Young Stock and Working Oxen, 146
On the Management of Bees, 148
On the Management of Hives, 147
On the Management of Barn Land, 147
On the Management of Wood-yard Manure, 147
On the Most Economical Mode of obtaining Fertilizers, other than Barn-yard Manure, 147
On the Use of Leached Ashes as a Manure, 149
On the Use of Unleached Ashes as a Manure, 150
On the Use of Salt as a Manure, 150
On the Relative Advantages of Employing Horses or Cattle in Farm Labor, 150
On Cutting Hay, Corn-stalks, and other Fodder for Horses and Cattle, 150
On the Best System of Rotation, 151
On Cheese Making, 151
On Underdraining, 151
On the Advantages of Forethought in Farming Operations, 152
On Subsoil Plowing, 153
On the Advantages of Stirring the Soil in Dry Weather, 153
On the Advantages of System in Farming Operations, 153
On the Benefits of Agricultural Fairs, 153
On the Cultivation of Peas, 154
On the Cultivation of the Peach, 154
On the Cultivation of Apples, 155
On the Cultivation of the Plum, 155
On the Cultivation of Small Fruits, 155
On the Management of a Farmer's Garden, 156
Reasons why our Agricultural Societies should offer Premiums for a Public Exhibition of Lady Equestrianism, 156
Reasons why our Agricultural Societies should not offer Premiums for a Public Exhibition of Lady Equestrianism, 157
On the Cultivation of Flowers, 158

HORTICULTURAL DEPARTMENT.

Horticultural Operations for May, 159
The Apple Tree Borer and Bark Louse, 160
The Earth, or Angle-worm, 161
Peas should be Sown Early, 161
Black Knot—Hog vs. Curculio, &c., 161
Cultivation of Currants, 161
The Apple Tree Caterpillar, 162
Cultivation of Plums, 162
Cultivation of Peaches, 162
Currant Bush Worm, 162
Growing Melons, &c., 163
An Ohio Farmer's Garden, 163
Cultivation of Peas, 163
Cherry Birds, 163
My First Dahlia, 163

EDITOR'S TABLE.

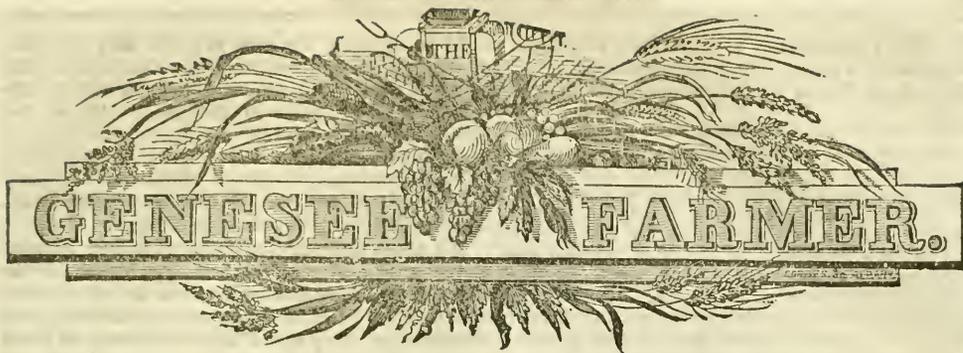
April Premiums; Prize Essays; Old Seeds; The Powers of Reproduction by Seed; To Detect Diseased Potatoes; To Canada Subscribers; Acknowledgements; Who Should do the Milking, 164
Beans in Hills or Drills; The Principles of Agriculture Universally Applicable; Spring Wheat in Kentucky; Spring Wheat; Soaking Barley in Nitre Water; Subjects for Prize Essays; Male or Female Progeny at Will; The Rural Annual; To Kill Lice on Anything; Black Beans; The Wheat Crop in this Vicinity; Keep the Milk Room Sweet; Fall Plowing for Barley, 165
New Advertisements this Month; Inquiries and Answers, 166

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JOSEPH HARRIS,

Publisher and Proprietor, Rochester, N. Y.



CULTIVATION OF RUTA BAGAS AND TURNIPS.

COLSA (*Brassica campestris*) is found apparently wild in Lapland, Spain, the Crimea, and other parts of Europe. Unlike the cabbage, (*B. oleracea*) it does not appear to be a maritime plant. In its natural state it has a slender root, and an upright, smooth, branching stem, not much exceeding two feet in height. The ruta бага, or Swedish turnip, is supposed by DE CANDOLLE to be a variety of *B. campestris*, analogous to *Kohl rabi* among cabbages, but with the root swollen instead of the stem. It was introduced from Sweden into England about the end of the last century, and has always preserved its distinctive characteristics, except when crossed by the common turnip. In its original pure condition, it

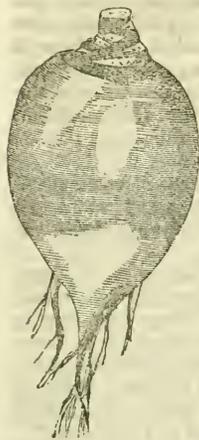


FIG. 1.

is a flattish, globular root, with a very fine tail, a narrow neck, and a hard, deep yellow flesh, capable of resisting a much greater degree of cold than the common turnip.

There are at the present time eleven varieties of ruta bagas commonly cultivated in Great Britain. We here present engravings of three of the best of them. *The Common Purple-top Swede*, (fig. 1,) is one of the oldest varieties. It is very solid in texture, hardy, and not apt to run to seed. It grows deep in the ground, and requires a black or loamy soil, of considerable depth. *Skirving's Improved Purple-top Swede*, (fig. 2,) was originated by Mr. WILLIAM SKIRVING, of Liverpool. It is a very popular variety in England, and has been extensively introduced into this country. It differs from the former



FIG. 2.

in the more oblong shape of the bulb, having a longer neck, and standing more out of the ground.

It is also more liable to run to seed in the fall,—a very great drawback in this country. It also contains, according to an analysis made by the writer at Rothamstead, *less dry matter* than any other variety of ruta bagas we are acquainted with. In fact, fifteen tons of the common ruta бага contained as much nutritious matter as twenty tons of this improved variety. On the other hand, it is a very free grower, comes early to maturity, and keeps well when stored. It is a good variety to sow on thin soils and on hard clays, because of the slight hold it requires of the ground. *Laing's Improved Purple-*

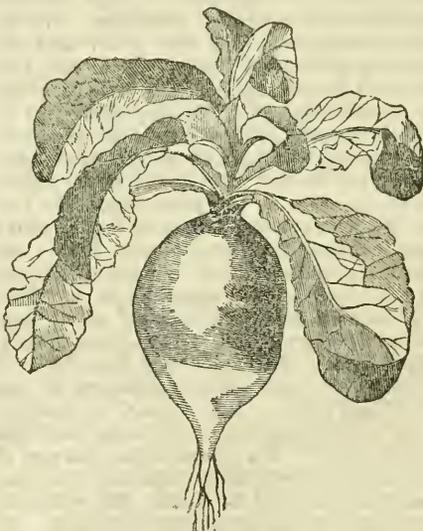


FIG. 3.

top Swede (fig. 3) differs, according to LAWSON, "from all hitherto known varieties of Swedish turnips, in having entire cabbage-like leaves, which, by their horizontal growth, form a thick covering to the soil, thereby materially checking the vigor of autumnal weeds." In point of shape, hardness and quality, it is superior to all other varieties. It grows late in the autumn, and is not suited to a climate where winter sets in early. It has little or no tendency to run to seed in the fall, and even in the spring, when set out for seed, it is a fortnight later in commencing this function than any other variety of ruta бага. It requires good land, in high condition, and,

under such circumstances as have been mentioned, its cultivation is strongly to be recommended.

An eminent Scotch writer well observes :

"The introduction of the turnip to field cultivation, is undoubtedly one of the most important events that has occurred in the history of British agriculture. Had the turnip still continued to be what it originally was—a mere garden plant, cultivated only for culinary purposes—it is no exaggeration to say that Britain would not now have occupied the high position she now enjoys among the nations of the earth, whether as regards agriculture or commerce. Without the turnip, rotation of crops would have been still limited to weedy corn [grain] and foul pastures; the production of butcher meat would have depended on pasturage, and consequently the great mass of the population must still have been condemned to a farinaceous diet or salted rations in winter. The cultivation of the potato would have increased to such an extent, that the whole of Britain must now have been what Ireland lately was. In Scotland, especially, has the introduction of turnip cultivation shown how vast are the changes which spring from apparently trivial causes."

We quote the above remarks, for the purpose of showing the value placed upon the turnip in Great Britain. On all the light soils of England, one-fourth of the arable land is annually sown with ruta bagas and turnips. We are well aware that the climate of this country is not so well adapted to the growth of root crops; but it is certain that we might cultivate them to a greater extent with advantage. We believe that as large crops have been grown here and in Canada as in England. As a general rule here, farmers sow a little turnip seed, and leave the plants to take care of themselves. If they escape the attacks of the fly, and produce a few fair bulbs, well; if not, no matter. In England, on the other hand, more labor and expense is bestowed on the cultivation of turnips than on any other crop. We have known fifty dollars an acre expended in the cultivation and manuring of a crop of ruta bagas; and twenty dollars is a low average estimate. MORTON'S *Cyclopedia of Agriculture* estimates the "total expense of growing an acre of turnips" on a "large class of medium turnip soils, in average condition as to cleanliness," at £85.2 per acre (say \$40). In East Lothian, the same authority estimates the cost at £103.6 (say \$50). "Does it pay," we hear our readers ask, "to expend so much money and labor on a single crop?" We believe it does not pay, *directly*. In other words, the turnips cost more than they are worth as food for stock. But, *indirectly*, turnip culture is undoubtedly very profitable. An English farmer, of great experience, once said to us, "Insure me a good crop of turnips, and I will insure you good crops of everything else in the rotation." In popular language, *turnips draw largely on the atmosphere for their food*; and, when grown and consumed on the farm, furnish a large quantity of manure of great value for the cereal crops which follow. Then, again, turnips are a "fallow crop." If they were not grown, the land would have to be fallowed, in order to destroy the weeds and prepare it for wheat. In considering the economy of turnip culture, therefore, we must not charge the whole expense of cleaning and preparing the land to this crop, as much of the cultivation would be needed if turnips were left out of the rotation. Neither is it

right to estimate the crop as worth only the value of the beef, mutton and wool which its consumption by cattle and sheep produces, without taking into consideration the value of the manure left on the farm. According to such an estimate, turnip culture in England would be a losing business; but taking all things into consideration, it will be found not only profitable, but, with our present knowledge, absolutely indispensable to good agriculture.

We admit that our climate is not as well adapted to the growth of root crops as that of the British Isles, but at the same time we think no one will contend that if we took as much pains in manuring, and cultivated as highly as the English farmers, we could not grow fine crops of mangel wurzel, ruta bagas and turnips. These roots *must have* good cultivation, and *plenty of room*. They are generally left too thick. Fair crops of turnips and ruta bagas are sometimes obtained in very favorable seasons by scattering the seed broadcast on clean land; but as a general rule such treatment must inevitably result in failure. It is an old saying, "slovenly farmers get good crops once in seven years," but during the other six—with root crops especially—their experience is anything but satisfactory. It requires more labor, but it will, in nine cases out of ten, *pay better* to sow in drills two to two and a half feet apart, and thin out with the hoe one foot apart in the rows, than to sow broadcast.

We have received quite a number of communications on the cultivation of root crops, and cannot conclude this article better than by giving a few extracts.

Mr. F. BOWEN, of North Boston, N. Y., says, "Turnips should be sown on a deep, rich soil, broadcast, and harrowed in. They may be sown any time in July, but best about the first or second week. Ruta bagas can be sown in June, in rows two feet apart, and twelve to fourteen inches in the row. There is no crop a farmer can raise which yields so much food for his stock, or is so well adapted to the climate."

Mr. JAMES L. THAIN, of Lake Co., Ill., well observes: "The cultivation of root crops is one of the most important items of stock raising. The land designed for ruta bagas should be plowed in the fall, so that the ground will be mellow, and the stubble and manure well rotted, unless they are to be manured in the drill, which is far the best, as the roots come in more immediate contact with their food. If manure is put into the drill it must be well rotted. Having the land prepared smooth and of fine tilth, commence running the drills twenty-eight inches apart, opening them with two furrow; then spread the manure up the open furrows; close them with two furrows, thereby leaving a crease on top for the seed. If not provided with a seed drill, take a tin tube one foot long and one and a half inch across; bore some holes in the bottom; tie a rod three feet long to it; take the rod in your hand and walk at a good pace, shaking it as you go along; then take a roller and pass over the rows once. The quantity of seed required to the acre is one and a half pounds. Some think one pound is sufficient, but we must make allowance for the fly and bad seed. The best time to sow them is from the 20th of May to the first of June. Some object to sowing them so early, but when they are sown late, they do not come up as well—the ground getting so dry. Another thing, the fly hurts them more, and if sown later they cannot be properly taken

care of before harvest, as they need to be hoed twice; the first time when they are in the first leaf, thinning them out to nine inches, the second time to clear them of any weeds that may be among them. A narrow cultivator or shovel plow can be run through the rows, which, if straight, allow you to go very near the plants, thereby leaving little for the hoe to do. A man can hoe one-third of an acre the first, and one acre the second hoeing."

A Canadian correspondent who cultivated twenty acres of ruta bagas last year, and who intends sowing thirty acres this year adopts the following method: "I plow the land in the fall very deep, thinking it important to stir some of the subsoil. During the winter draw manure into the field and put it in a round heap, with a flat surface to catch all the rain. As soon as the ground is in working condition in the spring, plow again; work down fine with cultivator and harrow, and about the first week of June commence ridging twenty-eight inches apart; fill the ridges with good rotten dung; then split your rows to cover the dung; roll down with a light roller, and from the 10th to the 20th of June drill in about a pound of seed per acre. Skirving's or Laing's improved are excellent varieties. Last year I tried a new kind called Marshalls, which is very good.

"When the plants are nicely in rough leaf go through them with scuffler or horse hoe; then hand hoe, leaving the plants twelve inches distant from each other—if the ground is very rich a little more. When the plants have got a little hold of the ground scuffle again, and go over them with the hand hoe, cutting out all weeds and double turnips. I consider turnips and ruta bagas the most profitable crop the farmer can raise."

Mr. MYRON E. TANNER, of Clarkstown, Rockland Co., N. Y., says: "For raising ruta bagas, after breaking up your land, ridge it and let it lie so for a while; then run a deep furrow through the center of each ridge and fill it with fine manure, after which cover it slightly with earth and sow your seed. Keep your land well worked between the rows, and when the tops are large enough so that they are out of the way of the flies, thin them out to about eight or ten inches in the rows."

ITEMS SUGGESTED BY THE MAY NUMBER.

MAY-DAY is here, but the *Farmer* was one day in advance, ready for the leisure given by a stormy afternoon for its perusal. And it has been some compensation for the delay in the work, to see the grass grow greener beneath the rain, and to get some suggestive ideas from our worthy farmer's club—for your journal, with its host of practical farmer correspondents, is better than any farmer's club ever yet organized.

ROTATION OF CROPS.—Some ideas contained in the leader are new to me. I accept them, thankfully. Circumstances must guide the *thinking* farmer in the course to be pursued; and if he has a clear idea of the principles on which crops should rotate, he can act intelligently in the matter, and give that rotation best and most convenient. Now, I meant to have grown clover after wheat, but the seeding failed from extreme drouth, so I shall apply barn-yard manure and plant corn and potatoes, and seed again to clover on barley next spring. This "leaves over" a

green sward one year longer than intended, and I shall try, if possible, fall manuring, to be plowed under for corn next season, as recommended by Mr. JOHNSTON and Prof. VOECKLER.

CROW-SCARERS.—The application of sulphur to the hills of corn is a new notion—we find coating the seed with tar effectual. Place your seed in some convenient vessel—we use an old half bushel—put in good tar, enough, when stirred with the corn, to coat thinly each kernel, then add a handful of plaster, stirring again until the corn does not stick together. I am sorry to say, that last year it did not keep red squirrels from digging up out corn.

BEAN FODDER.—Perhaps, if cured in the way Mr. SAMPSON recommends, bean straw would not be worth over \$2 per acre, but good bean fodder is worth three times that sum. I value it equal to common hay for sheep, and other stock can be learned to eat it readily.

PARSNEPS AS A FIELD CROP.—I join in Mr. HAYWARD'S recommendation of this root for stock. It can be raised with as little trouble as any other, and the keeping in winter is much easier and safer.

MANAGEMENT OF MANURE.—To keep the *strength* of the manure, as Mr. HOUGHTON says, is the great object with the farmer, and to prevent *fermentation above ground* will accomplish this. This "prize essay" is worth a dollar to any farmer who will put its recommendations into practice.

ASHES AS A MANURE.—The value of ashes for applying to all crops on dry land, is not overstated by Mr. RANDALL. Selling ashes for ten cents or less a bushel, is getting a very little money for what, applied to the crops, would bring a much larger return. Mr. R. got eight bushels of potatoes, extra, from the use of one bushel of ashes. I have done as well—and have found them of much benefit to corn, grass, and grain crops.

SUBSOIL PLOWING.—Ought not draining to precede subsoil plowing on such clay and hard-pan lands as the writer of the prize essay on this subject describes? The subsoil, when loosened up, would soon become saturated with water, which, without drainage, would find no better outlet than before, and hence pass off by evaporation. First *drain*, and then *deepen*, and the character of the soil will be changed from compact and retentive to friable and quickly drying, and yet keeping sufficient moisture for the uses of the crop.

A FARMER'S GARDEN.—Every farmer should have a garden—one receiving, and therefore worth, some attention. They are too often neglected, to the great loss of the family—for garden vegetables are necessary to perfect health in summer, and a great luxury besides.

PLUMS AND THE CURCULIO.—Dare we hope to eat our plums again? Not many years since we raised fine ones, by the bushel; but first came the curculio, and then the black knot, and not a tree is left alive. N. D. C. encourages us to try again, and we will do so.

MY FIRST DAHLIA.—This was grown some six or eight years since, from a root transplanted the 4th of July, and I thought it a fine one. My last dahlias were only buds, and for three years I have had them cut off by early frosts. So I saved no roots last year. B.

Niagara Co., N. Y.

NOTES FOR THE MONTH, BY S. W.

ALL THAT IS CHANGED NOW.—To day, the 7th of May, the canal has been open two days here, and not a single loaded boat has passed our locks. Twenty years ago, the day before the opening, our village was enlivened by the coming sound of the Kent bugle and the boatsman's horn, sent forth from scores of boats loaded to their utmost capacity on deck and below with wheat, flour, pork, whiskey, &c., &c., the rich products of Seneca, Ontario, Yates, Steuben and Tompkins; but up to this time there are no arrivals in our canal from Geneva and the lake ports above; while more than twenty freightless boats that wintered here, now line our basins, sighing aloud for employment; the dry dock is also full of boats, so tardily repairing that the music of the caulking mallets is no longer heard in full accompaniment as of old.

Wheat was formerly the great paying staple of the farmer of this region, but the continued deterioration of the crop as the soil gave up its wheat pabulum, succeeded by the midge, has induced farmers to reduce their wheat fallows to the smallest compass. This is the main cause of the failure of our canal exports; but the competition of the rail roads have also contributed very largely to the result. Now instead of large accumulations of pork, whiskey, manufactured articles, &c., during winter, to be forwarded by canal at the opening, all now goes in the winter by rail road. Several hundred barrels of whiskey alone are forwarded by rail road weekly from this place, from the close to the opening of the canals, to say nothing of the thousands of live hogs, slaughtered carcasses, &c., &c.; so that most of our boats of late years have to go to Oswego and Buffalo for that employment which formerly at this season of the year was pressed upon them at high rates of freight.

But those of our farmers who have not too recklessly impoverished their farms, never made money faster by the products of their industry than at this time. Many who grew two hundred bushels of potatoes to the acre last season, are now selling them at one dollar a bushel. Hay, which was not a short crop on well treated meadows, has been sold at from \$15 to \$20 the ton; and beef, pork, butter and cheese at almost fabulous prices. Suffice it to say that very blue veal sells at 10c. a pound in our market, and the best pieces from poor beef at 14c. the pound. When will farmers learn that it costs double to make the same weight of skin, bone and lean flesh, than it does to make fat or carbonaceous matter?

PLANTING POTATOES IN JUNE.—EARLY AND LATE CORN.—An Iowa correspondent of the *Farmer* says, that late planted potatoes "bring the best crops," and that the early varieties planted as late as the 20th of June do well in Iowa. It may do for those who are blessed with a deep, porous, absorbent vegetable soil in the virgin west to follow such advice, but we who live on the calcareous soils of western New York, where the original vegetable matter has been long since worn out, should by all means plant potatoes early, that they may get their growth of stems and leaves before the trying droughts of summer overtakes them. June planted potatoes in our region can only do well in cold, wet seasons. Corn also should be planted early so that its cereal product only has to be made in a drouth. I have always noticed that corn which has not perfected its stalks before the drouths of July and August have commenced, is

invariably a short crop; but although potatoes grow in the fall months and perfect tubers, corn comes to a stand still as soon as the cool nights of September commence. Frost, as much as some behind-hand farmers may dread it, rarely ever injures corn that would have ripened had the frost kept off until December.

THE EMIGRATION TO KANSAS.—A lady writing from near Ossawatamie, says that they were two nights and three days going about seventy miles with a light wagon load of traps, drawn by six mules with a colored boy driver; part of the way good roads over dry prairie, and *comme ca* hotels by the way; then sloughs, muddy and deep, through which they had to have the aid of oxen; then the steep banked, bridgeless creeks, into one of which she and her trunks and band box were precipitated from the top of the load. They saw some coarsely dressed men who looked like border ruffians, but they only grumbled at the Yankee crusade as they quietly passed by. When stuck fast in a slough, some Missourians passed them by like the priest and Levite of old, when lots of Yankee wayfarers immediately came to their aid. The Missourians doubtless reserved their sympathy for their own border clan. Near Ossawatamie they went into their brothers' unchinked hackberry log house, but in two days the howling prairie north-wester was chinked and daubed out; they got a board for a table, set up the cook stove, and began to live with that best of Kansas sauce, a good appetite. They then bought an adjoining claim of a Hoosier, sat out currant bushes and made a garden; when the Hoosier rued his bargain and would have his claim back.—The great advent of live Yankees with their pockets full of money now bidding over each other for claims, quite turned his head, and set his honor and honesty adrift. Not another claim to be had in many miles for less than \$400, add the government price to this and then the betterments, and you have a new farm at old prices. But here you can relish hog and hominy, wear your old clothes, and laugh at the latest fashions; laugh at or ignore fever and ague until it comes, then shake and bear it.

THE SEASON.—April has been a cold, snowy month for the season, and the present month, May, has been very wet to the 6th; but the long warm rain has brought the grass forward very fast, and to day, the 7th, is warm and very growing weather. Peas planted 26th of April on a heavy soil are up and ready to hoe; even a well underdrained soil if heavy, needs two days dry weather after such soaking rains, before it is fit to move with the hoe. I shall plant a few rows of Sorghum and King Philip corn, if warm and dry, to-morrow.

Waterloo, N. Y.

A PROPOSED ROTATION.

MESSRS. EDITORS:—Allow me to propose the following "four-course rotation," through your columns, for the consideration of farmers of Western New York. It has no particular claims to originality, though, in one respect, it differs slightly from the usual practice, and looks to a decreased attention to the wheat crop, once our great staple product:

1. Corn, on green sward, with the bulk of the winter's manure.
2. Barley, land fall-plowed, sowed after harrowing in the spring.
3. Wheat, with composted manure, rye the spring

following, beans on any stubble unused for these; the whole seeded to clover or herd's grass.

4. Pasture and meadow, three or more years.

The crops of the first and second years are those now commonly employed. For corn, apply twenty or thirty loads of barn-yard manure per acre, plow it under eight inches deep, roll and harrow, plant in May, and give clean culture.

For barley, plow the corn stubble late in the fall, attend to perfect surface drainage, harrow and sow as early in April as may be, roll after sowing and harrowing in. Green manure applied to corn and plowed under, as above recommended, reserves a portion of its strength for the next crop—the barley needs and will find the same.

For wheat, the barley comes off in ample time for preparing thoroughly. To the stubble intended for and best suited to this crop, apply fifteen or twenty loads of decomposed manure per acre, plow lightly, and sow early in September. With good seed, of some early maturing variety, the crop will be less liable to injury from the wheat midge, and a rapid growth, from good soil, is stronger to resist the attacks of any enemy.

Rye may be sown on the lighter portion of the barley stubble, when the land is of varying character. Sow by the middle of September. In the spring, seed both the rye and wheat ground to grass, with a mixture of clover and timothy, and dress with plaster, at least one bushel per acre. Do not fail in this application, if you would secure a "good catch" of your grass seed.

If any portion of land remain unused for these crops, some would sow to oats, and seed down; but we would plant to beans early in June, and after harvesting them, use the gang plow, harrow, and sow on our grass seed, following with the roller. The earlier this is done the better, and a dressing of plaster should be given as soon as the grass appears above ground.

We have spoken of sowing mixed grass and clover. We think it better for pasture, also for hay; and if circumstances should make it advisable to let the land lie in grass more than two or three years, the perennial grass will fill the space left by the death of the clover.

This course is marked out with the fact that less wheat must be sown, in view, and proposes to substitute corn and barley as the staple crops in their stead. We must have more corn, and feed it upon the farm, that we may have plenty of manure—we want barley to bring us the ready cash. Some wheat is a necessity, so let us select our most favorable soils, and give it our best preparation. We shall find rye a valuable crop for feeding stock and swine, while beans pay well, but require considerable labor; and the three—wheat, rye and beans—will about fill up the acres we wish for corn and also barley, as single crops each year.

It will be seen that the size of the corn-field depends on the amount of the manure, or should do so, and that of the barley also. To carry this course out, would require at least eight fields fit for the corn crop, of which three would be in grass each year. This would allow the keeping of a due proportion of stock, with proper attention to corn fodder, straw and roots, and the use of the corn for fattening beef, pork and mutton during the winter.

Brother farmers, what think you of this? Please write out your comments for the pages of "our paper!" J. H. B.

ON THE ADVANTAGES OF STIRRING THE SOIL IN DRY WEATHER.

[We have received several excellent communications on this subject, and think our readers will be interested in a few extracts.]—Eds.

I HAVE known instances where a narrow strip has been left unbroken in a summer-fallow during a dry summer, and after harvest it was all cross-plowed together. The unbroken strip would appear almost destitute of moisture, while that which was plowed and frequently stirred with the harrow or cultivator exhibited quite a contrast.

It is the common experience of farmers, that wheat sown in a dry fall upon fallow ground is much more liable to come up well, than when sown on stubble.

Again, in hoeing corn in very hot weather, when you could fairly see the corn grow, upon leaving the field at night I have measured some hills that were hoed and some that were not, and the next night compared their growth during the twenty-four hours.—The result was that the hoed had made about twice the growth of the unhoed.

Two years ago last summer I planted rather late in the season a small piece to cucumbers for pickles. The soil was dry, sandy loam, with a warm, southern aspect. I determined to rely entirely upon frequent hoeing to resist the effects of that unusually severe drouth. The piece yielded a fine lot of pickles, the vines remaining green and bearing well until destroyed by the frost; while vines in the neighborhood treated in the ordinary way were dried up and barren. So much for facts. Now how are these results to be accounted for.

We have seen that the soil frequently stirred had gathered moisture, and had also received from some source, nutrition. From what source, and by what powers were those supplies of moisture and nutrition derived? It is a well known fact, that the driest atmosphere contains vapor, which is usually deposited in the night upon any substance that is sufficiently cool to condense it into water in the form of dew.—At the close of a hot day, when the air is calm and the sky clear, vegetation soon radiates sufficient heat to reduce its temperature to the dew point. The naked earth does not possess this power; hence we often find dew upon vegetation, when the bare ground is dry, not having cooled enough to condense the vapor in the proximate atmosphere. But if the ground is mellow, the air will penetrate its surface, carrying its vapor until it reaches a cooler soil where it is condensed into dew, which diffuses itself through the mellowed earth.

Your agricultural readers have probably noticed that fresh plowed ground is frequently covered with dew, and sometimes with frost, when the adjoining ground is dry.

I think I have succeeded in accounting for the presence of moisture in soil frequently stirred, when almost entirely wanting in compact ground; yet I believe that water is not the only ingredient that soil frequently stirred, derives from the atmosphere.

I am convinced with you, Messrs. Editors, that nitrogen is an important element in the pabulum of crops. Nitrogen is present in the form of ammonia

to a certain extent in the atmosphere, and as it has a strong affinity for water, being absorbed by it in large quantities; is it not reasonable to infer that it is combined with the vapor, and with it conveyed to the roots of growing plants to minister to their urgent necessity? Like favorable effects may be produced in mellow soil by the light showers that frequently occur, even in the driest weather. The difference in the depth to which light showers will penetrate in soils frequently stirred, and those left hard and baked, is very appreciable.

In conclusion, allow me to exhort my brother farmers to keep the plow, the hoe, and the cultivator pretty busy in their corn, potatoes, root crops, and even their wheat fields, believing it will do more to counteract the injurious effects of our severe drouths, than any other means which they can employ.

Palmyra, N. Y.

P. C. R.

THAT there are advantages to be obtained by stirring the soil in dry weather, no person can doubt who has ever tried it, and as there certainly is some cause therefor, every enquiring mind well seek to know what those causes are. I am convinced that by the stirring, the soil causes the moisture from below to rise to the surface, and also prepares the soil by loosening it to absorb and retain the moisture of the atmosphere, which is so very essential to the growth and maturity of the growing crops, keeping it green and in a flourishing condition during the dry weather. Whereas if the soil is not stirred, (but let alone to wait for rain, as some farmers have done to my knowledge, because they were afraid they would kill, or at least very materially injure their crops,) after a few days it will become so dry that the moisture from below the surface will not rise even during the night season sufficient to keep the crop green and flourishing, and the soil will fail to absorb and retain the atmospheric moisture; hence the crop becomes withered and begins to show signs of failure much sooner than where the soil was stirred and kept loose, proving conclusively (to my mind at least) that stirring the soil in dry weather is a great advantage to the growing crops. W

Laurel, Delaware.

THE effect of the hot sun upon the soil is to render it dry and hard, and prevent the absorption of moisture which would otherwise take place from the dew and atmosphere. If left unstirred, this dryness descends continually, and each day finds the soil less able to absorb and retain that moisture which is absolutely necessary for the growth of crops. The consequence is they cannot come to maturity, and the hot sun scorches them "to death." But if the soil is frequently stirred and kept loose and mellow, it can—somewhat like a sponge—not only absorb a much greater quantity of moisture, but also retain it, than if it is left in that hard, impervious state which is so very frequently permitted. D. S.

Salem, Ohio.

I HAVE observed to but little purpose if I am not convinced of the necessity of stirring the soil in dry weather. The garden and grainfields of every farmer of any experience, have taught him a lesson in this respect which he cannot forget. Weeds and foreign plants are entirely subdued if the ground is properly stirred in dry weather; hence it gives to the crop a

greatly increased supply of food and drink. Pulverization of the soil can only be thoroughly effected at this time, and here is an advantage that is not likely to be overestimated. It is to the vegetable world what mastication is to the animal;—much depending upon the *thoroughness* with which this has been effected.

A neighbor's cucumbers failed last year, and he said to me "he thought they had been *hoed too much*." The only trouble was, in my opinion, they had not been *thoroughly* hoed. An inch of the surface, although better than nothing is not enough to stir in dry weather; it should be deep as well as thorough.

It leaves the soil in a proper state to receive warmth and moisture, and to retain them longer. How soon and evenly Nature's supplies of water are distributed where the ground has been stirred in dry weather, benefiting every plant alike, and there is not that rapid evaporation which takes place where the ground has become hardened from any cause. The Alwise often withholds the rain, and sometimes even the dew, yet He has not left the farmer to be consumed in the drouth, but has provided a substitute—*deep and thorough pulverization of the soil*. We do not wish to be understood as affirming that this will avail in all cases; but that it will greatly mitigate the evils of a severe drouth, and that an ordinary spell of dry weather will be really an advantage to the farmer.

Scipio, N. Y.

A. J. C.

THOUGHTS SUGGESTED BY THE MAY NUMBER.

MESSRS. EDITORS:—I do not intend to turn itemizer for the *Genesee Farmer*, as that position is already ably occupied; but some of the prize essays coincide so well with my notion of things, that I cannot refrain from noticing them, and also of venturing a few ideas of my own. First, "On the Management of Milch Cows." The method there described is emphatically the way milking should always be done in stables, each cow tied in her place. "But," says one "that is too much trouble." Let us presume we have a dairy of thirty cows. They very soon become accustomed to being milked in the stable, and the moment they are brought in will seek their respective places, where they may be fastened by a spry boy in a very few minutes. This being done, the milkers have a dry, clean floor under foot at all times. They do not have to follow their cows about the yard.—They have their milk stools on hand and always dry; also hooks in the back part of the stable, upon which to hang empty pails to contain the milk of each cow as soon as milked. Then they need not sit down to a cow with a pail nearly full, and possibly have it turned over. Thus we leave each cow where she was when we commenced milking; no hooking, no running, no turning over the milk pails, no scolding; but all the milking done comfortably, quietly and speedily. Give them a little salt occasionally before letting them out of the stable, which will make them anxious to get there again.

But now let us milk in the yard. The thirty cows are brought in and probably it is raining with a vengeance; five hands or less to do the milking; yard littered with droppings mixed with mud; stools hanging on the fence well soaked, &c. All the old coats, old hats, and all other old duds that can be mustered, are brought into requisition; the consequence is

frightened cows, spilled milk, cross milkers, a thorough wetting and an utter dread of milking in rainy weather. These pictures are not over-drawn, as I have seen them both carried out to the letter, and the inconveniences named suffered because "it is too much trouble" to tie up the cows at milking time.

"On the Advantages of Forethought in Farming Operations," is full of valuable practical truths, and if followed we should see more good farmers, consequently more good farms, better crops, better stock, and a general improvement in agricultural affairs.—We frequently hear it remarked of some farmer, "he is a hard working man, but some way he does not prosper." The essay in question divulges the whole secret, if it may be considered a secret. He does not give his business a thought until it is time to execute it, and then he is as likely to commence wrong as right, does not discover his error till it is too late to remedy it, and probably meets with serious loss in consequence.

The essay "On the Advantage of Stirring the Soil in dry weather," is full of sound reasoning, and worthy the attention of every farmer and gardener; it is a theory that has been tested and proved by many, although the "false reasoning" referred to still prevails to a great extent. W. GARNSEY.

East Cobleskill, N. Y.

BROOM CORN IN OHIO.

MESSENGERS EDITORS:—There is quite an extensive business done at raising broom corn, and manufacturing brooms, in some of the valleys of Ohio.

Any soil that will produce good Indian corn, will be found to be favorable to the production of broom corn. But supposing it is true that any soil which will produce one will produce the other, it is very necessary that the after culture be thought of, as broom corn, when it first makes its appearance, is very small, and if the ground had previously been polluted by the seeds of noxious weeds, it will require a great deal more *hand* and *hoe* labor than would have been required if the selection had been judiciously made.

The best soil for its perfect growth and early maturity is a warm, sandy loam; clay lands, or those of a wet and tenacious character, should be avoided. A green sward, if turned under in the fall, has been found most productive, and easiest cultivated. The ground should be deeply plowed, and well harrowed, before planting the seed. A dressing of hog dung and leached ashes, spread on broadcast before harrowing, has been found to be beneficial. Mark the ground off three feet apart each way, if to be planted in hills; if to be drilled, mark the rows about four feet apart. The hill planting is preferable, from the fact that it diminishes the *hoe* labor.

As soon as the plants are up, commence running the cultivator, in order to get ahead of the weeds, (for, as Dr. FRANKLIN says, "a stitch in time saves nine,") and keep the soil well stirred around the young plants. Thin out to eight or ten plants to a hill the second time you go through with the cultivator, which should go through at least four times; and, if the ground be disposed to throw up weeds, run it through to the entire destruction of these *crop robbers*, without stopping to sum up the number of times.

In harvesting, pass between the rows and break the tops about one foot below the brush, bending

them towards each other, so that they may interlock and support each other. The proper time for doing this, is just after the seed has gone out of its milky state; but in case of a frost, let no time be lost—do it immediately. The only benefit to be derived from bending, is that it will prevent the bush from becoming crooked, in consequence of the weight of the seed. When fully ripe, cut six inches below the bush, and spread it thin on the second story of some out building.

The seed is separated from the brush by what is termed a "hetchel,"—made by placing upright knives together, and drawing the brush through them. This instrument, however, is intended only for hand labor. When raised extensively, a machine driven by some power will be necessary. Those in operation are similar to the cylinder of a thresher, except that the teeth are five inches in length.

There are various estimates in reference to the quantity raised per acre—some asserting that there cannot be more than five hundred pounds raised, while others assert that one thousand pounds may be raised, by extra cultivation. As the medium between two extremes is generally the proper course, eight hundred pounds may be considered a good yield. Its market value varies in price from five to ten cents per pound, according to the supply and demand. The seed is worth from twenty-five to thirty-seven and a half cents per bushel, depending on the price of other grain. It is very hard to keep from spoiling, if in large quantities, unless kiln-dried.

Laceyville, Harrison Co., O. J. G. SAMPSON.

CULTIVATION OF BROOM CORN.

PREPARE the ground as for maize, and plant at the same season, in rows three and a half by one and a half feet. Drop about ten seeds in the hill, covering about one inch deep. As soon as the corn prickles through the surface, drop a mixture of ashes, plaster and salt (unless on new land)—ten bushels of ashes, one bushel of plaster, and one bushel of salt, thoroughly mixed—a table-spoonful to each hill, and repeat immediately after the first hoeing. Cultivate and hoe thoroughly, at least twice. When hoeing the first time, pull out the superabundant plants, leaving but five or six in each hill. As soon as the seed is out of the milk, table the corn, by breaking two rows across each other, a hill in each row alternately, walking backwards between the rows; break the corn one and a half to two feet from the ground, which makes the tables about the right height. Cut the corn close above the upper joint, and lay the brush on the tables to dry, which will take four or five days in good weather; then tie up the bundles, haul to the barn, and scrape off the seed. The brush is then ready for the broom-maker, usually bringing \$125 to \$150 per ton.

Five hundred pounds is a poor crop, one thousand pounds a good crop, and fifteen hundred pounds a first rate crop, on gravelly loam. One thousand pounds will make five hundred brooms, costing \$10 per hundred for manufacturing. One thousand pounds, at \$150 per ton, is \$75; cost of making, \$50; total, \$125. Five hundred brooms, at \$3.75 per dozen, is \$156.25. One thousand pounds of brush will yield about thirty bushels of seed, worth as much to feed as oats.

D. A. A. NICBOLS

Westfield, Chautauque Co., N. Y.

MANAGEMENT OF BEES;

OR, PLAIN COMMON SENSE THE SECRET OF SUCCESS.

MESSRS. EDITORS:—Last spring I had fifteen swarms of bees, valued at \$90; from these I received twenty-four young swarms, and thirty-four boxes of honey. I have now sixteen swarms, valued at \$96, and have sold about \$160 worth of bees and honey. The honey used in the family, if sold, would well pay for all the trouble of hiving, &c.,—leaving a nett profit of \$166.

I practice the following plain rules in management: When the bees are swarming, I keep at a distance, and let them come out and alight quietly. I then get them into the hive, and remove them to the bee-house as soon as possible. Since I have practiced the above, I have not lost a swarm by flight. My hives hold thirty-six quarts, dry measure, which is small enough for first swarms for wintering. The inside of the hives, old or new, I always make rough with a scratch-awl, before putting the bees in, as they cannot hang to a smooth surface, but drop down, rush out of the hive, and leave for parts unknown. This is the reason why so many swarms go off after being hived. I let down the bottom board at once three-fourths of an inch in front, and let it remain the year round, as bees need as much air in winter as in summer. I let my bees stand in the same place through the winter that they occupied in summer, for the reason that it is natural for them to live in a dormant state a portion of the winter, and after passing through this ordeal, they come out much more vigorous than when wintered in the cellar or chamber.

FOR WINTERING, I select swarms that are numerous, and about equal as to numbers, always killing off the large heavy and small, light swarms. I never lose any by the moth, for I winter none that are not numerous enough to cover the combs. About twelve or fifteen swarms in ordinary, and eighteen or twenty in the best seasons, are as many as should be kept over on any farm, as an over stock proves a failure on the whole.

Box honey should always be drawn before buckwheat is in blossom. Bee-hives should face the south or east, where the morning sun will strike them and start the bees early, as one hour in the morning is worth three in the afternoon to collect honey.

There are a large number of works extant on this subject, but they are of no practical utility to any one. They are generally got up to accompany some particular patent hive, the production of some speculative genius, whose writings and invention show that he is totally ignorant of all knowledge pertaining to the wants, nature or habits of the honey bee.

Brandon, Vt.

W. L. B.

MANAGEMENT OF BEES

MESSRS. EDITORS:—There are some things in the management of bees that I do not agree with your correspondent, Mr. HOWE. In the first place his hives are too large, and the chamber worse than useless.—I have tried many kinds of hives, including several patented ones, and my experience is, that a square hive a cubic foot in the clear, is better than all the patent hives that the community were ever humbugged with. There should be one or more holes in the top for a super hive or store box. I have found it best

to take a common water pail for them, one that the hinges are on the sides, so that the handle can be slipped over out of the way. This inverted on the top of the hive with a stone to keep the wind from blowing it away till the bees seal it down, completes the arrangement. My bees will ordinarily fill two of these pails in a season, and when full you have the honey in a nice portable shape.

My reasons for disliking the chamber hives are, that if they are made in the best manner, there will be crevices by which the bee moth will enter and wind up, and your hives will soon be full of worms. These objections will apply with the same force to structures for bee houses. My experience has been, that bees do better in the open air without anything around them, except some screen to keep off the cold winds, than they do in bee houses, or under trees, or any thing of the sort. The fact is, in this latitude the great thing we have to guard against, is the bee moth. If we can keep this pest away from our hives, all other difficulties are easily guarded against, and the simpler we have our "fixings," the less we shall be troubled.

My hives stand upon a stool about two and a half feet from the ground, in my garden, without anything around them, and these so managed have always been free from worms. I raise my hives about half an inch from the bottom board in the summer time, to give them air. This can be done by placing a small block under each corner, or what is better, drive four nails in each corner and have holes in the bottom board or stool, by which they can be lowered down in cold weather.

Bees if rightly managed and taken care of, can be made very profitable as well as furnishing a delicious beverage at all times of the year. F. W. LAY.

Greece, N. Y.

HOEING CORN IN DRY WEATHER.

MESSRS. EDITORS:—It seems to be a prevailing opinion with many farmers, that time spent in stirring the soil in time of a drouth is as good as lost. This is an error. Observe as you walk forth on a summer's morning, after a plentiful fall of dew, the beaten path at your feet, which is quite dry, while the grass at the sides is dripping with moisture. The reason of this is plain: the air circulates freely in the grass, and deposits the water it may contain readily, whereas, on the path, it had no effect. Now apply this reasoning to the soil, and on the same principle the advantages will be plain—for it is evident that the soil which is kept loose by frequent plowings will receive the greater supply of water, which is the one thing needful in a drouth. As an example of the benefit of stirring the soil in dry weather, I will state that my father last summer had three fields of corn, planted in ground of about equal quality, and they all received about the same amount of tillage, except that one field was plowed over just before harvest, while it was impossible to plow the others on account of the press of work, and after harvest it was too late, and when the corn was husked the one field yielded at least ten bushels more per acre than the other two—and if there was any difference in the soil, the largest crop might have been expected from the two, as the one had been cropped the two previous years.

STEPHEN POWERS.

Waterford, Washington Co., Ohio.

BUTTER MAKING.

MESSRS. EDITORS:—There are various methods of making butter, and as many ideas as to which is right. For my part, I think that the utmost cleanliness is absolutely necessary, or all the modes will prove unavailing to obtain good butter. Many spoil their butter by too much working and making it smooth like lard, or in other words, losing what is called the grain, and many by carelessness about their milk vessels.

My method is as follows: The cows in the summer are salted two or three times a week. The milk is strained in pans holding ten quarts and placed upon shelves in a cool, dry place, with plenty of fresh air, and nothing with the least unpleasant odor is allowed to be near the apartment. In cold weather I have the pans of milk placed over a kettle of hot water, or upon a stove with moderate heat, and remain until it wavers upon the top of the milk. Then stand in a warm place until the cream rises. Warming the milk causes more cream to rise and churns easier.

In warm weather I always let the milk stand until it turns thick so as to obtain all the cream. I have churning done three times a week in summer and once in winter. After each skimming of the cream I add about a table-spoonful of salt and mix well together to keep the cream nice until churning day arrives. I use a stone churn with dash in preference to any other, being easier churned. In warm weather, when ready to commence churning, I have the churn placed in a tub of cold spring water, and when the cream breaks or curdles, add cold water to stiffen it and make it collect well—mixing until all is in a mass. Having scalded the bowl and laddle and cooled with water, rub with salt to prevent sticking. Then with laddle take up the butter and drain off the butter-milk; put on cold water and with laddle cut the butter through and through in small pieces to wash out the butter-milk, but by no means work it over and over, as that will make it tough. Repeat this from three to six times, or until the water runs off clear; press out the water and salt to taste—using fine table salt—about an ounce to a pound of butter, and mix in well; let it stand until next morning, then work carefully in small pieces—pressing more than working, then make in rolls. If packing be desired, I work twice—the last time adding a table-spoonful of pulverized loaf sugar to about four or five pounds of butter. Having made ready a jar and packed it, I then take some salt and pour boiling water upon it to make a strong brine and set away until cold; then strain on the butter. Remove the brine when more butter is to be added, and then replace it; and so on until the jar is nearly filled. Lastly, leave brine on the butter an inch in depth as a more effectual preservative than salt. Cover the jar with a cloth, then put on the lid and store in a cool cellar.

I never had any trouble in keeping butter, and in fifteen years' experience never lost a pound. The great secret in preserving butter consists in extracting every drop of butter-milk. Some may say, "she makes a great fuss about making butter." But I contend we can have nothing good without trouble, and "what is worth doing at all is worth doing well," in regard to house-keeping as in every thing else. The greater part of the comfort of a whole family depends upon the house-keepers' management and oversight.

We have often heard it remarked that "the eye of the master would do more work than both his hands," and so in the house. It is not so much in the performance of manual labor of a farmer's wife if she keeps a servant, as in the *care* she exercises, and in using to advantage that very important little member, the "eye," that makes a profitable wife and good house-keeper.

Niagara Co., N. Y.

CHEESE MAKING.

MESSRS. EDITORS:—In cheese making the first requisites are to have good utensils; the next is to have good rooms for making and keeping the cheese in. Our mode of management with the milk from forty cows is this: In warm weather we milk the cows at night, commencing at six o'clock; strain the milk into a tub and reduce the temperature by placing a cooler containing four pails of cold water in the milk, and allowing the same to remain till both are of the same temperature. In the morning we skim the cream from the milk in the tub, and then proceed to milking, straining the milk in the tub as before; set it at 90°; break up in three-fourths of an hour with a curd cutter, letting it settle ten minutes; dip off the whey; then break up fine with the hands; then scald gradually to 104°; let it stand half an hour, stirring occasionally; then dip into a strainer over a sink, and stir with the hands till fine, when it should be salted with about one common sized tea cup full of salt to fifteen pounds of cheese; press eight hours, then turn and bandage, pressing twelve hours more, when it is taken out and placed on the table and colored with annatto top and bottom. Turn once in two days, and oil on the top with the oil made from the whey cream, the table being kept clean by rubbing with woollen cloths.

East De Kalb, St. Law. Co., N. Y. W. F. R.

ADVANTAGES OF FORETHOUGHT IN FARMING OPERATIONS.

MESSRS. EDITORS:—In every occupation, the thinking man has the advantage. Close, consecutive, well-directed thought, always brings a rich reward to the thinker. Where anything is to be performed, forethought is necessary. To the professional man, forethought is an invaluable portion of his capital; so it is to the merchant and the mechanic. To the farmer, it is absolutely indispensable. He might better do without a team or a plow, than without forethought.

HAP-HAZARD is a farmer without forethought. He sleeps or smokes when he should be thinking. By him the long winter evenings are drowsed away. Spring comes. Gentle showers, a balmy atmosphere and genial sunshine are ready to assist him. He has no plans laid. Seed time is at hand, and his fences are unrepaired, and his manure remains in unsightly heaps in his barn-yard. He harnesses his horses, and fastens them to the plow, which is found in the field where he turned his last furrow the summer before. "In one short hour" the decayed wood-work is torn from the castings. A new plow must be purchased, or the old one repaired. Either will take time. The same is true in respect to all his farm implements. Now, when he should be sowing and planting, everything else must be done—cleaning seed, fencing, carting manure, hauling grain to market and wood to the house, purchasing and repairing tools, &c. When

a day dawns, he has no plan for the day's work; perhaps a dozen different kinds of work will engage his attention. The consequence is, that nothing is done well—nothing in season. He raises poor crops; briars, brambles and thistles disfigure his fields; his fences invite his neighbors' cattle to gratify their appetites within his enclosure; loose boards upon his barn, as well as swinging doors, make harsh music whenever the wind blows; his stock shivers with the cold during winter; his wagon and other implements become rheumatic; his dwelling looks like the drunkard's house; he soon comes to the conclusion that "agricultural editors and professors, in the enjoyment of salaries, are almost the only men who think farming profitable."

Mr. ORDERLY is a farmer who exercises forethought. During his leisure hours, when nature sleeps, he plans for the busy season. When his farm work does not hurry, he paints and repairs his tools, prepares his seed, rebuilds his fences, makes a compost of his manure, and decides upon a plan for the rotation of his crops. Forethought enables him to perform every kind of labor, just at the proper season; it enables him to guard against destructive insects, to make every kind of soil friable and productive, to counteract the disastrous effects of drouth, to prevent disease in his stock, and to raise only remunerative crops. His dwelling and other buildings all present a neat, substantial and attractive appearance; his abundant harvests reward his toil; his cheerful and happy family doubly reward him for all his labor and forethought; his granary groans beneath its burden; his purse becomes plethoric with gold; and his table is loaded with the many luxuries of the field and the garden. *He* will tell you that farming *pays*. His sons and daughters, virtuous and intelligent as they have become, will reassure you that farming, with forethought, *pays*.

With forethought, farming is a delightful occupation; without it, it is slavish drudgery. Forethought prepares the farmer's pathway for a healthy, invigorating drive over it during a prosperous and happy earthly career; without it, it will be filled with obstructions and frightful images.

I cannot close without acknowledging the indebtedness of farmers to the agricultural press for a large amount of the forethought that is now exercised. It is HAP-HAZARD that does not read as much as one agricultural paper. E. HODGES.

Marion, Minnesota.

CULTIVATION OF POTATOES IN OHIO.

Messrs. Editors:—I am no scholar, and am not much of a writer, neither am I much addicted to troubling the public with my views upon any subject; but having received the first four numbers of the present volume of the *Genesee Farmer*, and finding in all of them several communications upon the best method of raising potatoes, I have concluded to give you an account of some experiments made by myself. I have examined the different methods proposed, minutely, and find nothing that satisfies me as well as my own experience. The methods proposed by your correspondents are all good, and yet they are all objectionable in a measure. Some of them are adapted to particular localities only, such as clover sod, a high and dry piece of ground, &c.; others are attended with too much ex-

pense, although they might answer on a small scale for early potatoes, yet would be too expensive for a field crop.

I commenced renting farms in the north-east portion of Ohio, and have been moving at short intervals, and a short distance at a time, until I find myself, for the last four years, located in the woods, a few miles from the Indiana line; consequently, my experience covers almost every variety of soil to be found in Northern Ohio—and that I believe would include nearly every variety to be found in the United States; and whenever I could follow the method hereafter described, I have never failed to obtain from four to six hundred bushels of potatoes per acre, and I have never had the misfortune to raise one peck of potatoes that were affected with the dry rot, when this method was adopted. During the years of 1848 and '9, when all my neighbors lost their entire crop with the rot within four or six weeks after digging, I raised as good potatoes as I ever saw, from a heavy clay soil. I have raised them on black prairie sand, on prairie muck, on yellow and white sand openings, on gravelly loam, and on limestone land, and they were invariably as sound when new potatoes came again as they were when dug in the fall. The *modus operandi* is this:

The first great principle is to know that your ground is rich enough to produce a good crop, for it is a well established fact that no man can produce a good crop of potatoes unless his land contains a sufficient amount of those ingredients necessary to feed the growing plants. If my ground is not rich enough, I make it so with manure. I then plow at least from ten to twelve inches deep, harrow, and if necessary, plow again, until my ground is thoroughly pulverized—that is, if there is no sod. I then, after harrowing smooth, mark out the ground in rows four feet apart, and invariably run the rows the way the ground descends, taking care to mark out very deep. I then drop small potatoes, or pieces of large ones, from ten to twenty inches apart, according to the strength of the soil. I then turn a deep, heavy furrow from each way on to the seed; this, if done with care, will cover the seed some four or five inches, and leave the outer edge of the ridge higher than it is in the centre; the ridges will be some two feet broad at the top and four feet at the base. As soon as the potatoes begin to show themselves, I take a light harrow, and harrow the surface lengthwise of the ridges, then cover the ground from six to eight inches deep with dry straw, and my work is done until digging time. The deep furrows being turned each way, form quite a respectable ditch, which will carry off any surplus water that may fall in a wet season, and the straw will protect the crop from the scorching dry weather, and will arrest and detain about the roots of the plants all of the ammonia that would naturally escape into the atmosphere; consequently, the potato is never checked in its growth, from the time it comes up in the spring until it is ripe, which will be from two to three weeks earlier than those planted the old way. If I have a piece of sod, either clover or timothy, the first thing I do is to mark out the ground, by plowing a light furrow, say from two to three inches deep, drop my potatoes as before, and then back-furrow as before, taking care to have the edge of the two furrows just meet over the seed. This will throw the light furrow back on to the seed, which will rot and form a good manure. The object of

harrowing the ground before putting on the straw, is to crack up the surface after it has been baked by the sun; for if we put the straw on at the time of planting, it will sometimes keep the ground too wet and cold after a heavy spring rain, and might rot the seed before it has sprouted. When they are planted on a sod, the way to dig them is to throw the straw out of the way, and take a spade or shovel and roll the old sod back into the furrows again, and the potatoes are ready to be picked up, and will generally lay there in pretty respectable numbers.

Pioneer, Williams, Co., O. W. F. KELSEY.

ON THE MANAGEMENT OF A PRAIRIE FARM COMMENCING IN ITS NATURAL STATE.

MESSRS. EDITORS:—Having lived for a number of years in a prairie country, and having myself been engaged in farming upon the prairie, I have naturally tried to be a close observer of the effects of the different modes pursued by different individuals, and at different times. We always expect in newly settled portions of this prairie country a heavy coat of dry grass. This should be burned before plowing, as it is almost impossible to do good work with it on.

The first thing now to attend to is the breaking. This should commence about the middle of May; the grass has then started to growing, and the roots and stalks are full of sap. Prairie broke at this time of year rots much sooner than that broken very early, or in the fall. There may be considerable feed raised the first summer, if a boy follows the plow every third furrow and drops grain of some of the early varieties of corn at the edge of the furrow. If this plan is adopted the fodder must be cut early, and the ground cross plowed, (which can be done with two horses.) Plow in small lands, and harrow once before sowing. Then sow in wheat, from the 10th to 20th September, with a bushel and a half of good clean wheat to the acre, and you are almost sure of a good crop of wheat. Harrow thoroughly—the more the ground is pulverized the better.

As soon as the wheat is taken off the ground plow shallow. The ground will soon become green with wheat and weeds which will protect it from the scorching rays of the sun. Then about the first of October there will be a pretty good coat, which should be turned under deep. When plowing is done in the fall, upon rolling prairies, it should be up and down the hill in small lands. This, if the middle furrows are well cleared out, prevents washing, and the land becomes dry much sooner in the spring.

As soon in the spring as possible, commence plowing for corn. Plow deep, but mark off as shallow as possible. The prairies are of a cold, backward nature, and it is best to have the corn as near the surface as possible. There will be but few weeds this year, but the crop is the better for frequent stirring of the soil. If it is a fair season, you may expect from thirty to fifty bushels to the acre without manure, and with manure, *much more*—for I believe there is no land that shows the advantages to be derived from manure to a greater extent than the prairies.

The following spring this piece of ground should be sown in oats. This is a sure crop. The ground should be harrowed perfectly level after sowing.—Then sow timothy seed at the rate of one peck to the acre, and follow with a heavy roller, making all as

smooth as possible. The oats stubble will be a great protection to the young grass the first winter.

By this time we suppose there has some manure accumulated on the farm. Haul it out when the ground is frozen and scatter over the meadow. Follow this up two or three years, mowing in harvest, and manuring in winter. Then break up deep in the fall and sow wheat. Follow up the same rotation, and the result will be better land, better crops, with contentment and smiling faces at home.

It is supposed that for four or five following springs a new piece will be broken and followed up in the same manner, then all will work just like clock work.

W. M. D. MITCHELL.

DEEP PLOWING FOR CORN.

MESSRS. EDITORS:—The learned and worthy JOHN JOHNSTON, in the *Genesee Farmer* for March, advises farmers not to plow up the subsoil for corn—a recommendation which agrees neither with my theory nor practice. If your ground has been plowed shallow, don't be afraid to throw up a few inches of yellow subsoil. In marking your ground, you will run through this yellow soil, and thus drop your corn on it. Then, in working your corn, there is a good chance to get the yellow soil mixed with the better, and thus improve it all. And should you chance to have a dry season, the drouth will not affect the deeply plowed field near so much as the shallow one.

About ten years since, when I came to this farm, then one of the poorest in the country, the soil in many places not being over two inches deep, I plowed a heavy, cold field *deep*, turning up some three or four inches of yellow subsoil, and gave some of the poorest knobs a very light springling of compost, made of lime, manure and earth, but so light as scarcely to be worth naming, and, by working the corn well, I raised about an average crop, which I could not have expected if I had only plowed as deep as it had been plowed before. I then sowed the field with oats, and seeded it down with timothy. Two years since I plowed the same field again, when I had dark colored soil, some eight inches deep. This is the result in the majority of my fields. I seed down with clover every two or three years. "Plow deep, while sluggards sleep," is a good motto.

Again, it is highly beneficial to stir the soil often between the corn. The dryer the weather, the oftener you should run your cultivator through your corn; for the more you stir the soil, the more moisture it will absorb from the atmosphere during the night.

Some other time I will give several more hints on working corn, which I have not noticed in the *Farmer*. H. K.

Latrobe, Westmoreland Co., Pa.

DRINK FOR YOUNG CALVES.—When the calves have learned to drink, prepare the following broth for them: Take a large pot and fill it with hay and water; then boil it until the strength is out. Strain off this broth, and to six quarts of it add one pint of milk. This is sufficient for one calf. As they begin to grow, it should be increased. This food is not only cheaper, but far better than milk—or any other drink—because it makes them strong, healthy and elastic. B. O.

Jackson, Pa.

INFLUENCE OF AGRICULTURAL PAPERS.

MESSRS. EDITORS:—I take great pleasure in witnessing the good influence exercised by your paper among our farmers, manifested by the improved appearance of their farms. I have seen it, as by enchantment, bring order out of chaos. There are a great many men in our country who are styled farmers, that appear to think there is no way to do anything, except *just as father did*. They plow and sow the same field year after year, until they scarce get their seed, because *father did*. They leave the same islands around which they plow; the same rows of thrifty briars and elders along their old, rotten, tumble-down rail-fence; use the same inconvenient barn, generally doorless; keep the same kind of scrubby, half-starved cattle, reminding one of "PHAROAH'S lean kine;" and very sure to tell the same story about what a *dog's life* the poor farmer has to lead—a great deal of work, and small returns. His cattle die; the dogs kill his sheep; the cattle break in and destroy his crops, or the land is so poor they fail altogether; and worst of all, the *store-keeper* *wont wait any longer*, and so he sells out and goes West, I suppose to repeat the operation. Or, what is vastly better, he or his boys take the *Genesee Farmer*, which roots out those islands and hedges of briars and elders; repairs his fences, or replaces them with substantial board fences or stone walls; puts up some barn doors; builds a good barn-yard, surrounded by comfortable sheds, under which repose a score or more of fine, sleek-looking cattle, contentedly and slowly chewing their cud, and winking their satisfaction at the change that has taken place, no doubt wondering what has wrought it.

Cameron Mills, N. Y.

S. MITCHELL.

DEEP PLOWING.

MESSRS. EDITORS:—I see much is said on the subject of deep plowing, and much well said; but I wish to call the attention of plowmen to one idea not often adverted to—that is, to study the quality of the soil, to see whether they had better plow deep or not. Every farmer knows, or ought to know, that different soils should have different treatment; for instance, deep gravelly soil may be plowed deep to good advantage, but any soil resting on a cold, lifeless subsoil, had better not be plowed so deep as to fetch up much of that cold, lifeless earth for the present or first crop; but judicious treatment, and rich manuring, will increase the depth of the soil, and of course increase its productiveness, especially in a dry season. I remember I once scraped off a piece of land to fill a small pond in a field, and took the top soil all off, perhaps one or one and a half feet deep, and, by manuring and plowing, restored the spot as good as the surrounding land; but have no idea it would have produced much at first, by simply plowing. I approve of deep plowing in general, but not always. I once was plowing a gently sloping side hill, in the spring, for corn; of course some turned up hill, and some down. That turned up hill always produces the best crop, provided it is thoroughly plowed. The reason is, that turned up does not fall so flat, and leave the cold bottom on top. A neighbor came along, stopped, and made me a farmer's field visit, as we frequently do. He said if I would plow twice as deep, I would get double the crop.

He was plowing a kind of mound-shaped hill, across the road, and went right around the hill, turning the furrow all the time down hill. Notwithstanding my neighbor's advice, I plowed my way, and he his; his corn came up weak and yellow, mine strong and green, which kept ahead of his, and produced, I think, one-third more.

A. DEVOL.

Gansevoort, N. Y.

GOOD TWO YEAR OLD STEERS—THE WHEAT CROP.

MESSRS. EDITORS:—Some folks can raise two year old steers as well as Mr. JOSEPH WRIGHT. A neighbor of mine sold one the other day, three-fourths Durham, to a butcher in Geneva, for \$60. He was two years and one month old, and was fed nothing but very good hay during the last six months. And I sold one a few days ago, to Messrs. THOMAS & VAN HOUGHTON, for \$60, and he will not be two years old until the 5th of June. I have fed mine two quarts of oil cake meal, daily, since the 28th of last November. He was raised on skimmed milk and a little oil meal until four months old, and on hay, with two handfuls of meal daily, the first winter, good pasture through the summer, and fed on corn stalks since the 28th of November, with the meal, as above stated.

I am sorry to say that the wheat generally in this neighborhood is miserable. The drouth last fall prevented its getting root enough to withstand the severe frosts early in February, when we had no snow to shelter it. I never saw a worse prospect for a crop, except where it was sheltered from the west winds. On loamy and sandy soils it is better, but on clay soils bad. I am plowing up seven acres that was sown with wheat, and would have plowed up five acres more, had it not been sown with grass seed. That fallow from old sod looks pretty well; but there will be a bad account of the wheat in Seneca and Ontario counties, and by a letter from Northern Ohio I find it is equally bad there.

Near Geneva, N. Y.

JOHN JOHNSTON.

THE WAY I MADE A FENCE ON HEAVY GROUND.—I set the posts in blocks of old oak timber, from the frame of an old oak house,—because I had such, not because I think it any better than new. I cut the blocks two feet nine inches long, six by eight inches square, morticed them with a two inch auger, and beat out between the holes. I made a tenon on the post to fit the mortice, and draw bore it fast; and then, for a picket fence, let in the lower rail about six inches from the block, laid the other on the top of the post, about two feet from the lower one, and put on the pickets as usual. For board fence, the blocks should be longer, because it will hold more wind. I made another piece, by digging a ditch two feet deep; then sharpened the lower end of the post, and stuck it in the bottom sufficiently to hold it up; then filled the ditch with small stones nearly to the top; covered the stones with leaves (straw or shavings are just as good); then covered with earth deep enough to raise it a little above the common level, because wet land heaves up the posts, not dry. I think it will answer the double purpose of keeping the posts from raising, and form an underdrain. The lower end is left open, and water has run from it all winter, when there has been any to run.

A. DEVOL.

Gansevoort, N. Y.

SWAMP MUCK AS A FERTILIZER IN DRY SEASONS.

MESSRS. EDITORS:—On the 6th of May, 1856, I planted six rows of potatoes, (Mountain June,) of sixteen hills each, on purpose to test the value of swamp muck as compared with other manures, such as horse, hog, cow and hen manures. Placing equal quantities in their respective rows, except the hen manure; of this I used about a double handful to each hill, of the others a barn shovelful to each hill, covering the seed with it, and afterwards covering the whole with earth. I placed one potato in each hill—uniform in size and shape.

Those manured with muck and cow dung made their appearance as soon as those in the row not manured. But the other three were some ten days later; they were dug the 23d of August—the tops being dead and the potatoes ripe, and each row weighed as follows:

No manure,.....	22 lbs. or	91½ bush.	per acre.
Muck,.....	24 “	100 “	“
Horse manure,.....	19 “	89 “	“
Cow manure,.....	23 “	96 “	“
Hog manure,.....	14 “	60 “	“
Hen manure,.....	20 “	83 “	“

Seymour, N. Y.

J. C. ADAMS.

[REMARKS.—The experiment was on too small a scale to be satisfactory.]—Eds.

MANAGEMENT OF MANURE.

MESSRS. EDITORS:—Your editorial in the April number of the *Farmer*, respecting the application of “Muriatic Acid to manure heaps” does not brighten the hopes of those farmers who have been looking for a simple method for fixing ammonia. We may have a general knowledge of chemistry, but to the practical chemist we must look for a solution of many questions. Some of us to avoid the loss of manure in a common barn yard have constructed ample cellars and covered yards, where, as we feed our stock, the straw, chaff &c., moistened only by the urine, will be two or three feet in depth. The fermentation on the surface will be rapid, and to apply often gypsum until a ton or more is used, will not prevent fire-fang or give satisfactory results.

Common salt is sometimes used, but is there not danger of its doing more injury than good? I cannot speak from experience, but nothing suggests itself more plausible than to freely water it, and to repump upon it all that drains into the tank. But while water will absorb several hundred times its bulk of ammonia, and if judiciously applied will retain the most of this gas, does not chemical science provide something to render it a salt without loss or check to fermentation?

We wish from you and others more light on this question.

H. J. FOSTER.

Palmyra, N. Y.

[We know of no better plan than that recommended in our article on Barn-yard Manure, in the January number of the *Farmer*. We shall be glad to hear from others on this subject.]—Eds.

TO DESTROY WEEDS.—There seems to be quite a difference of opinion regarding the best means of destroying weeds. I will give my method: use the Michigan double plow thoroughly, and it will be a quietus.

D. HAMLEN.

Clay, Onondaga Co., N. Y.

THE BENEFITS OF AGRICULTURAL FAIRS.

MESSRS. EDITORS:—Many farmers appear to be of the opinion that, except they have large farms and large purses, it is of no use being a member of, or in any way encouraging or supporting an Agricultural Society, because they think that it is only those who obtain several premiums, that gain any thing by it. Now, this is a false conclusion, and I fear that few of such men will read the *Genesee Farmer* where they may learn better. Agricultural Societies are (I am bold to assert) a public good, and there public exhibitions are their beauty, their pride, yes, and the key, as it were, which holds them together—their very life and soul.

Now the benefit of Agricultural Societies are these: (1) They induce better cultivation of the soil, by which better crops are grown, and better stock raised, for which better prices are obtained and more profit is realized. The farmer is thus enabled to carry on still farther his improvements by purchasing better implements and hiring more labor. Thus (2) while the mechanic is enjoying the best articles the farm can produce, the farmer has the pleasure of working with, and enabled to pay a good price for, the mechanics' best wares. The farmer and the mechanic are mutually benefitted, and (3) through these Annual Exhibitions there is a friendly strife created, the mind becomes aroused into a state of activity, and thus improvements are accomplished which astonishes even those engaged in the work themselves.

(4) At these fairs the best stock of a neighborhood or country are brought together,—yes, and the best men too in point of utility to the place in which they reside. You may see them engaged in friendly intercourse with each other, making enquiries, drawing comparisons, and so gathering up a stock of knowledge to be spent in improvements during the succeeding year.

J. N.

Nussagiveya, C. W.

HINTS ON BUILDING A FARM HOUSE.

MESSRS. EDITORS:—As you request plans of cheap houses from your patrons, allow me to present a few thoughts. No farmer should build a dwelling without a good cellar, secure from frost without banking, and properly divided to suit the wants and convenience of the family; water and rat proof, &c. After digging deep enough to allow carrying a basket upon the shoulder without stooping when the house is finished, dig the outside two feet in width, one and a half to two feet deeper, and fill nearly even with the cellar bottom with small stones thrown in loose; from this you can drain any water that may appear, and always have a dry cellar.

When the wall is within four feet of the surface of the ground, use smaller stone; allow none to reach over half the width of the wall, that is, build two walls to the sill; build the inside wall to the floor, thus leaving a space in the centre for dead air, to prevent freezing. Have the sash for the windows made so as to put two glass in each light, put one from the outside and one in the inside, with a space between. Use water lime to plaster the inside wall; smooth it well. I would not advise cementing the bottom, if you have a hard bottom without, as I think it makes the cellar more damp. Brick are much the best for partition walls.

Doors should be sufficiently wide to admit a convenient egress of barrels, &c., and made perfectly tight.

A good cellar should be divided so as not to keep butter, fruit, vegetables, roots, &c., all in one room. Persons who do not wish a separate room for butter and milk, if they have a dry cellar, can make a nice one for butter, by digging three or four feet in the coolest part of the cellar, laying the sides and bottom with brick or stone in cement; having stairs to descend, and a tight trap door over it. Another essential requisite to a convenient farmer's cellar, is an outside door from the woodshed—if adjoining—if not, you can purposely erect a shed over the stairs.

Ballston Center, N. Y. D. E. LARKINS.

AN ACRE AND A HALF OF WHITE BEANS.

MESSRS. EDITORS:—Allow me to give the facts respecting the cultivation of one and a half acres of beans last year. The soil is free from excess of wet, but not what would be denominated dry, the subsoil being tenacious but a reasonable depth below the surface. The field was cultivated with corn and beans the preceding year. Last spring after having put it in good condition with plow and harrow, I drew shallow furrows with the plow for planting, say two to three inches deep and three feet distant, and running north and south. Planted in the furrow from six to eight beans in the hill, scattering them a little, say six to eight inches; then leave a space of twelve inches and plant more beans, and so forth. I have tried drilling and find no difference in the product, as in both cases they make a close row; but in pulling, the former method is preferable, when by using both hands we pull a hill a teach grasp. When the beans were fairly up, I passed the plow once around each row, turning the earth towards the beans; and when nearly putting forth blossoms, plowed them again in the same way, one hand with the hoe following the plow at each dressing. Under ordinary circumstances the bean lot is easily kept free from weeds, from the fact that as soon as the plant is up its large foliage takes a horizontal position, and almost bids defiance to intruders. From the one and a half acres I had twenty-four bushels of beans, (small white,) worth one dollar and fifty cents per bushel, at the barn.

On land that has suffered from hard usage, when being restored, and in a transition state, the bean crop is much more reliable, and will pay better than wheat.

Springhill, Bradford Co., Pa. H. S.

BE KIND TO THY CATTLE.—Working cattle should be well cared for, and they will abundantly remunerate their owner by an increased amount of labor.—They should be kept well shod, that their feet do not become sore, and thus unfit them for service. The unmerciful "gad," and the still less humane good should be banished from every christian farmer's establishment. Oxen do not need lashing and beating any more than horses, and if properly trained will perform well their part by gentle and humane treatment. In fact, it is an almost unexceptionable rule, that all domestic animals will become docile and tractable by kind and gentle treatment; while harsh treatment will always render them more or less vicious and stubborn.

Salem, Ohio. D. S.

CULTIVATION OF ONIONS.

MESSRS. EDITORS:—The soil best adapted for the cultivation of the onion, is a medium between a cold, heavy, and a light, dry. A rich, clay loam is very good. The preparation of the soil for the onion is similar to that for other garden or root crops, with one exception: It is not necessary to cultivate the soil as deep as for beets, carrots and parsneps. If it is desirable to cultivate on a small scale, I would recommend to make beds four feet wide, and as long as may be desired. Sow in drills crosswise of the beds, leaving a space of seven inches between, if the soil is dry; press with the spade, (a more speedy and neater method is with a roller a foot in diameter and two and a half feet long, drawn lengthwise of the beds.) Immediately after sowing, dress with equal portions of lime, ashes and plaster, allowing six or eight quarts to the square rod. As soon as the drill can be discerned stir the ground with the hoe, breaking the crust about the onions. When the third leaf appears, thin out to five inches. Keep the ground free from weeds, and move the surface to prevent it from crusting. If extra size is desired, water once or twice a week with liquid manure, such as drain from barnyards. If this cannot be had, very strong manure may be leached as are ashes for lye. Apply it with a water pot or dipper.

For field cultivation, let the drills be one foot apart, using the same treatment as before described.

Caledonia, Liv. Co. D. LEATHERSCHEL

REARING CALVES.

MESSRS. EDITORS:—The calves should be taken from their dam and tied up at the first sight, and fed by hand on new milk until four weeks old, at which time they may have part skimmed milk, which may be gradually increased and the new milk diminished, so that by the time the calf is eight weeks old it may be fed entirely on sour or thick milk. If you wish to raise a fine calf commence at two weeks old to add a small handful of meal once a day to the feed, composed of one part flax seed to four parts peas and ground fine. This may be increased to any desirable amount. If it causes the calf to scour, add a lump of white chalk, the size of a hickory nut, once a day, and increase daily until the scouring stops. The young animals should be well cared for both summer and winter, and through all the stormy or cold part of the year they should have a good shelter, and such as are intended for milch cows or working cattle should be tied up at night in a warm but clean and well ventilated stable for the purpose of getting them under subjection. Oxen should never be worked after the sun goes down.

Canada West.

W. S.

CURE FOR SWENEY.—Let me give you a cure for sweney which I have seen treated successfully after many others had failed on two valuable horses.—About the middle of the shoulder, or where the sweney is the worst, make an incision *through* the skin, only large enough to admit a quill, blow into it, and work it round till the skin is loosened as far as the sweney extends; then confining the air, close up the orifice, as we do in bleeding a horse, by sticking a pin through the skin and fastening round with thread or a horse hair.

Mansfield, Ohio.

C. PALMER.

CULTIVATION OF MILLET.

MESSRS. EDITORS:—Millet is cultivated for several purposes, and has obtained many flattering commendations from persons who have grown it extensively. In Italy, and some parts of Germany, it is made into bread, which is very nutritious, and extensively eaten by the poorer classes. Generally, the seed is grown as food for animals, and more especially for poultry. It is estimated (by those who understand how to use it) to possess about the same value as corn.

There are three varieties of *Panicum* cultivated as millet, besides two species of the *Sorghum*, all under the common name of millet. Two of these species, *Panicum Germanicum* and *Panicum Italicum*, have round heads, much resembling what is known by the name of pigeon grass. These varieties have not succeeded well as yet in Ohio. The common, or German millet, grows four or five feet high, with stalks as large as coarse wheat straw. The *Panicum miliacum* grows about three feet high, with a broad leaf at each joint, terminating in a panicle, somewhat resembling Poland oats. There are two varieties of this species, one having brown, and the other yellow, buds. This species is found to be more profitable for cultivation than the two first named. From the small size of the stalk, and the great quantity of leaves, cattle and horses prefer it to the best timothy hay.

One of the favorite methods of growing this crop, is upon green sward, deeply fall-plowed, and well harrowed or worked with a cultivator or gang plow in the spring. Then apply a coating of fine, well rotted manure, and if the season is favorable you may expect a good crop. Sow from three pecks to a bushel per acre. If sown about the middle of May, it will be ready to harvest about the middle of July, and yields from three to four tons of excellent hay.

JOHN G. SAMPSON.

Laceyville, Harrison Co., Ohio.

VALUE OF MANURE FOR POTATOES.—About the 15th of May last I plowed a piece of green sward, and then let it lay for a few days exposed to the sun. On the 19th of the same month I harrowed it, and also planted some potatoes the same day. I never saw any piece of ground harrow up so beautifully in my life. On six rows I put a forkful of well rotted manure in each hill, and six rows I left without. The result was as follows: The rows I manured yielded fifteen bushels to the row, or ninety bushels from the six rows; and those without manure only yielded nine bushels to the row, or fifty-four bushels from the six rows. The rows were forty rods in length.

Chippewa, C. W.

G. P.

PLANTING BEANS IN DRILLS OR HILLS.—Your Ohio correspondent recommends planting beans with a machine drawn by a horse. Now, I planted a piece of about six acres last year, part of it with a "machine drawn by a horse," and the remainder with one of WAKEFIELD'S Patent Corn Planters, and found the yield decidedly in favor of the planter. There was also a large saving in seed, and in labor in pulling, the plants being in hills. My experiment was so decidedly in favor of the planter, that I shall use it exclusively this year.

D. D. SIMMONS.

Clarkson, N. Y.

ASHES AS A MANURE.

MESSRS. EDITORS:—Having for a few years past used all the ashes I could easily get, I can say that they are a cheap manure, and cannot be used upon any soil without the most beneficial effect. I have used them in various ways, and upon almost all kinds of grain, grass and potatoes, and always found my crops increased from two to four fold by their use. As to the use of leached or unleached ashes, I have used them side by side on my grass land, sown broadcast, at the rate of forty or fifty bushels to the acre, with an increase of hay the first year of at least three fold, but the difference in the grass after the leached or unleached ashes was scarcely perceptible.

I have used them with good success in the hill for corn and potatoes, mixed with an equal part of plaster and lime, the lime being slacked with strong brine; but the result, when used in this way, was always in favor of the unleached ashes. I have also used them with swamp muck, at the rate of one bushel of ashes to a load of muck, and after laying exposed to the ashes one year, spread and plow in, with good effect.

A. F.

Corinth, Saratoga Co., N. Y.

DON'T THIN YOUR CARROTS.—I wish to enter a protest against the plan of thinning carrots to three or four inches apart. I seldom thin out any except in spots where the seeds were deposited in clusters and come up, perhaps a dozen in the space of a hands breadth. Two years ago this season, I planted a patch of ten rods long by fifty feet wide, and dug one hundred bushels of carrots, and not one of them larger than one and a half inches in diameter and fourteen inches long, and when a basket full was lifted to the wagon it denoted some substance; they were of the long orange variety. A neighbor, the same season, raised on half an acre about one hundred and fifty bushels, and his smallest were larger than my largest, but the noticeable difference was in the weight of the same basket when filled.

D.

Gates, N. Y.

CULTURE OF POTATOES.—I give my land a thorough plowing early in the spring. Then harrow repeatedly. Then about the first of June, with a horse and small shovel-plow harrow out rows four feet apart, and drop cut potatoes in the furrow twelve or fourteen inches apart. Then the horse and a winged shovel-plow covers the potatoes with a gutter over the potatoes to catch the rains, and this gutter should be left in all the after tilling, which should be thoroughly done.—To harvest I take a horse and a common plow, throwing a furrow from each side the row; this makes a complete ridge in the middle of the rows and leaves very little work for the hoe.

I have as nice potatoes as any one can wish for, raised after the above plan. The variety, early round, white fleshed Pink Eyes—some weighing over two pounds.

AMOS CLIFT.

POLL EVIL.—Wash the poll well with bar soap and water; then spread green ointment on flax or tow, and tie it on. If there be proud flesh, add a little blue stone, well pulverized. Dress once a day until it begins to heal, and then once in two or three days. The horse can be worked if the bridle is tied back.

J. W. K.

Jordan, C. W.

CULTIVATION OF BEANS.

MESSRS. EDITORS:—Beans produce best on a rich, loamy soil, but they will usually produce well on any soil that will grow good corn, wheat, barley or peas. There are numerous varieties, among which, for field culture, we prefer the small round white bean, which will usually get perfectly ripe in ninety days from the time of planting, and will yield from twenty to forty bushels per acre. Plant them in drills or hills, as soon as your corn is planted, about two feet between the rows, and in hills, one foot apart in the row. Keep the weeds down with the hoe, but do not hill up the beans. When ripe, stick down stakes about eight feet long, lay stone or wood around the bottom, so as to keep the beans off the ground, pull and stack them around the pole, the roots inward, cap with straw, and let them stand until well cured, when they should be drawn in and threshed with a flail, and well cleaned, ready for market.

H. H. TAYLOR.

East Rodman, Jefferson Co., N. Y.

PLOWING WITHOUT HEADLANDS.—Commence in the middle of the field or land (as the case may be) where you would finish in the ordinary way of plowing. Make one furrow the length the dead furrow would be if you had finished there, lift the plow around and turn the team gee, and throw the second furrow slice against the first, and so on. Avoid plowing at the ends until you have gone five or six rounds, when the broken land will have become wide enough to plow across. Continue on in this way until you have finished the field or land at the outward edge. In this way the teams never have occasion to walk on the broken land, and you may keep plowing all the time. The teams will turn "gees" as readily as "whas," after going a few rounds.

Ballardsville, Ky.

W. B.

PERUVIAN GUANO AS A MANURE.—Last year I prepared a piece of ground, hauled out at the rate of twelve loads of good fine barn-yard manure to the acre, spread it, and then sowed to buckwheat. I had a large growth of straw, but, on account of the dry weather, had but little wheat. After sowing the above described lot, I prepared another piece by the side of it, in order to try an experiment with guano. After preparing the ground, I sowed at the rate of one hundred pounds of guano, mixed with four bushels of ashes and two bushels of plaster, to the acre; then sowed my buckwheat, and harrowed it in. The wheat was equally as good, in every respect, as that part manured with barn-yard manure.

A. F.

Corinth, Saratoga Co., N. Y.

SELECTING SEED CORN.—I have been very particular in selecting my seed corn. I continue to cultivate the same kind of corn that I have raised for twenty-two years past, and it has greatly improved, both in size and time of maturing. My plan is to select the largest and best filled ears when I am husking, and put it into a barrel or box until spring, when I again pick it and reject all that is not perfectly sound, and the result is that my corn comes up well, and, instead of running out, it is greatly improved. So much for my experience in saving seed corn.

W. W. GRAHAM.

Duncansville, Ky.

WHY BUTTER IS DEAR.

MESSRS. EDITORS:—In the last volume of the *Genesee Farmer*, some one tells us why butter is dear; but I think he attributes it to the wrong cause. I live in a community of farmers, and I know of no farmer's daughter that does not know how to make butter; and some I know that have an ornamental education, but it does not interfere with their knowledge of butter making, as they learn that as they are growing up, and will no more forget it than they will their A, B, C's. If the women and girls don't know how to make it, why is it that the farmers have butter for their own use? which I can affirm they do have, and use it too.

The reason why butter is dear, is because it is scarce, and it is scarce because of the increase of population, which consumes the surplus in the small villages, and but little comparatively finds its way to the cities, unless from the dairies, and that is not often sold until fall. The only remedy will be for rich men to buy stock farms, and stock them, in reach of these Northern railways where land is cheap, and the butter can be sent into market once a week. There are many families who have help of their own enough to manage a small dairy, who have not the means to buy, or even to stock a farm, who would do well for their employers on such a place. I think it would be a better investment than bank stock.

Saratoga Co., N. Y.

A FARMER'S WIFE.

PEAS.—Select a piece of clover sod where you can drain it dry; plow in the fall as deep as possible; drain it well. In the spring, as soon as the ground is thoroughly dry, harrow the ground well, and sow the peas, plowing them in about four inches deep.—Then go over the ground once with the harrow lengthwise the furrows. To destroy the bugs in the peas, put them in boiling water long enough to kill them, before sowing.

G. JOSLIN.

Mt. Brydges, C. W.

BONE SPAVIN.—I have tried the following and found it a good remedy for bone spavin. Take two ounces of mercurial ointment, one ounce of iodine ointment, two ounces of camphor and six ounces of oil organum; warm and mix thoroughly by holding the dish in warm water. Apply twice, daily. Keep the horse dry while applying; rub the mixture in with the hand. It will cure in five days.

Niagara, N. Y.

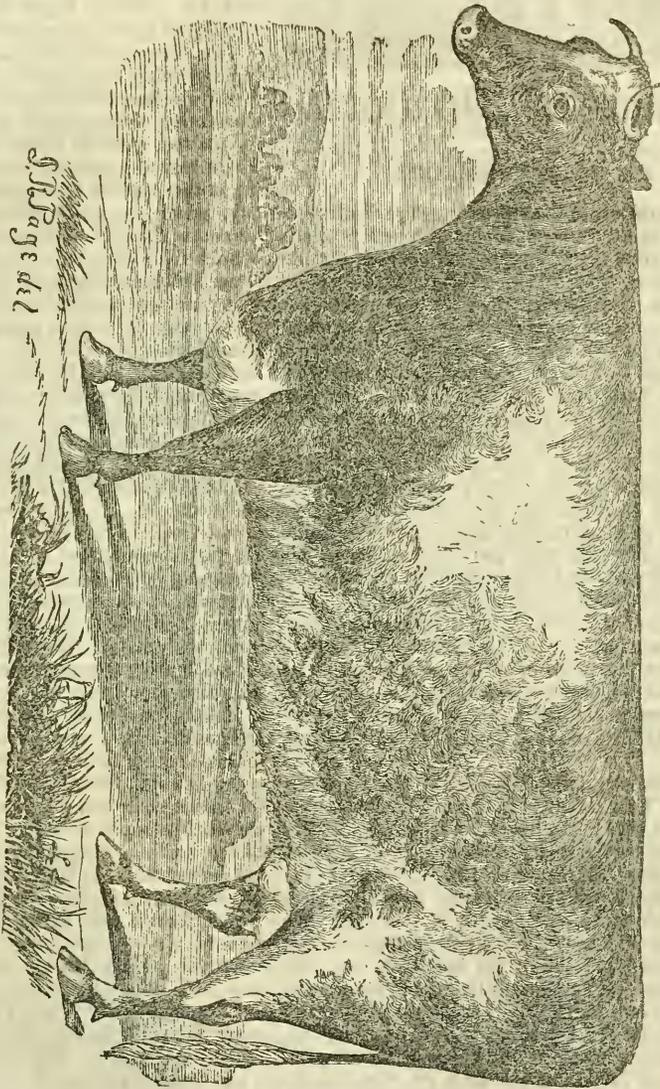
CULTIVATION OF CORN IN INDIANA.—The best mode of cultivating corn with us, is to take a grass sod, roll and harrow fine. Then stir the top of the ground between the rows often; keep the weeds out and hill up but little. The distance three feet each way is about right. Four stalks in each hill for eight rowed corn.

C. E. HILDRETH.

DuPont, Jeff. Co., Ind.

BEANS.—The most profitable varieties of beans which I have raised—and I have tried a good many—are the White Mountain, a large white bean; and the Dwarf Horticultural. The former is a half runner, and is very productive and profitable; the latter early and good.

H.



SHORT-HORN COW ADELAIDE.

Adelaide was bred by Hon. ARAM FRINGSON, Woodhull, C. W.; red roan, and calved April 20th, 1850. She was sired by Halton (11,852), out of Lady Elgin by Symmetry (12,170), Flora by Wellington (13,987), Victoria by Agricola (1614), Beauty by Snowball (2,647), — by Lawstievers (305) — by Charles (127.) She was bought by Hon. JOHN WESTFORTH, for the "Illinois Breeding Association," at Summit, Cook County, Illinois.



Horticultural Department.

SIX HARDY EVERGREENS.

In a climate where deciduous trees are destitute of foliage for nearly three-fourths of the year, it is surprising to witness the tardiness with which farmers plant out evergreens. Take a sleigh ride in almost any direction, and you will find set out along each side of the road, at regular distances, tall, straight, branchless sticks—a cross between a hop-pole and a telegraph post—which you will be surprised to hear are intended for shade trees; but where will you meet with a grove of evergreens surrounding a farmer's quiet homestead? The glaring white houses look cold and cheerless, as the fierce north-wind whistles around their unprotected gables. The atmosphere becomes colder as you gaze, and you drive on, thinking it less strange that so many farmers' sons and daughters are willing to leave such bare and desolate scenes for even the dingy walls of a crowded city, than that intelligent, industrious, prosperous farmers should so far lose sight of their own interest as to neglect to ornament their rural homes, by planting out a few of the hemlocks, firs, pines or cedars which are to be found in great numbers in their own woods, and which could be transplanted with a ball of earth around their roots, at little expense, during the leisure season of the year.

There has been much difference of opinion in regard to the best time for transplanting evergreens, from the fact that if the operation is performed with care they can be transplanted with safety at any season of the year. In removing large trees from the woods to another part of the same farm, and when a considerable quantity of earth is taken up with them—as should always be the case in transplanting large evergreens—probably the best time is in the winter, because the farmer has then more leisure and it is easier to remove them with a large ball of earth. Setting aside all considerations of leisure and facility, the best time to transplant evergreens is during the present month, or just as the buds are “swelling to burst.”

The point of most importance in transplanting is to avoid exposing the roots to the air. If the roots are exposed to the sun and wind till they are dried the tree may live, but the chances are very much lessened.

Nearly all evergreens prefer a rather soft, moist soil, but not wet with stagnant water. They will do well, however, on nearly all soils by judicious management. Dig the holes of good size and depth, and if you have any muck or peat that has been thrown up a year or two and is thoroughly decomposed—if it

has been decomposed with ashes or lime so much the better—put a small barrowful under each tree and mix it up with the soil, and then plant the tree on the top, spreading the roots out carefully and covering them with light, moist soil. Mulch the ground round the tree, and you will be abundantly rewarded for your labor.

In regard to the best kinds of evergreens, it is difficult to make a selection from so many worthy candidates. We have, however, concluded to name six that are perfectly hardy and every way desirable, forming an agreeable contrast in color and habit.

THE NORWAY SPRUCE (*Abies excelsa*.) This is a rapid growing, hardy and most beautiful tree. Even in old specimens its fringed branches are gracefully spread out on the ground and ascend pyramidically to the top, with its leader pointing to the skies.—There are some beautiful specimens of this tree growing in the grounds of AARON ERICKSON Esq., of this city, which we never see without exclaiming with RICHARD HOOKER, “the goodness of trees when we behold them delighteth the eye,” and recalling the remark of a more modern but less orthodox writer, that “without trees the world would be a desert; with them it can be made a paradise.” It is the loftiest tree indigenous to Europe, attaining in some instances the height of 180 feet. It derives its nourishment chiefly from the surface and luxuriates in soil which is cool and moist; and with a surface-soil of ordinary quality, is one of the few trees that will thrive where the sub-soil is wet and retentive. There is a noble specimen of this tree at Studley, England, 150 years old. In 1853 it was 124½ feet high and at a yard from the surface of the ground, the trunk was 14½ feet in circumference. It is still healthy and vigorous with branches and foliage nearly to the ground. It stands in a sheltered situation on a rich alluvial deposit, and has at no period of its growth suffered from confinement. The late A. J. DOWNING says, “there is no ornamental evergreen, on the whole so satisfactory, so hardy in all parts of the country, and so well adapted to all soils as the Norway Spruce.”

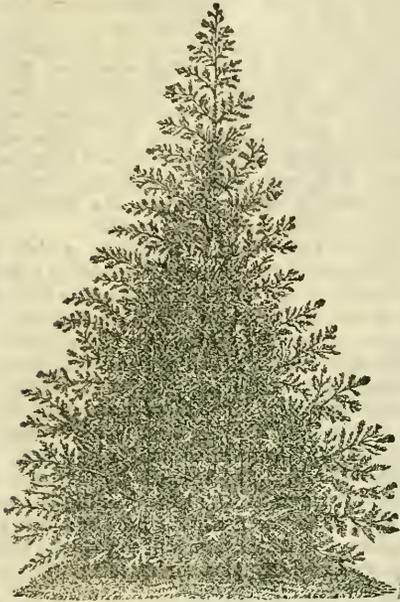
THE BLACK SPRUCE (*Abies nigra*.) is indigenous to this country, and closely resembles its Norway congener in habit, though differing from it somewhat in the richer color and increased density of its foliage and its less rapid growth. The tree is abundant in all the northern States, and farmers cannot plant it too extensively. It is from this tree that the genuine and wholesome “spruce beer” is made.

THE SCOTCH PINE (*Pinus sylvestris*.) This is also a hardy, vigorous and rapid growing tree; its dark color and general habit forming an agreeable contrast with other evergreens. If a native is preferred the Weymouth or White Pine (*Pinus strobus*.) is every way suitable, though its growth is not so rapid as the Scotch pine. Though indigenous to America, it has become extensively known as the Weymouth pine, from the fact, that at the beginning of the last century large numbers were planted by Lord Weymouth on his estate in Wiltshire, England. It is the American White pine of commerce.

THE AUSTRIAN PINE (*Pinus Austriaca*) was introduced into England in 1835, and is now more extensively propagated than any other foreign pine. It is also rapidly gaining favor in this country. It is, perhaps, the hardiest of all pines, thrives on a great variety of soils, and is of robust growth and handsome habit. In Austria, it sometimes attains the height of 100

feet, and produces a strong, resinous timber, superior to that of the other varieties of the species.

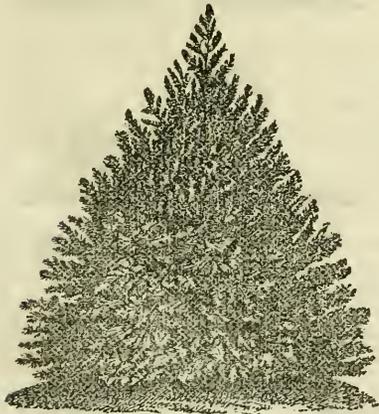
THE AMERICAN ARBOR VITÆ (*Thuja occidentalis*) is indispensable in all ornamental grounds. For forming a screen, it has no equal. It transplants



AMERICAN ARBOR VITÆ.

easily, grows freely and quickly, and makes a beautiful hedge, though not strong enough to resist animals. Grown singly on a lawn, it forms a handsome, pyramidal tree. There is a beautiful specimen growing in the grounds of S. MATTHEWS, Esq., of this city, of which the annexed cut, drawn and engraved for our *Rural Annual*, is a correct likeness.

THE SIBERIAN ARBOR VITÆ (*Biota pyramidalis*) is the hardiest variety of the species, and, we were



SIBERIAN ARBOR VITÆ.

about to write, the handsomest. That it forms a beautiful pyramidal tree the accompanying engraving drawn from one of three fine specimens growing in an exposed situation on Mr. MATTHEWS' lawn abund-

antly proves. The branches are flat, and very densely set around the stem. It is of slow growth, but retains its color so well during even the severest winters, and has withal such a handsome form and foliage, that it deserves a place on every lawn.

RABBITS AND FRUIT TREES.

MESSRS. EDITORS:—In the December number of your useful paper, I see that considerable complaint is made about the injury done to young apple trees by the mice and rabbits. In later numbers, also, their mischief is spoken of, and some preventives made known.

I have a young apple orchard that I have taken some care to protect and bring on. My trees were transplanted from the nursery in the spring of 1855, and have passed the two last winters almost *entirely* without injury from the rabbits, which are as plenty as the boys that hunt them could wish. The mice, though very plenty, never meddle with our trees; but the rabbits sometimes spoil half an orchard in a single night, if not prevented. The mice attack our corn-cribs and out-stacks; but I have two big tom cats who know well enough how to catch them, for of late they are becoming very scarce about their usual haunts. And to keep the *rabbits* from my apple trees, I rub them thoroughly with soft soap. This has proved a complete preventive against the depredations of the rabbits in my orchard. I take a mop of woolen rags, late in the fall, with which to apply the soap to each tree, which I do to the height of two and a half feet; and in case of much rain in the early part of the winter, I make a second application. *This remedy need not be doubted*, for I have tried it *two* winters with complete success. My trees are now smooth barked, and look as though they had really been benefited by the soap. J. N. BOAZ

Near Exchange, Ky.

WHY FARMERS NEGLECT THEIR GARDENS.

MESSRS. EDITORS:—The half acre devoted to gardening by the farmer is to him the least attractive of any other part of the farm, yet it is the most profitable in a small way, should he count the cost and the return. I am certain that no other half acre will yield near the nett profit of the garden, yet it is the most neglected, and why? *Because flowers are entirely banished from it.* There is nothing to cheer the flagging spirits after a day of toil, nothing to draw the owner during an idle hour to while away the time among the beautiful sentiments of nature. His mind is engrossed wholly by the larger and more marketable productions; therefore is the garden delegated to the boys, who, having projects of their own, are very apt to slight it. Besides, the garden requires attention at a time when a farmer, who himself leads the laborers in the field, can have but little time to spare.

Now to remedy the evil, for surely it is an evil of magnitude, is first to persuade them to subscribe for, and read, the *Genesee Farmer*, or some kindred journal; and next, invite the girls to assist in planning the grounds, and let them have a variety of beautiful flowers successively through the season. Then would the garden be no longer the shunned part of the farm.

Gates, N. Y.

D.

HORTICULTURAL OPERATIONS FOR JUNE.

SEARCH diligently for bugs and carefully watch their operations upon the cucumber, melon and squash vines. They will be found in every little crack and cranny immediately about the collar of the plants and will eat them completely through just at the surface, and sometimes below the surface of the soil before one is aware of their existence. As the weather gets warmer they will be found flying about from plant to plant and then will be more difficult to catch. The easiest and quickest way to catch them is for two persons to take a piece of gauze about a yard square, then each person walk on one side of the row of plants with the gauze stretched between them; walk quickly and spread the gauze over the hill of plants before the insects have time to fly away. You will then have time to roll it up gently and kill them as they make their appearance. Repeat this night and morning for a short time and you will soon lessen their numbers, neglect it and doubtless you know the effect from previous experience—you may lose all your first plants. This is the only effectual method of getting rid of them; save covering the plants tighly with millinet or glass boxes. I have tried soot, wood ashes, air slacked lime, scotch snuff, tobacco water and Peruvian guano, and nothing has been so thorough as catching and killing. The guano has had a better effect than any of the others, either by invigorating the plant and enabling it to out grow the bugs or keeping them away by offensive smell.

SQUASH BUGS.—Search for the "big squash bugs." Take a pail or watering can half filled with strong brine or strong guano-water, catch them by hand as soon as seen and pop them quickly into the liquid. You must be resolute and make no compromise if they do stink or they will cheat you and get away. I have often thought that if a few tons of them could be collected they might be serviceable as an article of exportation to China for the purpose of manufacturing into *stink-pots*, especially now in time of war, for I know of nothing that can be more offensive.

A CONSTANT SUPPLY OF VEGETABLES.—To have a constant supply of tender kitchen vegetables it will be necessary to repeat the sowings of peas, string beans, early Bassano and Long Blood beet, sweet corn, summer crookneck squash, spinach, early short-horn carrot, lettuce, radish, mustard and cress. In order to have these vegetables in the best condition for the table, they must be sown on warm, rich ground that they may grow and come to maturity as quickly as possible, for the quicker they grow the more sweet, tender, delicious and wholesome they will be; and the slower the more coarse, hard and strong, especially the lettuce and radish.

LETTUCE.—When the lettuce are about half grown, or a week or ten days before they are wanted for use, take each plant and collect its leaves together and tie a piece of string or bass-wood bark around it and in a few days it will be as white as the heart of a cabbage and quite sweet, tender and crisp.

CABBAGE.—If a few early cabbages be tied in the same way it will forward their hearting up a few days.

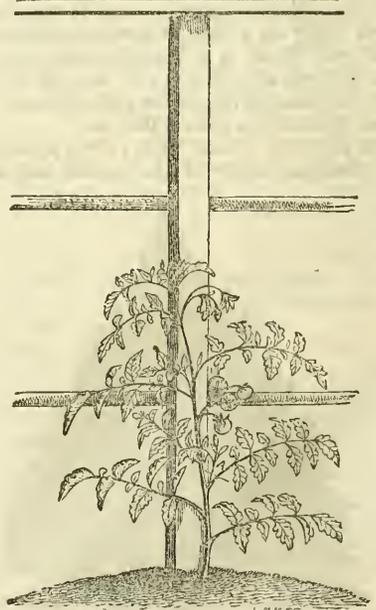
CABBAGE AND CAULIFLOWERS.—Plant a second supply of early cabbage and early Paris cauliflower as recommended last month. Also a good quantity of Drumhead or Flat Dutch cabbage for winter use.

PEAS—When the peas are up three or four inches high it will be time to hoe earth up to their stems, and when they are six inches high it will be time to stick them, by placing fan shaped boughs along each side of the row for the peas to clime upon.

PREPARING THE CELERY TRENCHES.—About the first of June will be the time to plant out the celery in the trenches. So prepare the trenches between the first rows of the peas that were sown five or six feet apart. Stretch a line and mark out the trench two feet wide, then dig it out one foot deep and throw the earth alternately on each side. Now wheel in about five or six inches thick of good rotten manure; spread it in, well mixing it with the bottom soil.—When done, if dry weather, give it a thorough good soaking of water and rake it smooth.

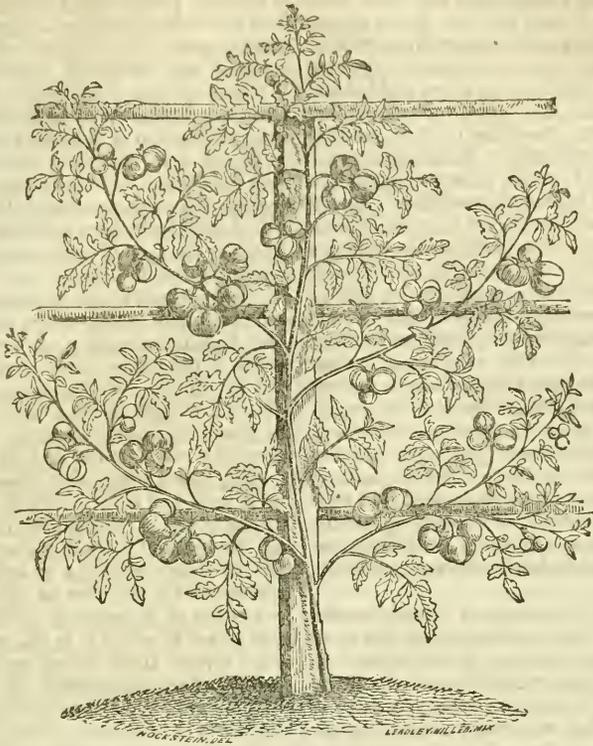
PLANTING OUT CELERY.—Choose a dull day, if possible, but do not wait too long; stretch a line down the middle of the trenches; then with a little garden trowel take the plants up separately from the nursery bed, being careful to preserve a ball of earth about their roots; pick off all the decayed, crooked or broken leaves and suckers about the collar of the plants; then plant them a foot apart along the middle of the trench; press them in pretty firmly with the hands and give a good soaking of water. If the weather should prove hot and dry they will require watering every afternoon as soon as the sun has passed off a little, say five o'clock or so; give a good quantity so that the water will soak to the bottom of their roots. Directions for earthing will be given next month.

TOMATOES.—If a stake was driven to each plant at the time of planting, as recommended last month, it



TOMATO RACK, AND VINE AS IT APPEARS WHEN FIRST PLANTED.

will be time now to nail on some strips of wood to form a sort of an espalier to train the plants upon. Take a stout strip of wood and nail along on the top of the posts that will keep them in their proper places;



TOMATO RACK AND VINE AS IT APPEARS WHEN FULLY GROWN.

an nail others at a foot apart lower down, to with a foot of the ground. If sawed strips cannot be had, long thin poles will answer perfectly well. It will then form a trellis, somewhat resembling the above engraving, which is a correct likeness of a plant grown by me in 1856, and is but a fair representation of a great many, only that it does not show half the number of fruit which had ripened and been pickled, for it was taken late in August. I have grown them so for many years and find that they ripen more perfect fruit this way than any other. Train the main stem right up the post, and when it has set the first bunch of fruit pinch out its leading shoot to one leaf above the bunch of fruit; it will immediately push another leader and also throw out laterals from the bottom. Train out one of these laterals on each side of the main stem as shown in the cut, and when they have set the first bunch of fruit pinch out the leader to one leaf as advised for the main leader.—They will immediately push again and as soon as another bunch of fruit is set repeat the pinching.—Train out other laterals a foot above the lower air, and so on to the top of the trellis. Cut out every superfluous shoot as soon as seen; cut them out to the axil of the leaf but do not injure the leaf.

TO SAVE TOMATO SEED.—Save the first finest, smoothest, roundest and largest fruit. Repeat this a few years and you will soon have a fine sample of tomatoes. I have adopted the plan, and I now have them, not flat or wrinkled all up, but as round as an orange, and as smooth and large as the largest Northern Spy apple.

JOSIAH SALTER.

Rochester, N. Y.

BIRDS—AGAIN.

MESSRS. EDITORS:—I have always been an admirer of birds—the denizens of the air. They have always appeared interesting to me, not only from their song, but their lively, interesting habits and beautiful plumage. In my youthful days I was taught that it was wrong to harm birds.

Flowers have been called “the poetry of nature,” a compliment which might be applied with even more justice to birds; which not only vie with the tulip and rose, in the splendor and beauty of their colors, but in their sprightly and joyous movements, their elegant and graceful forms, and more than all, in the variety and sweetness of their melody, may be said to embody the very soul of poetry. To study the character and habits of this most interesting portion of “animated nature,” has been to me highly pleasing and instructive.

Singing birds are undoubtedly for the most part, found near the habitation of man, and commonly follow the track of cultivation. This is part owing to the protection which he affords and the greater facility of obtaining food.

I consider birds are benefactors as well as injurious to the husbandman. They destroy millions of grubs, caterpillars, larva, and aphides, which would have ravaged his crops; but at the same time, some commit depredations and havoc upon his fruit and seeds. The wisest course is to frighten them from the trees and garden at such times, or from the portion of it in which they can be prejudicial, but to leave them to visit it unmolested whenever and wherever they cannot be mischievous. Thus in early spring, and

during cherry time, one or two boys will drive them away and keep them off from the fruit during certain seasons, and the gardener may protect himself from injury at a very trifling expense, without depriving himself of the services of the most sharp sighted and successful of all insect-destroyers. Farmers and gardeners are beginning, however, to find out that birds are their most useful allies. Nothing in the insect tribe comes amiss to them, from the aphides of the rose bush to the heinous caterpillars. And if they do sometimes treat themselves to a cherry, who can blame them, if after such a dinner they fancy a little fruit for a desert, and who know but their quick eye perceived a worm in the very cherry you grudge them? "The laborer is worthy of his hire," and man can well afford this compensation for their tireless industry.

THE CHERRY BIRD, of which your correspondent "I. P." desires "a complete history," is of a brownish grey color, with a deep black line from the nostril, over the eye, the hind head, bordered over by a slender line of white. Chin black, gradually blending into greyish brown. Six or seven, and sometimes all the secondaries furnished with a prolongation of their shafts of a vermilion color, and resembling sealing wax. Occasionally these appendages are seen on the tail-feathers, and sometimes individuals are found without them.

This well known bird has various popular names. Those of "Cedar bird," but perhaps better known as "Cherry bird," are most common in this State. In Massachusetts it is called "Canada robin," and by the French Canadians it is known under the name of *Récollet*, from the color of its crest resembling the hood of that religious order. It is also called the "brown bird." It is distinguished for its beautiful silky plumage, the gentle fondness of its disposition, and of its gluttonous habits. They arrive from the south about the middle of April, generally in flocks, and feed principally upon insects until the ripening of mulberries, whortleberries, grapes and cherries. At this season they are well known pests in the garden. They are best known, however, for their fondness of cherries, which they devour with great greediness.—They are not, however, exclusively frugiverous, but repay the comparatively unimportant injuries which they inflict on man, by ridding trees of the small beetles, caterpillars and canker worms with which they are infested.

At the time of the ripening of cherries they are well known to horticulturists as great pests. And should we stop here in our investigation into the character and habits of the Cherry bird, we should be compelled to admit they had but little to recommend them to the tender mercies of the cultivator of Ox-Hearts and May Dukes. But we are happy, however, to notice that the usefulness of this bird to the cultivators of fruit, is at the present time more generally acknowledged than it was when Mr. WILSON wrote its history. The author supposed that "the use of the Cherry bird to the farmer consists principally in their agency in the transporting various kinds of seeds and berries on which they feed, the action of the stomach not injuring their vegetative powers. In other respects, however, their usefulness to the farmer may be questioned; and in the general chorus of the feathered songsters, they can scarcely be said to take part. We must rank them, therefore, far below many more homely and minute warblers, their neighbors, whom Providence seems to have formed both

as allies to protect the property of the husbandman from devouring insects, and as musicians to cheer him while engaged in the labors of the field, with the innocent and delightful melody." Such was Mr. WILSON'S opinion of the merits of the Cherry bird. Since this distinguished ornithologist's time, the character of this bird is in better repute, we trust, among intelligent and discerning horticulturists; it has been found that the Cherry bird is very useful in destroying the canker-worms. The period from the arrival, which we have said was about the middle of April, to the time of their pairing, which takes place about the first of June, is spent by these birds congregated in small flocks, in procuring their insect food principally the canker-worms and small caterpillars. And in this connection we would notice the social habits of the Cherry bird, as observed by ourselves as well as others. We have seen a flock, containing some six or eight of these birds, after having silenced upon the canker-worms to repletion, seat themselves in a row on a dry limb, in a state of listless pluming their wings, and occasionally lisping the feeble note, and thus quietly digesting their meal. Presently one of their number, more vigilant than the rest, discovers at a short distance from the perch well-fed insect, which he at once seizes and politely presents to his neighbor on his right, who declines to partake of it passes it to the next, who also refuses to eat it, and it is in this way sometimes passed round several times before one can be found to accept it. Notwithstanding this disinterested trait the character of the Cherry bird, they are sometimes gluttonous in the extreme, gorging themselves with fruit until no more can be swallowed, and even in some cases, filling their throats so full as to cause suffocation, resulting in death. Although we have said before, that these birds are the personification of mischief to the cultivators of fruit, more especially the cherry, yet, in view of the many insects, particularly that pestiferous one, the canker-worm, which they destroy from the time of their first arrival, the ripening of our early fruits, we should pause while meditating some more murderous design upon their lives.

Springside, May, 1857.

BEMENT.

WHY DO FARMERS SO GENERALLY NEGLECT THE GARDENS?

MESSRS. EDITORS:—There are leisure moments for a farmer to cultivate a garden if he will, and have good one too, but

A angles after a warm shower, when he should be transplanting.

B begs his seeds of his neighbors, and is either short or must wait until others are done seeding.

C cuts and hauls his wood, which should have been done in the winter.

D drives a fast horse, and must as frequently be possible show himself on the road, believing himself to be the most important personage in the community.

E either dislikes garden sauce, or is too lazy to attend to it.

F forgets to manure his garden in the fall with decomposed manure, and is obliged to use that which is unfermented, and altogether unfit for the purpose.

G goes to law with his neighbor for some imaginary damage done him or his, getting fleeced twice once in time and once in money, but is sure to "gain the suspicions and distrust of the neighborhood.

H has many irons in the fire; some are sure to turn, and among those are his garden.

I, ignorant man, would not pay the postage on the best agricultural paper in the country, even if it were forwarded gratis. His judgment is very great in the management of a farm or a garden, and his ends come to the same conclusion while visiting his premises.

J jobs it for mouied men.

K kneels to the shrine of the curse of the world, and is obliged to run at every man's call.

L looks to his own interest, by watching his embarrassed neighbor, in order to know when to "strike" a good bargain, and double his money.

M manages to run his face for a little more land, while he has twice as much as he can properly till, and must of necessity give his whole time and attention to some saleable crop, in order to free himself.

N now and then pettifogs a little, and gives his are moments to the law.

O on all such occasions visits the bar-room or oocery.

P preaches occasionally in the school-house, and just look well to his text, depending on his hearers bringing in the sauce on donation days, or when needly visits are made.

Q questions the utility of eating so much fodder, when pork and corn-dodgers are so easily made, and so well on the stomach.

R rather inclines to speculation; thinks he will sell or let his farm and go into trade, and makes his speculations accordingly.

S sleeps the best part of his time away, which is in the morning.

T takes a trip to the Far West, is delighted with the country, sells out and moves off, and the next year of him is that the "shakes" have a mortgage on him.

U underrates the value of agricultural papers, after returning crumpled and soiled the one he has borrowed; knows the biggest part to be lies, got up for the purpose to cheat the farmers.

V varies somewhat from the rest; holds town office, and is fond of political strife.

W watches the signs and the times, has his almanac days, and plants in the moon, whether the ground fit or not.

X is about X—can play on a fiddle, and sings in the church, and all leisure moments are spent on his "urns," and sol do rols.

Y yearns to be somebody else, or in some other business, is very much out of health, can't eat but little, for the reason that he "don't raise it."

Z, zounds! makes up his mind as he looks through an open window and discovers the tops of his last year's onions, parsneps, beets and carrots sticking up out of the ground, that if he hoes them a little he will have as good a garden as his neighbors, and much better than he had last year, for they have a hole year the start.

&c. is persuaded to subscribe for an agricultural paper, which is "the best means of rectifying the soil." The first year there is created in him a love for the beautiful, which grows with his growth, and strengthens with his strength; he is soon posted in the treatment of soils and manures, the effects of which will first be visible in his garden.

Seymour, Allegany Co., N. Y. J. C. ADAMS.

CURRANT WORM.

Messrs. Editors:—I have been noticing an inquiry in the February number of the *Genesee Farmer* from D. C. HOUSBERGER, Rainham Center, C. W., in regard to the currant worm. The worm he alludes to is no doubt the gooseberry caterpillar that has proved so destructive in many parts of Canada, that the gooseberry and currant bushes have nearly disappeared. I will give my remedy which has proved so satisfactory to me that I think your correspondent and all those troubled with the wormy pest may benefit by the same.

About five years ago I found my currant bushes infested with multitudes of these caterpillars. I could not bear the sight, so I declared war and set to work to kill them. I found that my chance was a poor one amongst the miserable old fashioned hedge row system, crowded against the fences amongst the grass, weeds and briars so commonly seen in Canada. I consequently dug up my old hedge row by the fence and cast it over board and changed the sight into a vine border. I prepared a portion of my garden by trenching and filling the trenches with surface soil and fertilizing substances. I then selected strong, healthy currant shoots of the previous years growth, cutting away all the eyes closely to the desired height, leaving several buds at the top. I planted them in rows six feet apart and four feet apart in the rows, from the following improved varieties, large Red and White Dutch, White Grape, Victoria, Cherry, Black English and Black Maples. They all rooted freely. By clean cultivation and regular pruning, I not only have fruit of double the ordinary size, but also much improved in flavor. I cultivate with clean stems; this gives them the appearance of a miniature little orchard and adds largely to the ornamental part of the garden; it also gives me free access to all parts of the bush, and when the worms make their appearance I generally prepare myself with an old tin dish, and on jarring or shaking the bushes they will all fall to the ground or else be found in a suspended form by a silky thread. In this form the old tin dish will be found an excellent means to secure them with. Those that fall to the ground may be easily destroyed by the foot, or by spreading a cloth under the bushes you may take them nearly all. By watering and paying attention to my bushes in the proper season, and probably spending not more than five or six hours in a summer season, I have nought to fear from the wormy pest. S. S.

Humberstone, C. W.

GRAFTING THE GOOSEBERRY.—In the *Farmer*, Vol. IX, page 234, a writer speaks of grafting the gooseberry on flowering currant. I have thought I might graft the currant on the gooseberry prepared as for standards, to stop its propensity for throwing up suckers; I am down on every shrub or flower that has that propensity. The flowering currant is a favorite of mine; it far surpasses some of the new shrubs, but I would not admit one into a good yard, unless I could grow it on some stock that would not sprout. I have a tree sixteen years old, eight feet high, length of body five feet, the limbs droop naturally and make a perfect weeping tree; a mass of flowers when in bloom; it is slender, and has to be kept tied to a stake. I have never suffered a sprout to grow, as it stands alone I can keep them down. — AMATEUR.

PLANTING TREES ON PRAIRIES.

MESSERS. EDITORS:—A lonesome place is the prairie without trees, shrubs, or rocks to fence the field or furnish shade for man or beast. The planting of the peach will prove, I doubt not, profitable both for fruit and fuel. It grows rapidly here, and through ordinary winters in most localities resists the frost successfully. Few kinds of timber will grow the same amount of fuel in so short a time and with little care as the peach.

The cotton wood grows readily and rapidly when cuttings are stuck in the soil, and soon forms considerable shelter for animals. Groves of these could be grown in low places in a short time, so as to protect animals considerably. These also furnish fuel rapidly, and in a few years form stately trees. In many places this species of wood has grown in fifteen years to six inches in diameter and thirty to forty feet in height.

For the growing of fence posts, the locust is the most vigorous and certain grower, and when put out upon a well pulverized soil, soon makes a handsome tree. Where timber is the object, the locust after the first year should be closely pruned of all side shoots. This will cause them to grow tall and straight. It is not so long a job as many imagine to grow fence post, or even rails in this way.

The western farmer should pay as much attention to the planting of trees as of corn, and give them as close attention as he gives his most remunerative crop. If the prairie land holder looks not to the growing of timber, the broad acres which he may leave to those who come after him will be of little value.

Illinois.

JNO. SANFIELD.

STARTING EARLY PLANTS.—As very few of your readers will make a hot bed to start plants for early fruits, the following may be of service. On reading an old *Iowa Farmer*, (which by the way is a good paper,) I noticed a rather ingenious, as well as (to me at least) a new method of forwarding plants, such as cucumbers, melons, &c., simply taking the flat turnip and dig out the fleshy part, leaving the shell, which is to be filled with soil, and place in a box, (an old raisin box will do,) filling in sufficient to hold the cups in position steadily; plant the seeds in the cups, which may be placed out as soon as the weather will permit, and not disturb the roots of the plants in the least. Tomatoes may also be started in the same way, and the fruit obtained earlier than by the old process of pulling and transplanting. This is not a good and seasonable article, I am well aware, but having recently seen it, the suggestion appeared to me practicable, I concluded to give it to you to publish or light your cigar. D.

Gates.

HORTICULTURE IN OREGON.—Tree planting is still carried on very enthusiastically in Oregon, as California buyers still take all the apples they can get at from five to ten dollars per bushel; all the last crop are gone, and I understand some are willing to enter into engagements for the next season. There is also quite a trade carried on in nursery trees to that market, I have heard it intimated by nurserymen at three millions of trees this season. This I think is too large a number, but still it is considerable, with signs of its increasing. J. M.

Salem, O. T.

SULPHUR TO KILL ROSE BUGS.—When visiting and around Richmond, Ind., last autumn, I was delighted with the abundance of splendid roses that met my view, and which seemed then to be in the glory. I inquired of several if the bug had not visited them. The reply invariably was, "oh yes, but destroyed them with sulphur." The plan for so doing was to put sulphur (the hard) on a plate under the bush, and set on fire, and then cover something of the bush while the fumes lasted. I remarked that sulphurous inhalations must agree with the bush, for they appeared extremely healthy, a few of the under leaves only dropping off. M. S. B.

Aurora, N. Y.

A LIST OF GOOD PETUNIAS.—Prince of Wales—large, dark purple. Hermione—large, lavender a white striped. Glory of America—small, but very pretty, striped. Alfred—bright salmon color, good form and substance. Beauty of Yorkville—bright pink, white throat, very pretty. Great Western—large and fine. Hebe—veined, very handsome. Amazon—dark, purplish crimson. Eclipse—very fine. Enchantress—large and showy. The above will be found to comprise a superb collection of the length of duration and beauty of bloom

Rochester, N. Y.

W. T. GOLDSMITH.

SPARE THE OWLS.—In the March number of the *Genesee Farmer*, I observed an article headed, "Catch Owls." The plan proposed, I doubt not would be very efficient for the purpose; but from the frequent complaints made by your correspondents of the destruction of fruit trees by mice, I should think more advisable for all keepers of poultry to prepare a place for them where they would be safe from owls and let the owls live to destroy the mice.

A SUBSCRIBER.

TO RAISE LARGE ONIONS.—Sow the seed at the usual time in the spring, very thickly, and in poor soil, generally under the shade of a fruit tree; and in such situations the bulbs in the autumn are rarely found much to exceed the size of a large pea. They are then taken from the ground and preserved till the succeeding spring, when they are planted in rows fourteen or fifteen inches apart, and a foot apart in the rows, and they afford plants which differ from those raised immediately from seed in possessing much greater strength and vigor, owing to the quantity of previously generated sap being much greater in the bulb than in the seed. The bulbs thus raised are often of greater size; and, being more mature, they are with more certainty preserved in a state of perfect soundness through the winter than those raised from seed in a single season.

"PLINY says, the Romans sowed the seeds of Basil with maledictions and ill words, believing that the more it was cursed the better it would prosper; and when they wished for a crop, they trod it down with their feet, and prayed to the gods that it might not vegetate."

HOE all your crops as soon as the drills can be distinguished. Recollect that more weeds can be destroyed in an hour when young, than in a day when they have obtained a good foothold.

Ladies' Department.

A LADY'S OPINION OF THE WEST.

MESSRS. EDITORS:—During a four years' residence in Iowa, I have watched with some interest the ways and doings of our western farmers, comparing them with those of the same class at the east. Though most of them have emigrated here from the eastern states or countries, candor compels me to say they have degenerated from neat and thrifty farmers, to shiftless and slovenly ones, and for this there must be a cause. They come here with a desire and determination to get rich, even at the sacrifice of those social qualities which are so essential to the well being of any community. They take up large tracts of land which they cannot possibly cultivate. Break up and fence off a portion for immediate use; the rest lies a barren and unoccupied prairie—making of course a wide-scattered population. Even when this is not the case, and men are content to live without owning all the land that joins them, there is a lack of desire for agricultural improvements. This mania for large farms is to be on the increase. Men are wishing to sell their farms of one or two hundred acres, and go farther west, where they can get more land, when they now have, has never been half cultivated. It seems to me, is a great error. The west is manifestly a country of vast extent, unequalled fertility of soil, and unbounded resources for wealth, to which no man should choose to emigrate hither. Its beautiful unencumbered prairies actually seem to woo the plough, if men could only be content to own but one or two hundred acres of land, and cultivate it well, they would indeed in a few short years be the garden of America. But notwithstanding the natural advantages the western country possesses over the east for the purposes of gardening, such as a rich and fertile soil, freedom from stones, &c., few avail themselves of the privilege which nature has thus thrust upon them. A good garden here I have never seen, and will understand I am speaking of the country (not of towns.) It is true you will now and then see a little spot fenced off with rails perhaps, planted with a few beets, and may be a few vines, struggle with the weeds for the mastery, and the weeds usually come off first best in the contest. Now I trust every farmer will concede that a good garden is the most productive part of the farm; why then is it so strangely neglected? Is not a neat yard filled with shrubbery, and a well kept garden, indicative of neatness and refinement in its owner? But our western farmers seem to have little idea of the influence that these attractions have on the minds of their families. They forget that the little ones they are rearing will be men and women, with as little cultivation as our prairies given them as an outfit. We have not the facilities of the eastern states for education, for the schools are as yet in their infancy; where then are we to look for the training of our future men and women of the west, to habits of taste and refinements at home. Then let me iterate and reiterate to the farmers of the west, and those who mean to emigrate here, choose a location you mean to make a home, plant trees around the homestead, help your sons and daughters to cultivate flowers—protected the cows and pigs by a good fence. Grudge no few shillings for choice seeds; spend an hour

occasionally with them in the garden, suggesting new improvements, aiding them by advice, and what will be more effectual, a little digging with the spade; and rest assured in a few years there will be a new era in the life of the western farmer. The comforts of home are not to be weighed in the balance with your uncultivated acres; and if you are in haste to be rich, choose that best of earthly riches, springing from a well balanced, well cultivated mind, for without this, the best filled purse only places you a little above the scale of creation, with the brutes that perish.

Clay, Washington Co., Iowa.

VIOLE.

THE CULTIVATION OF FLOWERS.

MESSRS. EDITORS:—Since the earliest history of the world, the mythological goddess, Flora, has had her worshippers, and has probably contributed more real happiness to mankind than has sprung from almost any other source. She has been the means of refining the human heart, and rendering it susceptible of all the softer emotions of our nature, and has a language peculiarly her own—speaking in accents soft and low—of brightening our pathway through this vale of tears, and causing our thoughts to turn toward the great God who created such exquisite and diversified beauty for our enjoyment, and renders the world in one sense a prelude to what we may expect in a brighter and better sphere.

If I ever am inclined to feel sad or troubled, and there are flowers dispensing their fragrance near me, I go among them, and in admiring so many of the Creator's blessings bestowed upon me, soon dispel any unpleasant thoughts, and forget that they ever existed.

The cultivation of these sweet emblems of purity and innocence, is well calculated to render our hearts happier, and make us wiser and better. It begets a kind of enchantment—a feeling which those only who love flowers can fully appreciate. It makes me sad to think that any one should ever grudge a little spot of ground on which to grow those lovely companions of prosperity or adversity. We know there are some such, but hope for humanity's sake they are few, and that as refinement advances all such will be converted to the loving of flowers. For what were they created, unless to adorn this earth, and command our admiration and reverence for the exquisite workmanship and manifold design of their Maker? It seems as if the person who would spurn a flower, would spurn the richest blessing as a gift of Heaven.

Lockport, N. Y.

A LOVER OF FLOWERS.

FOREST FLOWERS.—In vol. XIII., page 288, of the *Farmer*, an authoress of Canada asks, "Where are the lilies of the woods, the lovely and fragrant Pyrolas, the Bloodroot, the delicate and sweet scented Mitchella repens, the spotless Monotropa, with Orchis of many colors?" I can tell you where some of them are, and they seem to be perfectly at home—not in Canada, but in Saratoga county, N. Y. The north side of our garden, a little lower than the other part, is a soft black soil, the depth of which I have never fathomed. Currant bushes are growing six feet from the fence; close to the fence I have planted every known wild flower that was an inhabitant of low woods that I could get. The soil, with the constant shade from the currant bushes, makes as good a spot for them as could be desired. They want no manuring or hoeing; merely weed them by hand, if any thing intrudes upon them. A FARMER'S WIFE.

Editor's Table.

THE RURAL NEW YORKER.—For some time past we have quietly submitted to great injustice from our neighbor of the *Rural New Yorker*, and know no better way of obtaining redress than to appeal to our readers—to the farmers of the country—and to our brethren of the Press. We have written an article stating what we believe to be the facts of the case; but on consulting a legal friend he advised us not to publish it, for fear of an unpleasant libel suit—for though we have no doubt as to the truth of the statement, yet it is one thing to *know* a fact, and another to *prove* it. We have concluded, therefore, to give such facts only as admit of easy and unmistakable proof, and leave our readers to draw their own inference.

Last year we expended several hundred dollars in procuring original drawings and engravings of houses, plants, trees, &c., having secured for that purpose the services of one of the best draftsmen in the country. Some of these engravings were given in the *Rural Annual*, and others in the *Genesee Farmer*. We also allowed several of our nurserymen to use them in illustrating their show-bills, &c., and they have thus been rather loosely scattered around the various printing establishments of the city.

In the last issue of the *Rural New Yorker*, (May 23,) there appears a beautiful cut of one American Arbor Vitæ, in all respects a *fac simile* of one we had drawn and engraved for our *Rural Annual*, from a specimen growing in the suburbs of this city. It will be found in the columns of the *Farmer* for this month. Those of our readers who make the *Rural* can thus compare the two cuts, and see if they can discover the least difference.

In the *Rural* of May 9 there is a cut of Sweet William, which is marvelously like a cut engraved for the *Farmer*, and which appeared in our last volume, page 161. The *Rural* man has, apparently, taken his knife and cut off the engraver's name. Otherwise the cut is precisely the same, and is given without a word of credit.

In the *Rural* of May 2 the editor says:

"A correspondent, after examining the engraving which we gave in the last number of a Dwarf Pear Tree, asks if dwarf trees always grow as straight limbed, and of so beautiful and graceful a form," &c.

Now, on turning to the "last number" of the *Rural*, (April 25,) it will be found that the cut which "we" (the *Rural*) "gave," is none other than the cut which we (the *Genesee Farmer*) gave in our February number. To disguise the cut as much as possible, however, the stem has been shortened a little, at an expense, perhaps, of fifty cents, whereas it cost us *twelve dollars*, having been drawn from an actual specimen with great accuracy, and engraved with much care.

Our file of the *Rural* is here incomplete, and we will continue our examination no further at this time. We would ask if such conduct is reputable and honest?

One word more. In the February number of the *Farmer* for last year, we alluded to an intimation in the *Rural New Yorker* of Jan. 26, that the cuts in a single number of that paper cost nearly \$50. We showed conclusively that the cuts did not cost the *Rural* one-tenth of that sum; that in fact the *Rural* was paid eight dollars for inserting one

cut, or more than it paid for all the other cuts. To this article the *Rural* has made no reply. It could make none. With all its boastful pretensions, the *Rural* notoriously expends next to nothing on agricultural and horticultural illustrations. It appears to be perfectly satisfied with an old, cast-off cuts of the *Genesee Farmer*; and the frequency with which these are inserted in its pages, indicates its high appreciation of the source from which they are derived. Let us look over such of the papers of this year as we now have on hand:

In the *Rural* of February 21, there are cuts of Hovey Seedling, British Queen, and Elton strawberries. These will be found in the *Genesee Farmer* for 1852, pages 9 and 91.

In the *Rural* of March 21, there is a cut of Phlox Drummondii, which will be found in the *Farmer* for 1852, page 159.

In the *Rural* of March 28, is a cut of Golden Bartlett which will be found in the *Farmer* for 1852, page 191.

In the *Rural* of April 4, is a cut of Salpiglossis, which will be found in the *Farmer* for 1852, page 222.

In the *Rural* of April 11, is a cut of Petunia, which will be found in the *Farmer* for 1851, page 75.

In the *Rural* of May 2, is a cut of a Gothic Farm Cottage, which will be found in the *Genesee Farmer* for 1852, page 249.

In the *Rural* of May 2, is a cut of a Dwarf Pear Tree which will be found in the *Genesee Farmer* for 1855, page 351. Of this cut the *Rural* man says: "We give a very correct portrait of a tree growing near this city. Although different from the engraving we gave last week, [also taken from the *Farmer* without credit,] it is a beautiful tree," &c.

In the *Rural* of May 9, are cuts of a Dwarf Apple and Dwarf Cherry, which will be found in the *Farmer* for 1855, page 351.

We do not say that the *Rural* did not come honestly these engravings. As cast off cuts it may have paid small sum for them; but, be this as it may, it is certainly a new development of the law of "Progress and Improvement"—of which the *Rural* boasts so much—to give these cuts as though they were original.

THE friends of the *Genesee Farmer* will be glad to hear that our circulation this year far exceeds our most sanguine expectations. This unlooked for success, though grateful to our feelings, is attributable mainly to our numerous correspondents, and other friends who voluntarily act as agents. Subscribers are still coming in freely;—we have to-day received from N. J. SLOAN, post master at Fredericksburg C. W., a club of one hundred and twelve; and from CHAS. MCGLASHAN, Esq., of Moore, C. W., a club of one hundred and nineteen subscribers!

Such has been the demand for back numbers that we are entirely out of the January number, and have been compelled to send off these and many other orders without it. We are, however, having a new edition struck off and will forward this number in a few days.

DRYDEN HERD BOOK.—SANFORD HOWARD, Esq., editor of the *Boston Cultivator*, gives notice that the third volume of the *Devon Herd Book*, which he has been engaged in preparing, will be ready for delivery in July next.

DRY WEATHER WITH FREQUENT HOEINGS BETTER FOR GARDEN VEGETABLES THAN A WET SEASON.—A correspondent writes: "The summer of 1854 was very dry, and by frequent hoeings the weeds in my garden were completely subdued. The result was that I had good crops of all kinds of vegetables. My carrots yielded eight bushels to the rod—1,250 bushels per acre; melons extremely fine, and, in short, all my crops were very superior. The next summer (1855) was wet, and the weeds in my garden would grow in spite of all the hoeing I could give them. Hoe one day, and the weeds would be grown all the better for it on the next. The result was that in all the care and attention that could be bestowed on them, my vegetables looked puny and sickly all summer and yielded very inferior crops."

TURNIP FLY.—A correspondent writes that he has, for the past three years, at the recommendation of an experienced gardener, sown a row of mustard seed between two rows of ruta bagas, as a remedy for the fly. The result has been very gratifying. The mustard came first, and appeared to be preferred by the flies—at all times, they fed upon it till the ruta bagas were out of the way. Our correspondent thinks it better to sow mustard between the rows, because it can the more easily be destroyed by the horse hoe. In the ruta bagas singled out in the rows with the hoe—as they always would be—we do not see any objection to sowing the ruta and ruta бага seed together, in the same drill. Perhaps, however, our correspondent is right.

HEN MANURE FOR ONIONS.—A correspondent writes: "When onions are coming up scatter hen manure very liberally over them, (this is one of the best manures that was ever applied to onions,) and sift a small quantity of sand over it. When they are fully up thin them out so as to have but one onion in a place. Keep the ground loose all the way around the remainder from the time that they are up till they are 'pulled.' A most important thing to be observed in raising onions is to keep them entirely free from weeds, as all farmers know that they will not grow where they are choked with weeds."

REMEDY FOR GARGET.—We have repeatedly recommended hydriodate of potash as a cure for garget. It is undoubtedly the best remedy for this disease yet discovered. J. FOWLER, of Yorktown, N. Y., writes us that he has used it with the most satisfactory results. He prescribes it as follows: Put 44 table-spoonful of water into a pint of milk and then add one ounce of hydriodate of potash to it and make it well till it is dissolved. Give the cow a table-spoonful three times a day in a little warm bran or meal.

FEEDING CABBAGE FOR STOCK.—A Canadian correspondent writes: "We have sown about an acre of cabbage of late and consider them excellent fall feed for stock. Sowed in hills about a yard apart each way. They require good land with plenty of manure; but if the season is favorable they will yield a large quantity of food." The same writer also says, "Last year we sowed an acre of cabbage, and found it a great benefit to young lambs after we had weaned them from the ewes."

PLANTING POTATOES IN THE FALL.—My practice of planting potatoes in the fall got a little disturbed last winter. Except when unusual pains were taken to guard against frost, they were found to be entirely destroyed this spring. And in view of the whole subject now, my advice would be to any one thinking of adopting my plan published in the March number of the *Genesee Farmer*, for planting potatoes in the fall, that while raising your potatoes from seed planted in the fall, would for many reasons be the great desideratum accomplished, still great care and judgment are indispensable, and that the safest and best way would be to consider no fall planted potatoes entirely secure, unless in addition to a deep covering of earth, the surface is lastly covered with a considerable thickness of straw, which would be rather too expensive beyond any thing more than for a small patch, such as I intend to plant next fall, and each succeeding one, until a better plan is found. E. A. B.

Oxford, Chenango Co., N. Y.

SPROUTING POTATOES.—In a private letter, our correspondent, S. W., says: "It is all a humbug about sprouting potatoes to forward them. If put into a box with earth, and buried in a manure heap of horse dung, ten to one they will heat and rot before they sprout. Potatoes planted the 25th of April have no longer sprouts to-day (14th of May) than the potatoes left in the cellar, yet they will go ahead of those in the cellar if the latter are planted to-day. Warming potatoes in the sun before planting, enables them to sprout quicker when planted."

CARROTS ON THE SAME GROUND EVERY YEAR.—Our esteemed correspondent, H. H. TAYLOR, of East Rodman, Jefferson Co., N. Y., says: "I have raised carrots four years in succession on the same land, and believe it best to set apart a piece of land for this purpose, if manure can be obtained to put on every year free from all kinds of weed seeds. The longer you grow carrots on the same ground the cleaner and mellowier it will be, provided they are properly cultivated. My fourth crop was better and easier raised than the first."

CORRECTION.—In the article on the Cultivation of Indian Corn in Kentucky, in the April number, there is a material omission in the fourth line from the bottom. It reads thus: "the bar or shear, as the size of the corn will admit, is run next to the corn for the first time." Whereas it should read, "the bar or shear, as the size of the corn will admit, is run next to the corn, and the dirt is thrown from the middle for the first time."

SOWING MANGEL WURZEL IN THE FALL.—A correspondent at Guelph, C. W., says: "I have grown mangel wurzels for the last two years, and think them the finest roots grown, for breeding ewes, milch cows and pigs. I sowed four or five ridges last fall, and will inform you how they succeed in due time." We hope our friend will do so.

WATER LIME mixed with skimmed milk is said to make an excellent drab-colored paint. It will adhere well to wood, stone, brick or mortar, where oil paint has not been used, and is very hard and durable.

THE TURNIP FLY.—Mr. G. GRAHAM, of Woodstock, C. W., says: "Turnips should be sown thick on account of the fly. I have found it a good preventive, besides the usual quantity sown in the drills, to sow a pound of seed per acre broadcast, before rolling down and sowing the drills."

THE RURAL ANNUAL.—I have hastily looked over the *Rural Annual*, and do not hesitate to say that there is more valuable information to the owner of a spot of tillable land, condensed within its pages, than I ever read before in the same space. P. C. REYNOLDS.

Palmyra, N. Y.

NEW ADVERTISEMENTS.—Read the advertisement of ATKIN'S Automaton, or Self-Raking Reaper and Mower, and send for one of the pamphlets containing certificates of the value of this celebrated machine.

C. M. SAXTON & Co., offer some more good books.

A. LONGETT sells all kinds of Artificial Manures. We have had some dealings with him, and found him prompt and his fertilizers good.

A. GORDON & Co., offer some new testimony in regard to the value of their machines, especially of HILDRETH'S Gang Plow. Orders may be sent to A. G. & Co. with the utmost confidence.

THE GENESSEE FARMER for May is a choice number; it contains a large number of short essays on various subjects written in competition for certain prizes of books, offered by the Editor. These essays show most conclusively that *multitudo* have the *ability* to write for an agricultural paper, that very seldom do; it requires some extra inducement to bring them out. We have selected two of the number, on Lady Equestrianism, which we commend to the attention of all interested in that subject; here you have arguments on both sides of the question, for and against; examine them well and see which are the most conclusive, and if any of you have any thing further to offer on the subject, say on.—*Cayuga Farmer and Mechanic.*

Notices of New Books, Periodicals, &c.

HOOPER'S WESTERN FRUIT BOOK: A Compendious Collection of Facts, from the notes and experience of successful Fruit Cultivators, arranged for practical use in the Orchard and Garden. By E. J. HOOPER. Cincinnati: MOORE, WILSTACH, KEYS & Co. 1857.

A good "Western Fruit Book" has long been needed. It was the original design of Mr. ELLIOTT to call his work the "*Western Fruit Grower's Guide*," but, perhaps to please the publishers, was sent forth as the "*American Fruit Grower's Guide in Orchard and Garden*." To this we have no objections. It is well, for the book is no better adapted for the west than it is for the east. The present book is written and published at Cincinnati, and for that reason, perhaps, is called a "*Western Fruit Book*." From a slight examination we think the work is in some respects an improvement on previous fruit books, and one which will prove useful to nurserymen and planters in enabling them to select varieties. It is confined almost exclusively to rather brief descriptions of varieties of apples, pears, peaches, nectarines, apricots, plums, cherries, grapes, strawberries, raspberries, blackberries, currants, and gooseberries, with extracts from any published opinions of their merits; together with the lists of fruits recommended by various societies and individuals for cultivation in particular localities. This occupies 307 of the

333 pages in the book,—the apples and pears alone occupying 211 pages. No outlines of fruit are given, but there are some four or five colored engravings.

THINGS NOT GENERALLY KNOWN: A Popular Hand-book of Facts not readily accessible in Literature, History and Science. Edited by DAVID A. WELLS, author of "Knowledge is Power," "Militar Science," &c. New York: D. APPLETON & Co. 1857.

The character of this work is well expressed by the title. So far as we have been able to examine, the facts mentioned are generally reliable, and always interesting. It is impossible to turn to a page without finding something which, though known before, we are glad to have recalled. The book is principally made up from one of Mr. TIMM'S works published in England. The American editor has made many additions and struck out much that was merely local.

VILLAS AND COTTAGES: A Series of Designs prepared for execution in the United States. By CALVERT VAUX, Architect, (Downing & Vaux, Newburgh, N. Y.) Illustrated by 300 engravings. New York: HARPER & BROTHERS. 1857.

This is a book of some 320 pages, finely illustrated; "got up" in HARPER'S best style. It makes an elegant volume; and what is far better, it abounds in good signs and practical hints which cannot fail to be of great use to all about to build. We regard this as the best work that has yet appeared on American rural architecture.

THE AMERICANS IN JAPAN: An Abridgement of the Government Narrative of the United States Expedition to Japan, under Commodore PERRY. By ROBERT TOMES. New York: D. APPLETON & Co. 1857.

To all who have not had access to Commodore PERRY'S work, published by Congress, this book will prove of great interest. It is illustrated with numerous engravings, written in an agreeable style.

AMERICA AND EUROPE. By ADAM G. DE GUROWSKI. New York: D. APPLETON & Co. 1857.

We have not had time to examine this work, but highly spoken of.

THE GOLDEN LEGACY: A Story of Life's Phases. By a Lady. New York: D. APPLETON & Co. 1857.

A lady who has read this book speaks of it as "beautiful."

BLACKWOOD'S MAGAZINE.—This old and sterling monthly is reprinted by L. SCOTT & Co., 54 Gold street, New York, and sent to any address, by mail, for \$3 per annum. The volumes for 1856 and 1857 are sent, *postage paid* to any address for \$5. Those who did not take Blackwood last year, should avail themselves of this offer.

Inquiries and Answers.

(C. C., Raisin, Mich.) You had better graft your year old lemon tree next September when the fruit is fully ripened. Take the scion with the leaves on, cut the square, and then pare it down on one side with a slop cut to the pith of the scion; then cut the branch of lemon tree to fit the scion exactly. Bind it on tight with a little wax cloth or worsted yarn; then tie a little string tight over the wound to keep out the air. The tree should then be placed in a green house or hot-bed frame shaded. If too large to stand in the frame it may be laid down on its side and the frame placed over it. The fr

should be on the north side of a building or fence, as it is very important to keep the sun off. If well done it will be united and strong in a month or six weeks. If you could get buds the latter part of June, budding would be much the least trouble, but it is difficult to get them any distance as they are so liable to wilt. As soon as the grafts are united the branches of the lemon tree should be pruned back to the graft, so as to leave nothing but the graft to grow.

(E. F., Clinton, C. W.) Millet is one of the best of crops for fodder or for soiling purposes. It produces largely, can be sown late and is well adapted to our dry, hot climate. It draws heavily on the soil for those elements most needed by wheat, barley, oats, corn &c.; and we would not advise its cultivation on the upland portion of a wheat farm. When raised for fodder or for soiling, a rich alluvial soil, abounding in organic matter and which is too loose and low (but not wet) is just the kind of land for it. Large crops can be grown on such land in dry, hot summers when all other forage crops are light. It may be sown any time in June or even as late as the first week in July. If grown for seed it should not be sown too thick, say a peck per acre, for fodder or for soiling two to three pecks of seed per acre will be none too much. You can get the seed at almost any seed store. E. D. HALLOCK of this city has it for sale at \$1.50 per bushel.

(J. L., Lancaster, Pa.) Stone-coal ashes contain very little fertilizing matter. They have sometimes a beneficial mechanical effect on the soil; for radishes especially, they are valuable on this account. They are useful for mixing with guano, superphosphate, and other concentrated manures. They are said to prove valuable applied as a top dressing around fruit trees, acting probably as a mulch, and checking the growth of weeds. We have had no experience with them as a dressing for corn or potatoes. The question, "What are they worth?" we cannot answer. Judged by their chemical composition, we should say they are not worth three cents a bushel.

(G. W. THOMAS, Elderslie, C. W.) We believe Hardy's White Mummy wheat and the Prolific Red wheat are winter varieties. We should be glad to have you communicate the result of your trial with them to the *Genesee Farmer*.

(W. S. BRISTOL.) We know of no certain remedy for the black knot on cherry trees, or for the curculio on plum trees. Should be glad to hear from those who have discovered a remedy.

(D. F. H.) We have had no experience in grafting the pear on the red or white hawthorn.

DRYING FIGS.—I noticed in a late number of your paper a request for information in regard to drying figs. A relative of ours, residing in St. Augustine, where they raise and cure them to perfection, has, according to request, furnished me with the following receipt: Put the figs in hot, sweetened water; then expose them to the sun two days, or use artificial heat; then put them into the sweet water again; then dry, thoroughly. **HARRIET H. MYERS, —Liverpool, N. Y.**

Our farming community have been thrown into quite a state of excitement lately in reference to a system of farming, called "Terra Culture," by RUSSELL COMSTOCK. He has delivered two lectures in the county within two months; some sixty or seventy persons attended each lecture, at a charge of two dollars—a money making business. Since attending his lecture at York Springs on the 18th instant, I have read the *Rural Annual* that you sent me, and am far better pleased with it than his lecture, even if it had cost the same money. As Mr. COMSTOCK is from your State, perhaps you are acquainted with him. I should like to know your opinion of him, and also of what he claims to be his discoveries. **H. J. MYERS, —New Chester, Pa.**

We are well acquainted with Mr. COMSTOCK; have had repeated conversations with him on the subject of his alleged discoveries; have listened attentively for ten long hours to his lecture; and candor compels us to say, with SHERIDAN, that his system "contains much that is both new and true, but unfortunately that which is true is not new, and that which is new is not true." In the *Genesee Farmer* for March, 1853, page 77, we fully exposed the absurdity of his pretensions.

I WISH to know if any of your subscribers in Upper Canada have a full bred Devon or Hereford yearling bull and heifer for sale. **E. T. —Clinton, C. W.**

The breeders of Canada might promote their own interests by advertising in the *Genesee Farmer*.

If it would not be too much trouble to you to get a particular piece of information and publish it in the *Genesee Farmer* for the benefit of myself. I think you would find it profitable to a good many of your readers who are similarly situated. The information I want and have sought for in vain in Virginia, is the old plan of farming the Carse of Gowrie and the Carse of Stirling. You are of course aware of the quality and peculiarities of these soils, and it strikes me that the ancient—or to be more expressive, the antiquated—style of draining them by grip and water furrow is better suited to the prices of our lands than the effective, but far more costly mode of tile draining. I have tried that as an experiment, at Mr. PARKE'S depths and find it worth a good deal more than the fee simple of the land. For this reason, we are, to use a lawyer's phrase, "re-mitted to the original remedy," at least until an effective ditching machine is invented aided by a cheap machine for making draining tile.

WILSON in his *Rural Cyclopaedia*—which with deference to your better judgment, I think superior to MORRIS—quotes in his article on "drainage," titled "surface drainage," a few remarks of MARSHALL on that subject. I have one of MARSHALL'S works—his *Agriculture*, in which I find nothing of the sort; and I cannot get access to any other. I think it will be found perhaps that he has some remarks touching this matter in his "Elementary and Practical Treatise on the Landed property of England;" London, 1804, quarto, or in an abridgment of that work, entitled "Treatise on the Management of Landed Estates;" London 1805, octavo. If by means of some correspondent or friend in London you can have that worked looked into, and suitable extracts copied, if they can be found, and can do it without trouble, I should be much obliged to you; and I think, as I said in the beginning, that it may benefit others quite as much as it will me.

Our season here has been the most backward I have ever known, and the wheat that was killed by the winter, and more particularly by the cold spell in March which followed a very warm February, cannot rally. A great deal of our wheat all over the State is in that fix. It does not brighten our prospects much to have a freshet on the low grounds, as is just now the case on James River. I have one hundred acres, on nearly all of which my corn was planted, completely covered with water. *—Virginia.

Can any of our readers throw any light on this subject?

KNOWING your willingness to assist your readers, I wish to ask your advice concerning a marsh, which I wish to bring into cultivation. It has formerly been a large beaver meadow, containing about twenty acres, laying on

nearly a dead level. There is a little fall on the west end of it. There is a ditch around it, four feet wide and three feet deep, which carries off all the surface water, which, before it was dug, used to flood the whole of it in the spring. The soil is a vegetable mould, partly decomposed, of about four or five feet deep. It is impossible to plow it, on account of the timber, which is buried beneath the mould. The grass which grows upon it is a very tough grass, that the cattle do not like, excepting a little in the spring, when tender. What crop do you consider it best calculated to grow, or what kind of grass would flourish best upon it? I would state that though the surface water is removed, the marsh is still quite wet and soft underneath, so much so as not to bear up a team if the sod were removed. I tried to plow it last spring, but when the plow struck a log the cattle sunk right into it. E. T.—Clinton, C. W.

I wish to enquire through your widely circulated journal, in regard to the fermentation of milk by the time it has been twenty-four hours drawn. On taking down the pans the cream presents an uneven, rough looking surface; on removing the cream from the milk there is very much the appearance of yeast, being frothy, and a cracking noise accompanies the process. I can give no reason why it is so, and would like to know if any of your butter making readers have observed such effects, and can give the cause? My cows have been stabled, fed with corn-stalks, with one peck of carrots daily up to the first of March, since which, the same treatment, except hay in lieu of stalks. If you or our readers will explain the above phenomenon I shall be thankful. D.—Gates.

I have a hen that wanted to set about four weeks ago, and I placed under her eleven eggs. A short time after I went to the nest and found a number of new layed eggs in it. Thinking it very curious I watched the hen and found she had intercourse with the rooster. She layed all the time she was setting, and continues to lay at the present time, the chickens being one week old. Will some of your correspondents who make fowls their study throw a little light on this subject? B. J. F.—Corinth, N. Y.

A FEW days since I set a trap for a woodchuck, and caught one with two white stripes running parallel with his back; when, by accident or design, he spilt his perfume while I was in rather close proximity to his manufactory. Now, I wish to "eradicate" the effluvia, as I never was very partial to cologne or other sweet scented essences, I come to you to tell me what will cure; the preventive I know. D.—Gates.

I WOULD like to know the probable age that sheep arrive at, with good treatment; and if it is a better plan to shear once or twice during a year. By inserting the above in the *Farmer*, you will much oblige a subscriber in the back woods of Texas. W. B. C.—Lockhart, Texas.

EGG PLANT.—Will some of your correspondents describe the manner of cultivating the egg plant, and the usual or best way of preparing the same for the table? D. L.—Caledonia, N. Y.

CAN any of your correspondents tell me what will prevent the malady which attacks young pigs when running in clover fields in wet summer weather? E. F. H.—Exchange, Ky.

ADVERTISEMENTS,

To secure insertion in the *FARMER*, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. TERMS—Two Dollars for every hundred words, each insertion, PAID IN ADVANCE.

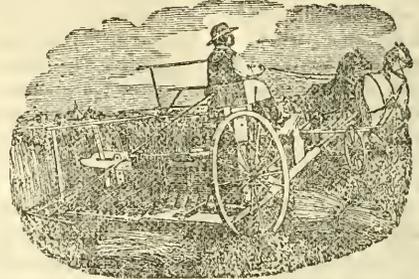
A. LONGETT,

No. 34 CLIFF STREET, NEW YORK,

DEALER in Peruvian, Columbian and Mexican Guano, Superphosphate of Lime, and Bone Dust.

June 1.—4t.

ATKINS' AUTOMATON,



OR

SELF-RAKING REAPER AND MOWER.

BEST MACHINE IN USE.

1 (the first) built in 1852.
40 used successfully in 1853.
300 in different States in 1854.
1,200 well distributed in 1855.
2,800 throughout the Union in 1856.
5,000 building for 1857.

THERE are six good reasons for this unparalleled increase and great popularity. 1st. It is strong and reliable, and easily managed. 2d. It saves the hard labor of raking. 3d. It saves at least another hand in binding. 4th. It saves shattering by the careful handling in raking; besides, the straw being laid straight, it is well secured in the sheaf, and does not drop in the after-handling, and the heads are not exposed in the stack, so that the GRAIN saving even exceeds the LABOR saving. 5th. It is a good Mower, being one of the best convertible Machines in use. 6th. It has a knife that does not choke.

Over 80 First Premiums Received in Four Years.

Price of Reaper and Mower, \$190—\$50 cash, balance in note due Jan. 1. 1858. Price of Reaper only, \$165—\$40 cash, balance in note due Jan. 1. 1858.

For cash, 12 per cent. discount from the above prices.

To secure a Machine, order immediately. Though so little known the past season, and none ready for delivery till the first of May, yet not two-thirds of the customers could be supplied. The reputation of the Machine is now widely established, so that 5,000 will not as nearly supply the demand as 2,800 did last year.

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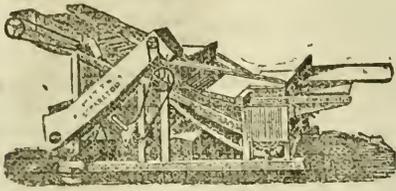
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May 1.

ROCHESTER AGRICULTURAL WORKS.

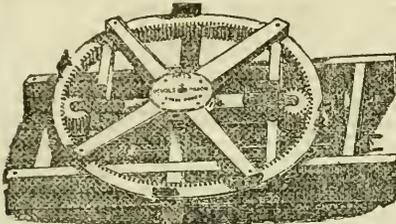
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FIELD CROPS.—Competitors should obtain the Regulations of the Society, so as to have their statements properly prepared. H. Greeley's Premium on one acre of Carrots is continued. Regulations will be furnished on application to the Secretary, and also a list of Premiums for 1857. B. P. JOHNSON, Secretary.

AGRICULTURAL ROOMS, Albany, March 2, 1857. April 1.—31.

Contents of this Number.

Cultivation of Ruta Bagas and Turnips.....	169
Items Suggested by the May Number.....	171
Notes for the Month, by S. W.....	172
A Proposed Rotation.....	172
On the Advantages of Stirring the Soil in Dry Weather.....	173
Thoughts Suggested by the May Number.....	174
Broom Corn in Ohio.....	175
Cultivation of Broom Corn.....	175
Management of Bees; or, Plain Common Sense the Secret of Success.....	176
Management of Bees.....	176
Hoing Corn in Dry Weather.....	176
Butter Making.....	177
Cheese Making.....	177
Advantages of Forethought in Farming Operations.....	177
Cultivation of Potatoes in Ohio.....	178
On the Management of a Prairie Farm, commencing in its Natural State.....	179
Deep Plowing for Corn.....	179
Drink for Young Calves.....	179
Influence of Agricultural Papers.....	180
Deep Plowing.....	180
Good Two Year Old Steers—The Wheat Crop.....	180
The way I made a Fence on Heavy Ground.....	181
Swamp Muck as a Fertilizer in Dry Seasons.....	181
Management of Manure.....	181
To Destroy Weeds.....	181
The Benefits of Agricultural Fairs.....	181
Hints on Building a Farm House.....	182
An Acre and a Half of White Beans.....	182
Be Kind to thy Cattle.....	182
Cultivation of Onions.....	182
Rearing Calves.....	182
Cure for Sweney.....	182
Cultivation of Millet.....	183
Value of Manure for Potatoes.....	183
Planting Beans in Drills or Hills.....	183
Asbes as a Manure.....	183
Don't Thin your Carrots.....	183
Culture of Potatoes.....	183
Foil Evil.....	183
Cultivation of Beans.....	184
Flowing without Headlands.....	184
Peruvian Guano as a Manure.....	184
Selecting Seed Corn.....	184
Why Butter is Dear.....	184
Fees.....	184
Bone Spavin.....	184
Cultivation of Corn in Indiana.....	184
Beans.....	184

HORTICULTURAL DEPARTMENT.

Six Hardy Evergreens.....	186
Rabbits and Fruit Trees.....	187
Why Farmers Neglect their Gardens.....	187
Horticultural Operations for June.....	188
Birds—again.....	189
Why do Farmers so generally Neglect their Gardens?.....	190
Current Worm.....	191
Grafting the Gooseberry.....	191
Planting Trees on Prairies.....	192
Starting Early Plants.....	192
Horticulture in Oregon.....	192
Sulphur to Kill Rose Bugs.....	192
A List of Good Petunias.....	192
Spare the Owls.....	192
To Raise Large Onions.....	192

LADIES' DEPARTMENT.

A Lady's Opinion of the West.....	193
The Cultivation of Flowers.....	193
Forest Flowers.....	193

EDITOR'S TABLE.

Rural New Yorker; Increase of the circulation of the Genesee Farmer; Devon Herd Book.....	194
Dry Weather with frequent Hoicings better for Garden Vegetables than a Wet Season; Turnip Fly; Hen Manure for Onions; Cure for Garget; Cabbage for Stock; Planting Potatoes in the Fall; Sprouting Potatoes; Carrots on the same Ground every Year; Correction; Sowing Mangel Wurzel in the Fall; Cheap Paint.....	195
The Turnip Fly; The Rural Annual; Complimentary Notice of the Genesee Farmer; Book Notices; Inq. and Answers.....	196

ILLUSTRATIONS.

Three Figures, representing different varieties of Ruta Bagas.....	169
Short-horn Cow Adelaide.....	185
American Arbor Vita.....	187
Siberian Arbor Vita.....	187
Tomato Rack and Vine as it appears when first planted.....	188
Tomato Rack and Vine as it appears when fully grown.....	189



AGRICULTURAL QUACKERY.

THOUGH agriculture and horticulture have attracted the attention of some of the wisest and best of men in all ages, yet it is only during the past twenty years that much progress has been made in developing the principles on which a judicious system of cultivation is based. Modern chemistry has thrown much light on the hidden laws of vegetable and animal growth; and the hundreds of patient investigators that are now busily engaged in studying agricultural and horticultural phenomena, are annually bringing out new facts, which serve as stand-points for further research into the unknown. The immense practical value of these investigations are readily perceived by every reflecting mind. The single truth that phosphate of lime, as found in bones, apatite, coprolites, and other minerals, can be rendered soluble by proper treatment with sulphuric acid, has already added millions of pounds to the agricultural wealth of Great Britain; and if the experiments of LAWES and GILBERT, which have already cost over *two hundred thousand dollars*, had taught us nothing more than the value and practical application of this single fact, the farmers of a single parish have already received enough benefit from the use of superphosphate on their turnip crops to pay the whole sum, and are annually reaping profits that would support the most richly endowed Agricultural College on the globe. If this one fact has proved of such great value, have we not good reason to hope that the extensive investigations which are being made in many parts of the world will develop facts of equal and still greater importance? Many intelligent farmers, however, look with distrust on all recommendations issuing from any source other than that of practical experience. That this distrust is a great hinderance to agricultural improvement cannot be doubted, but scientific men have themselves to blame, in a great measure, for this want of confidence on the part of farmers. They have propounded theories which would not stand the test of practice, excited hopes which have proved illusive, and recommended practices which entailed much loss on those who were enterprising enough to adopt them. The principal cause of these failures, is attributable to the fact that some of the more popular and leading scientific men left the slow but certain paths of experimental investigation, and startled the agricultural world by a series of the most brilliant and seductive speculations, that were confidently expected to revolutionize those systems of cultivation which had been the slow growth of close observation

and practical experience. The result was, as might have been foreseen, an entire failure.

The prejudice created in the minds of farmers by these unfounded speculations, is now gradually melting away before the rising light of true, experimental science. Many earnest seekers after truth have been quietly investigating the laws of vegetable and animal nutrition, and the number is annually increasing; numerous public and private experimental farms have sprung up in Europe, and before many years we shall have several in efficient operation in this country and in Canada. Scientific men feel the powerful influence of an awakening popular sympathy, and a brighter day is about to dawn on our agriculture.

There is, however, a dark side to the picture. The country is flooded with agricultural periodicals, and every county paper has its "Farmer's Column;" ambitious politicians traverse the country delivering agricultural addresses, and it appears to be the great aim of too many of these lecturers to tickle the popular ear with some new and plausible theory. Any one at all acquainted with the agricultural literature of the day, must be aware that, while it is not entirely destitute of wheat, the chaff vastly preponderates. It is in this mixture of error with truth, of crude speculation with inductive fact, that constitutes our greatest danger, and which, if not checked, will again bring agricultural science into disrepute.

We have been led to these remarks, by reading a paper on "Manure, Drainage and Irrigation," written by R. L. PELL, Esq., President of the American Institute, and which has been copied with high commendation by several agricultural papers. We cannot believe that the editors took the trouble to read over the article before copying and commending it. We would, therefore, call their attention to the following extracts:

"If the soil has but a small proportion of the phosphates in it, and a great quantity of the siliceous, [silicates,] wheat will ruin it more rapidly than barley, for the reason that a single crop of wheat will remove a larger portion of the phosphates than three crops of barley."

Now, the fact is that the same quantity of barley removes from the soil *more* phosphates than a crop of wheat. We make this statement on the strength of forty-two analyses by reliable chemists.

"If we grow plants that are not intended to go to seed, they will require no phosphate."

This is a great mistake. No agricultural plant

will grow without phosphates. Turnips, which are "not intended to go to seed," although they do not contain *as much* phosphoric acid as wheat and other cereals, "require" for their maximum growth a *greater quantity of phosphates in the soil than any other commonly cultivated crop.*

"The urine of man is much more valuable than that of the sheep, cow or horse, as it contains over eight per cent. of the phosphates, which are not found in the urine of other animals, except possibly the hog."

According to a large number of analyses made and collated by LAWES and GILBERT, the "urine of man" does not contain *half of one per cent. (0.37)* of phosphates; and the assertion that phosphates "are not found in the urine of other animals," is still farther from the truth.

"A soil should never be idle—plant your crops keep the land from weeds, and depend mainly upon the inorganic compounds elaborated by nature for their success. You may rest assured that more attention should be paid to the inorganic constituents of crops than has been. As, for example, I prepared an inorganic manure for wheat, thus: to five pounds of silicate of potash in solution, add five pounds of bone-dust; when dry, incorporate with it fifteen pounds of common Turks Island salt, and thirteen pounds of plaster of Paris. This composition produced great results, not only in the yield of the grain, but in the beauty of the straw, which was thicker than a pipe-stem. I then added the following year to the same compound, twenty pounds of wheat bran, and ten pounds of the ash of wheat straw, and the production was enormous. If land was so manured, eighty bushels of wheat would result from an acre. I have grown, by another process, at the rate of seventy-nine and three-quarter bushels of wheat to the acre."

We cannot of course contradict this statement. Mr. P. may have obtained an "enormous" crop from such a dressing; but we have seen essentially the same manure applied, without any particular benefit. It is certainly absurd to suppose that "if land was so manured, *eighty bushels* of wheat would result from an acre."

"Last year I was desirous of increasing the bones of several calves, and not having sulphuric acid at hand to dissolve bones for that purpose, I tried an experiment with lime-water, that proved to be perfectly effectual. The bones were placed in a large iron kettle, filled with slacked lime in solution, and boiled four hours, reducing them to a powder, which was used with irrigating water on grass land from which the calves fed, adding to it the necessary amount of phosphate of lime."

However true it may be that Mr. PELL's calves had plenty of bone in them, it is absurd to suppose that the process he adopted had anything to do in "increasing the bones" of the calves. In the first place, boiling the bones in lime-water would not dissolve them—and even if it would, there is not the slightest evidence that soluble phosphate of lime will increase the *proportion* of this substance in the grass; or if it did, that grass containing an unusual quantity of phosphate of lime would increase the growth of bones in animals feeding on it.

"Farmers often complain of long protracted drouths in summer; much to my surprise, as I glory in dry weather, because it restores the constituents of succeeding crops, and renovates the soil by increasing the mineral matters that have been dissipated by growing

grain and occasional rain—and were it not for drouths, a barren waste world in time result. God thus counteracts man's thriftlessness by evaporating moisture from the earth's surface, and thus inducing lower strata of water to rise by capillary attraction, which carry in solution soda, potash, lime, magnesia, &c., to the earth's surface, when evaporation carries off the water, and leaves these valuable substances for man's crops. I discovered this fact by having a sample of soil analyzed in the spring, when a mere trace of these matters was found; in the fall following, after a very severe drouth, a portion of soil from the same spot was analyzed again, and contained them all in very appreciable quantities—showing that they had been freed from their siliceous coatings by atmospheric influences."

Whether water ascending from the subsoil brings with it "soda, potash, lime, magnesia, &c.," or not, we will not undertake to say. The somewhat recent experiments of Prof. WAT, however, indicate that water percolating through a soil dissolves out far less of the elements of plants than had been previously supposed, and it is, therefore, probable that ascending water is not over-charged with these ingredients. Be this as it may, however, we have not the slightest hesitation in saying that no chemist in the world, by the most rigid analysis of the soil, can determine the point.

"If you wish to manure a field of potatoes advantageously, and produce remarkable results, use the manure of hogs *fed on potatoes.*"

Nonsense. The manure made by hogs fed on corn, or still better, on peas, would be far richer in those elements which experience proves are most required by the potato, and would produce more "remarkable results."

"Wisconsin, thirteen years since, produced forty bushels of wheat to the acre—now only twenty."

We should like to see the statistics. The average crop of wheat in Western New York, in her palmiest days, was never twenty bushels per acre.

"Thousands of acres in our own State might produce admirable crops, if their owners would analyze the earth, and add the missing requisites, which, nine cases out of ten, would be found to be lime, phosphate of lime, or potash."

The ingredients mentioned, and in fact all the constituents of plants, exist on all soils capable of producing a blade of quack grass or a Canada thistle. The soil may not contain them in sufficient quantity to enable it to produce good crops, but chemical analysis is incapable of determining whether it does or not.

CULTIVATION OF BUCKWHEAT.

BUCKWHEAT requires and receives but little cultivation. It is often sown on the roughest and the poorest of soils, and in favorable seasons produces good crops; yet, with buckwheat as with any other crop, good cultivation is usually the most profitable. A well prepared, mellow soil, is desirable. Even a little manure may be applied on poor land with advantage. We have seen one hundred pounds of guano, used on a light, dry, poverty-stricken hill-side field in Massachusetts, more than double the yield of buckwheat. "No crop," says an experienced writer, "will feel manure of any kind, or in any state, so quick as buckwheat."

In England, where, on account of the coolness of the climate, buckwheat is rather a precarious crop, it is frequently sown in drills one foot apart, and hand hoed; and some experienced farmers sow it in drills two feet apart, in order that the horse cultivator may be employed. In this country, and in most parts of Europe, it is sown broadcast. The quantity of seed per acre varies somewhat with the character of the soil and climate, and the purposes for which the crop is grown. When raised for seed on soil of medium quality, the rule is to sow about *half the quantity* of seed used in sowing wheat—say from three pecks to a bushel. The richer the land, the less seed is required, as a general rule; if too thick, on rich land, it runs too much to straw.

Buckwheat is very susceptible of cold. It must not be sown till all danger of the slightest hoar frost is past. The usual time of sowing, in this State, is the first week in July. If sown too early, say the middle of June, it is liable to blast; if too late, it is frequently injured by early autumn frosts. The seed should not be covered too deep. THAYER mentions the curious fact, that he has found the use of the roller in covering the seed injurious.

An experienced German writer says: "The success of buckwheat is remarkably affected by the weather to which it is exposed in the several stages of its growth. In this respect it is more susceptible than any other kind of grain. It requires dry weather immediately after sowing, and springs up during the time of greatest drouth; but after putting forth its third leaf, it requires rain, in order that its leaves may be developed before the appearance of the flower, which soon follows. During the long time for which it continues in flower, this plant requires alternate rain and sunshine, to facilitate its growth and enable the flowers to set. The flowers drop off during thunder storms, or even on the occurrence of electric phenomena unaccompanied by rain. Buckwheat is also incapable of withstanding violent easterly winds, which cause it to wither before its flowers are set. After flowering, the plant again requires dry weather, to bring all its seeds to maturity at the same time, and insure an early harvest. The success of buckwheat is, therefore, very precarious. It depends not only on the general state of the weather throughout the season, but also on the particular time which may have been chosen for sowing. A week earlier or later often makes a very great difference. Hence, those who wish to make sure of their crop of buckwheat, sow it in three or four separate portions, and at different times."

Buckwheat will not thrive on cold, clay land. On all the poor, light, sandy soils of the Atlantic slope, it grows with great luxuriance, when well put in and stimulated with a little manure. On such soils, buckwheat has been used to a great extent, and with considerable success, for plowing under as a green manure. The plant possesses many qualities which render it valuable as a renovator. It can be sown late in the season; requires little cultivation; is of rapid growth; will grow on the poorest soils, and, in fact, succeeds best on light, poor soils, which are destitute of the organic matter needed for other crops, and which the buckwheat, when plowed in, supplies in considerable quantity. Nevertheless, we think buckwheat will not enrich land so rapidly as clover, peas and other leguminous plants. Where these can be grown, we would never grow and plow in buckwheat

solely for its fertilizing effect. On soils which are too poor to grow clover and peas, buckwheat may be employed for the purpose of enriching the soil in organic matter, and, by its judicious use, the land will in a few years be capable of growing clover, peas, &c.

Buckwheat is often sown on land infested with wire worms. Two crops, sown in succession, will sometimes starve out these pests. We should be glad of the experience of our readers on this point.

CUTTING AND CURING CLOVER AND GRASS FOR FODDER.

RED CLOVER is raised with much greater care and certainty in many parts of this country than in Great Britain, yet it is held in far less esteem as a forage plant. This is probably owing, in some degree, to the manner in which it is cured. In England it is never spread out, but is allowed to remain unbroken in the swath, to prevent the leaves from falling off; and after being turned in the swath, is put into small cocks, and afterwards into large ones. Cured without much exposure to the sun, it is sweet and green, and horses prefer it to English meadow hay. The objection so often made against it in this country, that it is dusty and induces heaves in horses, is seldom heard in England.

It is important that clover should not be too ripe. It should be cut when in full bloom. A few days' delay often injures the crop, as the flowering stems rapidly grow tough and unpalatable. We are aware that a less quantity of hay is obtained—in fact, it has been proved that there is a gain of ten per. cent. in weight of hay by allowing the clover to form its seeds before it is cut—but in this case much of the saccharine matter is changed into woody fibre, and the quality of the hay is impaired more than the increase of quantity will counterbalance. Clover may be allowed to stand without loss till the lower leaves show symptoms of decay, but it is better cut too early than too late, especially if the after crop is intended for seed.

If the weather is favorable, and the crop not too heavy, clover may be cured advantageously as follows: Mow in the morning, as soon as the dew is off; turn it carefully in the swath about noon, and put it into neat, small cocks before the dew comes on. When sufficiently cured—say in three days—turn the cocks upside down, when the sun is well up, and draw in during the afternoon. If the crop is heavy, and the weather cloudy, put it into larger cocks, and allow them to stand out a little longer. The operation of curing may of course be expedited by spreading out the clover as soon as it is cut, but there is considerable loss of leaves—the best portion of the fodder.

It is possible by chemical analyses to determine with much certainty the best time to cut hay so as to secure the greatest amount of nutritious matter; but the analyses which have been made afford no satisfactory information on this point. In the famous experiments of SINCLAIR, the amount of nutriment was estimated from the quantity of soluble matter in the various grasses cut at different stages of their growth. Such a method of analysis cannot give reliable results. Much of the crude, imperfectly organized matter of immature plants might be soluble, but no one will contend that it is nutritious.

More recently, the nutritive value of food has been estimated by the proportion of nitrogen it contains.

Mr. LAWES' experiments on sheep, pigs, &c., proves that this method leads to erroneous results. Up to the present time, therefore, chemistry has afforded us no satisfactory data for determining the best time to cut the various grasses for fodder, so as to secure the greatest quantity of food. We must look to the experience of practical farmers. Unfortunately, however, it is difficult to ascertain how far the recorded opinions of farmers on this point have been influenced by the statements of scientific writers. There is, too, some diversity of opinion on the point, though the majority of farmers appear to be in favor of cutting the grasses when in blossom. Undoubtedly a less quantity of hay is obtained, but it is said to be enough more nutritious to make up for this loss. C. L. FLINT, Secretary of the Massachusetts Board of Agriculture, has published extracts from numerous practical farmers on this point. We will try and select out a few, as representatives of the whole.

One of the most intelligent farmers of Middlesex county says: "I prefer to cut grass when in blossom, because it will make more milk and more fat, and cattle prefer it to that standing later. It keeps them loose and healthy."

A farmer of Worcester county says: "When designed for milch cows, store, or fattening animals, I prefer to cut in the blossom, because it makes more milk, more growth, and more beef. For working cattle and horses, I cut about six days after the pollen has fallen, because it does not sour or loosen the animal so much as when cut in the blossom."

A farmer of Hampden county says: "We cut after the blossoms begin to fall, and before they have all fallen. It has more substance and weight out at that time than if cut sooner—more sweetness and juice than if cut later."

A farmer of Berkshire county says: "Our rule is to cut hay in the blossom, as it is then in the best state for feeding—less woody and much sweeter than later, and leaves the roots in better state for a second, or another annual crop."

A farmer who prefers to cut all other grasses when in blossom, says: "It will not do to cut blue joint or fowl meadow till some of the seeds fall, as it will soon run them out."

A farmer of Norfolk county says: "We cut about the time the blossom falls. The grass is then at its full growth. If it stands much longer, the leaves begin to die at the bottom, and the grass grows tough and hard, and I think the longer it stands the less it will weigh when dried. If it is cut much earlier, it will shrink and dry up, and does not seem to have so much nutriment in it, and I have noticed that cattle will eat more in bulk than when cut at the right time." Another says: "The time for cutting depends very much upon the use you wish to make of it. If for working oxen and horses, I would let it stand till a little out of the blossom; but if to feed out to new milch cows in the winter, I would prefer to cut it very green. It is then worth for the making of milk in the winter, almost double that cut later."

A farmer of Middlesex county says: "I cut my red clover before the heads begin to turn brown. When the clover is quite heavy, I cut it when only one-half the heads have blossomed, because then cattle will eat all the stems. Clover is injured more by half when it stands long after blossoming than any other kind. I find my clover hay in the barn much heavier when cut quite early."

Mr. FLINT says: "The replies from about one hundred and fifty towns, are that farmers prefer to cut the principal grasses, timothy and red-top, when in full blossom; red clover when about half the heads are in blossom; and swale grass before it is ripe, and generally before blossoming, if possible, so as to prevent it from becoming hard and wiry."

In regard to the best method of curing grasses for hay, there is also much diversity of opinion. We prefer to mow early in the morning, spread it out evenly and well as soon as the dew is off, and put it into small cocks in the afternoon and draw it in the next day. If the crop is light, it may sometimes be dried sufficiently in one day. In fact, in our dry, hot climate, hay is very frequently dried too much. We give a few extracts from Mr. FLINT's Report, before quoted, showing the opinions of practical hay makers in Massachusetts.

A farmer of Berkshire county says: "If the weather is good and the grass not too heavy, we cut in the forenoon and get into the barn in the afternoon. If the grass is heavy and the weather not good, cut in the forenoon and turn over the swaths at night, and spread and get in the next day. I do not believe in drying hay as much as some do. If not quite dry, two or three quarts of salt to the load will preserve it, and it will be the better." Another in the same county says: "I prefer to cut hay in the blossom on a good hay day in the forenoon, and it is fit for the barn, if raked with the horse-rake, and care is used to turn it over and bring the green grass to the sun, by two or three o'clock in the afternoon of the same day. Much hay is spoiled by being dried too much."

A farmer of Franklin county says: "Timothy will dry sufficiently for me in one good hay day. I dry less and less every year. If there is no moisture on it, there is little danger of hurting after it is wilted."

Another experienced farmer of Berkshire county says: "My way of making hay is to cut when in blossom, in the morning, shake it out evenly over the ground, turn it over at eleven o'clock, and get it into the barn on the same day, if the weather is good. But if the grass is very heavy, I put it into cocks over night. I consider it made, as soon as dry enough not to heat in the mow. To get drier than this is an injury to the hay."

A farmer in Hampshire county says: "My method is to cut with the mowing machine, which leaves the grass perfectly spread. It is turned over between one and two o'clock in the afternoon, and while still warm, and before the evening dew falls, it is put into cocks. It is spread and turned the next morning, and at one o'clock is ready for the barn."

TO CLEAN CHESS OUT OF SEED WHEAT.

IN the August number of the *Farmer* for last year, we published a method of removing chess out of seed wheat, adopted by our esteemed correspondent, JOHN JOHNSTON, of Seneca Co., N. Y. The process is simple and effectual, and its adoption cannot be too frequently urged upon wheat growers. We have received an article on the vexed question of "wheat turning to chess," from Mr. J., in which he gives an account of his method of cleaning wheat, and we are glad to be able to present it to our readers in his own words. Mr. J. says:

"Some twelve or fourteen years ago, two farmers and myself went to call on an enterprising farmer, not

fifty miles from where I now write. We found him sowing wheat. He quit his work, and politely showed us over his farm, out-buildings, &c., all of which were very neat and well arranged—showed us what improvements he had made by underdraining, &c., and asked us politely to stay to dinner, which we declined, as we had other arrangements. We accompanied him into the field where he had been at work, and I put my hand in a bag of wheat and took out a handful to look at it, but what was my surprise to find it full of ches! I said I was astonished to find a man of his reputation as a farmer sowing ches. He looked me right in the eye, evidently irritated by my abrupt reproof, and said, 'How the h—l would you help it, when it was there?' I told him I would blow it out. He looked up again, evidently a good deal irritated, and said 'Neither you nor any other man can clean it out.' He had a first-rate mill, and had put it four times through, and yet there it was; and he said he would bet me one hundred dollars that I could not clean it out. I told him it would not be justice in me to bet with him, as I had done the same thing so often that I knew I should have no difficulty in doing it; but if he would take a bag of wheat to the barn, if I did not clean out all the ches in going once through the mill, I would pay him five dollars for his trouble. He said 'done,' and took the bag on his shoulder and started for the barn; but before he got out of the field he threw it down, saying he had 'plenty of the same kind in the granary.' After going to the barn, I took the *shaking-rod of the fanning mill, and took out the riddles.* We carried the fanning mill into the granary, and I requested one of my companions to turn the mill steadily, not very fast, and not to stop until I notified him that it was all out of the hopper. I put in the wheat, and we run through about two bushels. The owner carried it to the barn floor, near the door, and all the three gentlemen got on their knees and examined it, and *they could not find one ches seed.* After examining thoroughly, the owner rose from his knees, saying, in a subdued tone, 'I see a man can never be too old to learn, and I have learned something.' I then said, 'Gentlemen you had better look behind the mill—*perhaps there was no ches in the wheat!*' The owner said he knew 'there was plenty of ches in it.' To make sure, I went and swept up behind the mill, and I should think I got at least four quarts of ches. The owner then said, 'Gentlemen, your horses shall go in and be fed, and you shall not leave until you take dinner. I have got paid for many dinners.' So we dined, and got an excellent dinner, and left without saying 'ches' again.

"I have never had the pleasure of calling on the gentleman since. I have thought I should like to see his wheat, to ascertain if he raised ches. I have seen him often since, but I never mentioned 'ches' to him, as I knew he felt a little grieved at his obstinacy in not believing me. I have been thus particular in making a long story out of a little matter, to try, if possible, to induce men to clean their seed, so that there may be no more 'wheat turning to ches;' but as long as ches is in your neighborhood, you are always liable to occasionally having a little. Your neighbors' cattle may get on your fallows when they have been eating chaff with ches in it, or swine when they have been eating screenings of wheat with ches in it. You may in this way get ches from their droppings, but still that will only be a trifle.

"Now, brother farmers, I beg you will try blowing the ches out of your wheat for a few years, and I know you will never again say wheat produces ches. I wish you, Messrs. Editors, would go up the Genesee Valley about seeding time, (I mean wheat sowing,) and see that they sow clean wheat. I know that some

of the best wheat growers in the country believe wheat that is damaged by the treading of horses or cattle, or nibbled off close by sheep, geese or turkeys, produces ches. Now, I know they are mistaken. It is only because the wheat is killed, that the ches gets a better chance to grow. Those who sow ches, get ches; those who do not sow it, do not get it."

ITEMS SUGGESTED BY THE JUNE NUMBER.

ONLY thirty days to the 4th of July, and the apple trees but just fairly in blossom! Summer here, and the balance of the country's corn and potatoes yet unplanted! And every hour of *seasonable* weather improved! Heaven grant us "growing times" and late frosts, and there will yet be a plentiful harvest. While I rest from hoeing in "*my new garden,*" let me note something of your June contents.

RUOTA BAGAS AND TURNIPS.—The cultivation of roots, particularly if *successful*, prepares the land in the best manner for the following crop. *Success in root growing* requires high manuring, thorough tillage, and clean culture; it results in plenty of food for stock, and hence *plenty of manure*—with this, farming becomes profitable. If we are to have winter until May, American farmers should give increased attention to root crops; they will find them just the thing for spring feeding. A few beets and carrots, raised last year, were found of high value (*nearly equal to their cost*) for milch cows, by the writer.

A PROPOSED ROTATION.—The third year in the course, is sadly blundered by wrong punctuation—it should read: "Wheat, with composted manure; rye; the spring following, beans, on any stubble unused for these; the whole seeded to clover, or clover and herd's grass."

STIRRING THE SOIL IN DRY WEATHER.—The advantages of constant culture are well brought out by your correspondents. I have found it easier to grow good garden crops in very dry, than in very wet seasons, by using the hoe freely. In wet seasons, it is almost impossible to keep down the weeds—in dry seasons, it is done with little difficulty—and the same rule and result hold good with our field crops.

MANAGEMENT OF BEES.—The great trouble in keeping bees, is the use of new-fangled hives, bee-houses, etc., and want of common sense in caring for them. Give them plain box hives, an airy place, sheltered from the heat and cold, and a little "wholesome neglect," and they will be sure to prosper.

BUTTER MAKING.—My neighbor, T., gives many valuable hints on this subject. I know she makes the best of butter, but a little less "washing" would suit my taste, though the great care used in working leaves little chance for injury from that source.

FORETHOUGHT IN FARMING.—It is a good idea to lay plans for work, but it is better to be able to change any of these plans in case of emergency. The farmer has great use for *forethought*, but cases come up frequently when the *ready thought* is called in play, and one who cannot turn back to first principles and plan anew, will be pinched sometimes pretty badly.

FARM HOUSE CELLAR.—One of the most important *desideratums* of a farmer's home is a good cellar, and any reader who intends to build soon, will do well to study Mr. LARKINS' communication.

REARING CALVES.—Our method, almost precisely, is that described by W. S., of Canada West. Of course, we think it one of the best which can be followed.

There are many other brief and excellent articles in this number, but time fails me for further itemizing. Since I commenced, we *have* had "growing weather," and farmers are thankful, and busy as need be. B.

Niagara Co., N. Y.

NOTES FOR THE MONTH, BY S. W.

FALLACY OF NEWSPAPER STATISTICS.—A Lowell hebdomadal says that the Bay State Mills, in Lawrence, manufacture 400,000 shawls yearly, valued at upwards of a million and a half of dollars, and that the mills consume 40,000 lbs. of wool per day, or 12,000,000 lbs. a year, requiring 3,000,000 fleeces. Now, as the Bay State Mills have only one hundred sets of cards, and 60 lbs. of fine wool per day being a fair average for a set, there can be only 6,000 lbs., and not 40,000 lbs., of wool manufactured there in one day. This is not the first exaggeration of Lowell's industry from the same weekly—strange as it may seem, when we reflect that Lowell is the cap-sheaf of a manufacturing town, and as such needs no puffing.

TRANSPLANT BEETS AND SOW CORN FODDER AS A SECOND CROP.—Any one who, on the 4th of July, has beet plants the size of the little finger, will do well to transplant them in vacant spots, or on ground where green peas have been grown, and the soil forked over. If the month is not too dry, they will be as large on a good soil as early planted beets, because they grow in the fall long after the advent of early frosts. Two thirds of the leaf should be cut off when transplanted. If dry and warm, set them towards evening, and pour on water that has had dung dissolved in it; they rarely require more watering—a little hoeing, to let in dew and atmospheric gasses, is better. Corn for fodder or soiling milch cows in the fall, may also be sown after peas are removed; but if we have a long drouth in July and August, it retards the growth of late planted corn as much as it favors the finishing and perfecting of the early planted. And as beets grow long after corn is chilled and stationary, they are more certain to pay as a late or second crop.

EXCAVATE DRAINING PONDS IN FLAT FIELDS.—While on a short tramp across lots to Fayette, when the roads were impassable, in April, I encountered, in a large flat meadow, a pretty little artificial pond, filled with water from large open ditches; the pond was circular, not more than one hundred and fifty feet across, and about four feet deep. The *Deutscher* told me that it evaporated water very fast, even in cold, rough weather, and that the yield of his meadow was nearly double the last year—an untoward grass season, as farmers' stock this spring generally bear witness! Why are not more ponds excavated in the flat fields, and tenacious, stoneless alluvium of Western New York?

LATE PLANTED CORN.—Some writers advise waiting until June to plant corn, lest the cold weather of May should rot the seed in the ground. I take it that any soil in which good seed corn would rot planted as late as the middle of May, would be altogether too wet to plant this ninth day of June, as more rain has fallen in the last twenty-four hours

than in three weeks before. Let no man in the general sections of Western New York omit to plant corn as soon as the soil is dry enough after the tenth of May; the notion that corn rots in a well under-drained soil after the middle of May, is ignored by continued experiment. I have corn and sorghum up and hoed that was planted on the tenth of May, although it was wet, cold and frosty for the next twelve days. Corn that is up on the first of June, luxuriates in a July and August drouth, if well tended, and the soil has been well manured; while corn planted on and after that day, will be pinched by the same drouth.

THE IMPOLICY OF SELLING OFF LEAN STOCK.—We often hear of a city butcher fined for selling bad meat; methinks the day has come when those farmers should be fined who sell to our village butchers starved cattle and blue veal. It is found to be not only humane, but good economy, to add hasty pudding to a calf's mess, as two cents' worth for three weeks would make the veal white and fat. Some farmers say "there is no profit in feeding corn to stock." How much more profitable is it to let them become poor and worthless for want of food? JOHN JOHNSON, of Fayette, feeds the whole of his always large corn crop to stock. He has paid at the oil mill here \$1,200 for oil-meal to feed to cattle and sheep, within the last twelve months. He says it was the best investment he ever made—much better, perhaps, than those farmers have done who sold their corn at sixty cents a bushel, and invested the proceeds in Western lands. It enriches land amazingly to keep fattening cattle; while to sell off lean animals, is a sort of agricultural or chemical suicide.

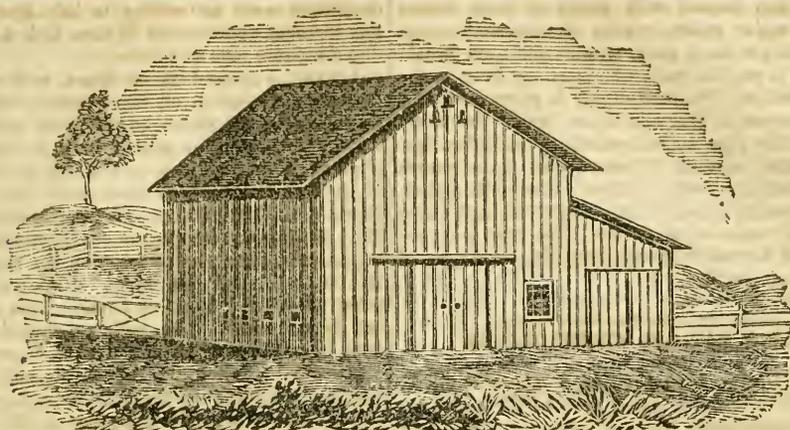
THE BLESSINGS OF A GRASS COUNTRY.—I have seen large fields of corn at the West, and an extra large breadth of cotton at the South; yet I have been far more impressed by the evidences of rural picturesqueness, and true domestic comfort, in grass-growing Western New York—even in those high regions where corn is reduced to the early stunted variety, yielding barely enough to make the johnny cakes and fat the pork of the family—for here is creamed cheese, and clover-scented butter, and every other substantial article of food that the epicure might envy; fat, sleek cattle, fine woolled sheep, and laughing milch cows; with plenty of white clover pasture in summer, and the best of shelter and sweet hay (not straw) in winter. While at the South and South-west there is little cultivated grass, and less timothy and clover hay, with only the coarse, inedible corn-stalk, never saved; no shelter for cattle in winter from sleet and rain, and of course little butter in spring and summer, and less cheese. I have red clover this ninth day of June not yet in blossom, but heavier than I saw it, even in Southern Michigan, at hay harvest, and farther west it was still lighter.

Waterloo, N. Y.

HARVESTING CARROTS.—Grind a hoe sharp, and send a hand along between the rows to cut off the tops, while another hand, with a team, plows a deep furrow along side of the first row, close to the carrots; the next furrow will turn them out. Two boys, with a large basket, can follow, pick up the carrots, and put them in the wagon. When your carrots are harvested, the ground is fall plowed.

East Rodman, N. Y.

H. H. TAYLOR.

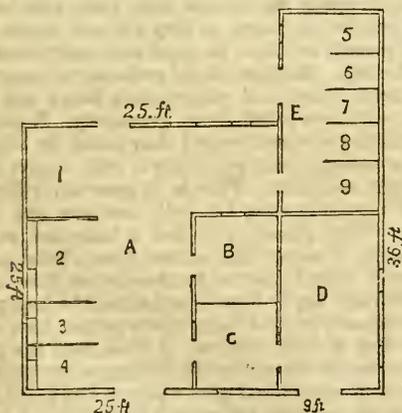


DESIGN FOR A CHEAP AND COMMODIOUS STABLE.

A CHEAP AND COMMODIOUS STABLE.

MESSRS. EDITORS:—Having noticed for some time back that our agricultural journals, with very few exceptions, give nothing in the shape of stable plans, except those which are too expensive for the farmer in moderate circumstances to erect, I have been induced to send you the enclosed plan of a plain and convenient stable, which, as far as cheapness is concerned, can be erected by almost any farmer. Although I do not claim for it anything on the score of beauty, yet it has a snug and comfortable look, and, if erected in accordance with the plan, will not fail to give the animals occupying it the comfort and convenience they require.

The main building, containing the stable, grain and harness rooms, is twenty-five feet square, and



GROUND PLAN.

ten feet in height. It contains two single stalls, each five feet wide, and two double stalls, each seven and a half feet wide. The grain room, B, is seven feet square, and is lighted by a window opening into the stable, A. The harness room, C, is about the same size, and is lighted by a window in front. It has a door opening into the stable, and also one communicating with the carriage house, D. The carriage house is sixteen feet in length, nine feet in width, and ten in height, and will hold two carriages, (as

many as the generality of farmers keep.) It is lighted by two windows on the side. Back of the carriage house is a stable for cattle, E, eighteen feet in length, and the same in width and height as the carriage house. It has a door leading into the barn-yard, and also one into the horse stable. It is divided into four stalls, each four and a half feet wide; or it can be used as a work-shop, or storage room for machinery, &c. The loft above the stable is six feet at the eaves, and twelve at the ridge.

The stable is constructed of wood. Over each crack a long slat is nailed, which effectually keeps out all cold winds. The large doors of the stable are hung upon iron rollers, which are fastened to the top and bottom of the door. Those at the top are constructed so that the wheels project from the door, and rest on a long beam fastened to the front of the barn. The lower wheels run on a groove, just below the surface of the ground. The doors move right and left, and thus there is no need of the long moveable pole which is generally placed in the centre of the doorway to fasten the doors to, and which is so unhandy to use. When the doors are opened, there is no slamming together by the wind. The other doors can be hung in this manner, or in the old way, as suits the taste of the builder. J. F. F.

CULTURE OF BUCKWHEAT.

MESSRS. EDITORS:—This is the month to sow buckwheat, and, as it is much sought after during the winter months as a luxury, I think farmers will do well to cultivate a portion, however small, of their foul meadows, &c., with this grain. It will perform a treble duty. In the first place, we raise it as much for the crop, as any other which we grow. Next—a great desideratum—it will subdue blue grass, or other foul grasses, more effectually than any other means, in the same space of time. Wire worms will evacuate the premises on the first assault from it, and we can plant or sow any crop after buckwheat without fear of molestation from them, at least for a few seasons. It also leaves the land in fine tilth—more so, perhaps, than any other crop. These qualities, I think, are worth all the trouble and cost, even if we get a light yield.

Buckwheat is excellent for breakfast cakes, par

ticularly when dressed with plenty of good butter and maple sugar, honey, or even our common sugars. Who would not be at some trouble for such breakfasts? It is good to make the hens lay, even in the coldest weather, if a good supply is given, and they have free access to lime and water daily. It makes good feed for pigs, notwithstanding a prejudice formerly existing against its use. The straw makes excellent bedding for the stables. It absorbs and retains moisture to a considerable degree, if kept under cover, as all manures should be. The bran is an excellent feed for milch cows, increasing the flow of milk quite perceptibly. D.

Gates, N. Y.

CUTTING HAY AND CURING CLOVER.

Messrs. Editors:—As haying is approaching, it may be well to talk the matter over a little before we commence operations. Some good farmers think that timothy should be cut while in bloom; others, equally as good cultivators, are of the opinion that the seed should be nearly mature before cutting. There are arguments in favor of both of these propositions. My own experience is, that it should be cut neither too ripe nor too young. I think that hay holds its weight better if cut while the seed is in the milk, than at any other time; there is more nutriment in it than when cut in the bloom. If left until too ripe, there is in the stalks so much of woody fibre that more or less of the nourishing qualities are lost.

One word in regard to clover, which is very highly prized by English teamsters—so much so, that they care very little about "corn," while there is plenty of clover hay in the loft. Their method is to cut as the first blows begin to turn brown; never spread, but pitch into small cocks, say fifty pounds each, or what will make about that after being cured; leave it in this manner for a couple of days; then turn it over, and draw in. When cured in this way, we do not hear of so much dust—besides, the leaves are all saved, and they are the best part of the fodder, yet horses and cattle will eat the greater portion of the stalks, which they will not do if cured in any other manner, unless driven to it by starvation. D.

Gates, N. Y.

IS IT RIGHT TO ASK THE WOMEN FOLKS TO MILK THE COWS DURING THE BUSY SEASON?

[The following extracts from some of the numerous answers we have received to this question, will be read with interest.]—Ens.

I THINK it is quite right to ask the women folks to do the milking, or help do it, during the busy season. If farmers' daughters were all taught to milk, it would not be any detriment or disgrace to them, as a general thing; but, on the contrary, it might many times be an advantage to them and their parents. What farmer's wife, who feels an interest in her husband's affairs, has not witnessed how perplexing and wearisome his business is at many times, especially at that hurrying season, haying and harvest? The weather is frequently bad for curing hay and grain, and perhaps but little help, or that which is very poor, can be had. We ought, in such cases, to make ourselves very useful, for we know, if we but observe things as they are, that our husbands are tired enough at night to find the cows milked, or if they are not milked, to find them in the yard, and his wife and

daughters ready and willing to help him, and make him pleasant and cheerful by their little kindnesses in doing a chore here and there.

I have witnessed many times, with regret, the husband and father, on his returning from town or some other place where he has been necessarily detained, go perhaps at nine o'clock at night to hunt after the cows, and perhaps not find more than half of them then; he drives them into the yard, milks them, strains the milk, and afterwards feeds the hogs, &c. All this time his family are quietly sleeping, unconscious of him who is laboring for their support. All men are not of this stamp. I know of some who never milk a cow when at home. This, in my opinion, is not right. The milking should not be all done by either sex, but as it is most convenient.

All children should be taught to milk as soon as they have sufficient strength in their hands to milk fast enough to keep the cows from shrinking. Farmers' daughters are being brought up very wrong in many respects. In the first place, they are not more than half dressed after they are two years old. In this way they are exposed to heat and cold, and, if they survive this usage, nine-tenths of them are puny children; and by the time they are seven or eight years old, (or ten at most,) they are placed on a stool to take music lessons, and, of course, their hands and fingers must be very limber to reach an octave on a piano. Mothers had better have them stand on a stool at the sink, and take lessons in dish-washing, and have them do all kinds of chores they are capable of doing, in doors and out. They should also be taught to knit their own and their brothers' stockings, mend and make papa's shirts, and piece bed-quilts, and, for aught I care, they may be taught embroidery, crochet work, &c. After they are twelve years old, if their parents wish them to learn music, they should buy a piano or any other instrument of music they may see fit, and have them take lessons and practice at home, so they will not forget that their parents are often fatigued with many cares and much work. Mothers should endeavor to teach their daughters to love and respect their father and brothers, who have to toil almost incessantly. Especially should they love and respect their father, for often he has to undergo many privations in order to give them a proper education. This he is generally willing to do, if they only repay him with their love and kindness. What parent, who has a taste and an ear for music, does not like to hear some choice pieces of music, after his labors for the day are done, in his cheerful and happy home? and all will be happy and cheerful, as a general thing, where parents have done their duty to their children. I think there is a great error afloat in respect to the training of our children. "The rod and reproof give wisdom; but a child left to himself bringeth his mother to shame." I heard a father remark the other day, that he "supposed girls ought not to wash dishes when they were taking music lessons, because it made their hands stiff." He had been told so, perhaps, by his wife or daughters. Such a parent would not, of course, ask the "women folks" to help milk the cows at any time, let the case be ever so urgent, because it is instilled into his mind that they cannot, or ought not, to milk with their limber, white hands. Oh! what a pity that he does not let his judgment teach him better; children can play the piano if their hands are a little stiff, or colored with the sun's rays. Do not fathers like to see

their children look fresh and healthy? If they do, they should take them out into the open air, and set them at some light work, or they will never be healthy. Parents, let your children's hands get somewhat stiff, so that they may know how your hands feel at times; and also have them help you milk whenever it is necessary, and do anything else that you think is best for them to do, that they may love and respect you.

James town, N. Y. A FARMER'S WIFE.

Your able correspondent, B., of Niagara County, asks for more light on this (to us dairymen, especially) important subject. If we do not succeed in imparting any light on the subject, we will at least have the pleasure of expressing our views, and of correcting some of the many errors into which your Michigan correspondent has fallen, in his or her premium article in the March number.

The essayist confidently asserts, that "woman's appropriate labor is strictly confined to the inside of the farm-house." This false notion, which has prevailed to a great extent in our country for the last quarter of a century, is the primary cause of the early decay of American women. In Europe, where women perform a vast amount of the lighter kinds of out-door work, they are strong, rosy and healthy, with fully developed physical organizations, which are the admiration of sculptors and physiologists, and which contrast beautifully with our *pale, sickly, cadaverous, wasp-like, hooped* substitutes, for help-meets. If our country-women desire health and beauty, and to make themselves worthy of the respect and admiration of mankind—a blessing to themselves, their country and the world—they must imitate, to a certain extent, their Puritan grandmothers, who were worthy help-meets of the men. They cheerfully and sweetly bore their share of labors and trials; they were the housewives, spinners and weavers, tailors, nurses and doctors of New England. They were dairy-maids and cooks, as well as friends and sweethearts, in the good old primitive times. The young ladies of that time were not the *awkward, timid creatures* referred to by the essayist, who are doubtless like the city belle, who inquired of her country cousin how they obtained the milk—"if they took hold of the cows' tails and pumped it out!" The essayist's quotations from Scripture to sustain his or her false reasoning, reminds us of his sooty majesty's quotations to our Saviour on the mount, and we trust will be as effectually rebuked by all right-minded, industrious women. The women in Scripture times not only milked the cows, but tended the flocks, and some of the most eminent of them made love at the wells while drawing water for their flocks. (See Genesis xxix: 11; Exodus ii: 16.) Our Saviour informs us that it is not only lawful, but our duty, to do good on the Sabbath day; and again, that the Sabbath was made for man, and not man for the Sabbath. In this section, where nearly every farmer keeps from ten to sixty cows, the women folks (to their honor be it said) generally help milk, without being *asked*, and consider it a *shame* to those women who refuse to maintain their right to share in the labors and toil, the joys and sorrows, of their husbands, brothers and lovers. H. H. T.

East Rodman, Jefferson Co., N. Y.

I was not a little surprised to see such a question proposed as the one now before me—"Whether it is

right," &c. If the question implies that the women should milk the cows without the men troubling themselves about it, I have nothing to say against it; but if it means the contrary, I am of a different opinion. I think it is the duty of the farmer's wife, or housekeeper, to see that the cows are milked, either by herself or by her servants. Woman was intended to be a helpmeet for man, and I do not know in what *better* way a farmer's wife can assist him, than by taking charge of the dairy. Farmers have so many things to attend to, that I think they can very well dispense with milking the cows; if they have a little time to spare, I think it could be better employed in the garden, which is *too much* neglected. Perhaps my views are owing to my education. In this part of the country, the women milk the cows. I was brought up a farmer's daughter, and am now a farmer's wife, and am quite content, while my husband follows the plow, to attend to the milking and manage the dairy. E. N.

Nassagiveya, C. W.

In a farmer's family there should be no drones; and if there is more work out of doors than in, women should not object to milking cows, or otherwise lending a helping hand to whatever they can do. It only exercises the same muscles that are required in making lemon custards, or whipping Italian cream; and in no way will a young man be more impressed with a love of rural life, than to see his sisters taking an active part in the useful, as well as ornamental, work of an orderly, pleasant, attractive home.

East Groveland, Ohio.

COUSIN ALMA.

If favored with health, when man is actively engaged in their common good, woman should be willing to attend to her appropriate duties. If the barnyard is properly cleaned, it will neither injure her dress nor person in the least. It is no more beneath her dignity to milk, than to do the work afterward attending upon it, for surely it is not more laborious.

Ballston Centre, N. Y.

MRS. M. C. L.

LADIES, milk your own cows. It will improve your strength, increase your cash, improve your complexion, remove your pride, strengthen your digestion, and hopefully relieve your consciences.

Granville, Va.

MRS. M. L. B.

WOMAN'S sphere of action is in the domestic circle; there, she may be frugal and industrious, investing everything with cheerfulness, and dispensing happiness on all. This makes a country home charming and attractive. If the women folks are obliged to milk during haying and harvesting, I think it would be better for them to consider milking their duty; then, perhaps, by practice, they may become fitted for that capacity. But when the busy season comes on, were a woman asked to leave her proper place and milk the cows, could she do it without neglecting her household work? Surely, all who have experience know the numerous cares of a dairy. But suppose she makes the attempt, what are the effects? She goes out, with a fluttering heart, among a drove of cows, who, perhaps, at the sight of a strange personage, will instantly present an example of perfect confusion. Here is a proof—the cows show by their actions that it is no place for a woman. And in

milking, she finds the hands she once supposed so strong, are weak, very weak, indeed.

Now I ask, has not a woman a busy season? Methinks there are few, at this enlightened age, who are ignorant of it, especially as it has been pictured in such glowing colors by the "lords" of creation. Would it not be unreasonable, as well as ridiculous, in "house-cleaning" time, to ask the men folks to get supper, and do up the dishes, because we had a piece of work to be done, (for instance, to finish papering or painting,) which must be done by Saturday night, and we are almost "dead" from fatigue? We doubt not you would say, "The world was not made in a day."

Now, you must not work so late; then you will have time to do *your* milking—for this is not women folks' work, any more than it is man's work to get the supper and do up the dishes during *our* "busy season." Neither can do this without neglecting their separate duties; the men are needed out of doors, and the women are needed in the house. Yet, if a woman chooses to milk, then let her milk; but, from what experience I have had, I know there is seldom to be found a woman who thinks it her place to milk, though she may do it from necessity.

I am a farmer's daughter, and have had my experience in milking; and this I know, that the "busy season" comes quite often during the summer—and perhaps this is why I have so little charity. However, I shall never admit that it is women's place to "milk the cows during the busy season."

Onondaga Hill, N. Y.

T M. W.

In answer to the question, "Is it right," &c., allow me to say that I am most decidedly of the opinion it is *not*, and will briefly give my reasons for so thinking: 1. If the "busy season" calls a woman to the milk-yard, will she not do the milking for the whole year? Of course she will; for industrious farmers find very little cessation in the labors of the farm. 2. Admitting, for argument's sake, that there are "busy seasons" for out-door workers, is it not correspondingly so in-doors? Most certainly it is. Then, of course, there is no more reason for women milking one season of the year than another. 3. A woman is completely out of her sphere in the milk-yard, with its wild cows and other unruly cattle, and its nasty and unpleasant covering. In short, milking is *man's* work, and ought to be performed by him, at all seasons.

Clearville, C. W.

BUTTER MAKING.

MESSRS. EDITORS:—In writing upon a subject like this, upon which there are so many conflicting opinions, I shall do as I think duty requires, and that is, merely give my own. In the first place, I would remark that I think there are very few people who have been engaged in regular butter dairies, who do not understand the *main principles* of making good butter—that is, so far as attending to the milk and cream, and churning are concerned. But I consider there is a great amount of knowledge yet required by many, and by far too many, to teach them that when they have made a quantity of good butter, to stop the process in time to allow it to remain good until it can be taken to market and used. I think I hazard nothing in saying, that no person who ever

ate a particle of rancid (called by some strong or frowy) butter, ever called it good. Now, all this rancid butter that is so much used by people who buy from the markets, (for the very good reason that they are generally troubled to get any other,) was once sweet, and probably very nearly all of it would have been pronounced by good judges to be good butter. Now, I have discovered the means of keeping it good, or rather allowing it to remain good, any reasonable length of time—say five years.

Now for the process. Be neat and tidy about your milking; milk twice in twenty-four hours, at intervals of twelve hours; set in middling sized tin pans, not over two-thirds full, especially in warm weather; have your milk room large and airy, and on the side or corner of the house from whence comes the prevailing wind, or draft of air, in the latter part of the day; have it shaded with trees, if you can. When you set your milk, be careful to set your fresh milk over the previous mess, if it be warm weather, (on the contrary if cool,) as the warmth of the new mess will often affect the old. Skim as soon as the milk becomes loppered, or thick. If the cream is not to be churned immediately, set it in pans in a cool place; if it is to stand more than one day, stir it gently each day a little. Churn it at a temperature of about 55° Fah., moderately, so that it will come to butter in from thirty to forty minutes. If it comes tolerably hard, churn it thoroughly after it comes, as it will take less time to work it; if it comes too soft to work conveniently, pour on cold water, and set it in a cool place until it is right to work. I have no objection to your washing it, if you can get out the buttermilk sooner, easier or cleaner by so doing—for if the water does the butter no good, it will be sure to do it no harm, and in warm weather it generally expedites the process. Now mix in evenly, and as quickly as possible, as much fine salt as will render it palatable for table butter, and no more (probably a trifle less) than one ounce to the pound. Then immediately pack it in a wooden tub or firkin.

I fancy I hear many, who have made butter for years, cry out, "Why, you have not told us to *work it over*." Very true, and I now tell you *not* to "work it over," for this "working over" is the sole cause of ninety-nine hundredths of all this rancid butter in the markets. Take notice: I wish it distinctly understood, that in no case should butter be *worked a particle after the salt is dissolved*, (as the term "*worked over*" is generally understood,) and all the working that is done must be done before the salt is introduced, except barely sufficient to work the salt in evenly. This, to many, is probably a new idea, so I suppose I cannot reasonably get off without giving the reasons for not working it. There have been various ways tried to preserve butter with little or no salt. This is truly an age of invention, and I would not risk myself so far as to say that it cannot be prevented from becoming rancid by any process other than salting. This much I can say: it has never been done with any advantage to mankind; and further, I know of no reason why butter is not better, under any circumstances, with a moderate quantity of salt. Now, I am not accusing any person of not salting their butter; but the trouble is, they allow it to dissolve, and after it becomes brine, or pickle, they work it out again, for pickle is full as easy to work out of butter as buttermilk or water;

and here I would observe, that although pickle may be easily worked out of butter, it is impossible to work any in. Now, when you have worked this pickle out, the saving power is gone for ever. "Why, no!" many are ready to say, "after we work our butter over we generally taste it, and it is true we find it quite too fresh to be palatable for table butter, but we then invariably add another dose of salt, and then pack down." Just so; but look here, my friends—your first dose of salt has absorbed all the moisture in the butter, and it is now like any other oil, and will not dissolve any more salt; and dry salt in its granular state is not a preservative of any thing, any more than so many grains of dry sand—and I would nearly as soon have my table butter saturated with the sand as with the salt, provided the salt is not dissolved. The finding of so much dry salt in butter usually sold in the markets, is the reason why there have been so many ways tried to save butter without it. Pickle, or brine, is a *certain preservative* of butter, if left evenly distributed through it, in the manner it will be by the above process. As each particle or globule of brine will be in the position in which the salt was deposited, of course the finer the salt the better, as it will bring more butter in contact with the brine. The finer the salt, the *less time* should be occupied in working it in, as it will commence dissolving immediately. Now, if the butter is worked after the salt is fairly dissolved, these small globules of brine are displaced, and brought in contact with each other. The moment two or more come together they form one larger, and so on, and as often as they come to the outside they run off. Many, mistaking this for buttermilk, and having, very erroneously, got the idea that butter can be kept from becoming rancid, even without salt, provided that every particle of the buttermilk is worked out, they keep on working until they have deprived themselves of the only possible means of ever keeping the butter sweet. This butter has now become an oil, almost as perfectly as though it had been rendered so by heat; and I shall find few that will dispute me when I say, that no kind of oil (except some essential oils) can long be kept from becoming rancid.

I think there is nothing so good to pack butter in as wooden vessels. Many have tried stone crocks, but they are perfect conductors of heat and cold, whereas wood is not. Tubs with covers are the most convenient, on account of inspecting the butter by buyers; but when a dairyman once gets the credit of his dairy well established, the best way is to put it in firkins and head it up perfectly tight.

I think it will pay every butter dairyman well, who has eight or ten cows, to procure a press and make cheese through the hot weather. I have found it so.

South Rutland, Jefferson Co., N. Y. H. H.

BEETS AND CARROTS.

MESSRS. EDITORS:—This article is a little out of season, but I trust it will do no harm. I have noticed many articles of late on the subject of beets and carrots—the manner of raising, their value for feeding, &c.—but still I judge, from the many inquiries made, that this branch of husbandry is not very well understood.

Analyses show these esculents to be a little inferior in nutriment to potatoes and apples, and much less so, pound for pound, than hay, but a little more

so than turnips. Still, we cannot always tell precisely the value of an article for food by its analysis. The unnutritious portion may act favorably, or unfavorably, upon the digestive organs. An occasional change of food is desirable, for man and beast. The substance of the body is made up of many simple substances, and scarcely any article of food supplies the whole in the proportions which the body needs them. I have heard persons condemn beets, because, as they say, they are not worth their weight in hay; and I have heard others say that carrots were worth more per bushel for horses than oats. Now, I have raised carrots (and generally beets, too) for feed, nearly every year for the past twenty years, and my experience is that no crops can be raised more sure to pay well on the investment. They should, of course, be fed on the farm.

Beets are liable to be injured early by insects—but much less so than turnips—and if not totally destroyed by them, I have never known them to fail of a fair crop. Carrot seed is a little liable to fail, from causes which are not well understood, but I am satisfied that it is not always the fault of the seed; they are, however, seldom or never injured by insects. They will *both* grow in almost any soil not too wet, but thrive best in a deep, dry loam. There is less danger of sowing them too thick than many imagine, though they may be so thick as to diminish the yield; but analysis and experiment show small ones to be worth more by weight than large ones.

The greatest enemies to these roots are weeds; and the great secret of success in raising them, is to keep the weeds down. To do this economically, they should be sown at a time when they will be likely to come up quickly, and, as soon as they appear, the ground should be stirred about them to keep the weeds back. The *rationale* of this is, that different plants require different degrees of heat for vegetation; most grasses and weeds will vegetate at a lower temperature than beets or carrots—consequently, they are very apt to get the start, if the temperature is too low for the beets and carrots. Then, there is a great difference in plants as to their hardiness and tenacity of life, and, if planted together, the strongest and most hardy will run out the weakest. Every one knows that buckwheat will exterminate many weaker plants. Beets and carrots, (especially the latter,) on their first appearance, are very feeble, and, if not protected from their more hardy neighbors, will surely be run out by them, or so enfeebled as to be worthless; but give them ten or fifteen days the start of the weeds, and they will take care of themselves as well as corn and potatoes. To raise these roots economically, they should be sown at a proper time, on a deep, well pulverized soil, in straight, true drills, so that, on their first appearance, the hoe can be passed rapidly, close to the rows; what few weeds are then left in the rows can do little harm, and may be pulled out, with little trouble, later in the season.

The great difficulty is, that farmers, in their first experiments, expect too much from these roots. My own opinion is, that they are very healthy and economical food for cattle, horses and sheep, but that it will not do to rely upon them for fattening, or even for sustenance. They should be fed with hay, stalks or straw, and not too many at a time, especially at first. If any one expects them to be as valuable, per weight, as hay or grain, he is very foolish, as he may know by experiment that from 600 to 1,600

bushels of carrots, and about two-thirds as many beets, may be raised on an acre. They will better compare with pumpkins in nutriment, but have the advantage of a greater yield, and are longer keeping.

With turnips, I have had less experience. I think them economical, but they are less sure, less palatable, and less productive, and, for cows, objectionable on account of the flavor they give to the milk and butter—but they are more hardy, and require less care. Cattle should never be fed enough of these roots to destroy their appetite for hay or corn stalks; if they are, you may expect them to grow poor. My breeding cows were fed less than a peck each, per day, the past winter, with hay once and stalks once, per day, and on the 15th of March were fair beef; but, like most of my neighbors, I did not calculate for so late a spring, and they lost flesh in April and May, for want of their full feed. AGRICOLA.

Gorham, N. Y.

SOWING WHEAT AFTER BARLEY.

MESSRS. EDITORS:—I understand a great quantity of barley is sown west of the Genesee River this season, and suppose many intend sowing the barley ground with wheat next fall, as the farmers in general did in all the counties east of them after the advent of the wheat midge, hoping that, from the two crops, they might get pay for their labor. But, in my opinion, they were only making bad worse. The true way would be to seed heavily with clover along with the barley, and then give the land rest for two or more years. There is not a farmer in the country, who, if his horses or oxen were so exhausted by hard work that they could not do a day's work in ten hours, would be so cruel as to make them work thirteen hours to make up, and that, too, day after day. No; they would give them rest, and feed them well, so that, after a time, they would be enabled to perform their usual labor. Now, if farmers would do the same by their land as I know they would do by their horses and oxen—or rather if they had done so by their land—no county in the State would have been obliged to give up the raising of wheat. But the truth is, the land was worked more and longer without food than it could endure, and at last it gave out producing the great staple of our country. Every farmer knows that if he keeps his cattle, sheep and horses poor, they become overrun with lice, and so it is with the human species. I have always observed that *animals* and *vegetables* need the same kind of care—that is, they both require to be *kept clean and fed well*—and then they will both look well, and both do all that can be expected of them; and I have no doubt that, if the land had been properly fed, and not overworked, the cry of weevil, or rather midge, would not have been so long, or so loud, at least. This is my candid opinion. Now, to sow wheat after spring crops, is making matters still worse. The business of the farmer ought to be, to improve the condition of his land, by rest and good food; and the land only asks the refuse and filth of his farm and yards for food. And if every farmer would only prefer a load of good manure to a dollar, and would give the land more rest, with a good covering of grass when resting, my word for it, you would soon see a different state of farming. Far better feed *ten* acres to raise three hundred bushels of wheat, than to starve *thirty* until they can only raise the same amount. Now,

this can be done. *I do it*; and I know what I can do, *others* can, if they try. But you will hear many say, "My land is rich enough—I get plenty of straw, but the weevil takes the wheat." But the land is like the starved sheep and cattle; the skin and bones are there, but the lice, together with hunger, have taken the flesh—so the straw is left on the land, but the lice have taken the wheat. Farmers, drain your land, and put all your manure on one-fourth the land you formerly did, and, if your land is a natural wheat soil, you will have paying crops of wheat. Give the remaining three-fourths of the land rest; stock it lightly with cattle or sheep, and it will make them fat, and the land will be getting fat at the same time. *I know it will*, and there is no arguing against experience, if the experiments are thoroughly made.

Letting timothy get ripe is a great scourge to the land, and I would rather have good straw, for either sheep or cattle, than have timothy cut, when it is seeded on mowing land. When the grass is cut while green, I think it does not impoverish the land much. But farmers must have hay, unless they feed largely on grain. I am convinced that I can keep any kind of stock better, and far more profitably, with part grain and part hay, than with either separately. Such is my experience, after many years of trial. It is over thirty years since I commenced feeding grain to all my stock during the winter, or oil-cake, which is as good. In that way I feed my land—and it has been *very grateful*, for it has repaid me bountifully.

Near Geneva, N. Y.

JOHN JOHNSTON.

THE ADVANTAGES OF SYSTEM IN FARMING.

SYSTEM seems to have been the great aim of the Creator. Eyes that see, and minds that reason, discover and admire it in the heavens above us; minds that philosophise, discern a geological *system* below us; the school-boy learns the system and harmony of bodies, animate and inanimate, around us. The system of the upper world is such, that the deviation of a planet a single hair, in each turn of its accustomed round, would, long ere this, have created the wildest disorder and the most lamentable results—a collision of worlds would have been the fearful consequence. The creeping babe loves order; see the system as he arranges his marbles in squares. God gave the wild bird an instinctive system, with which to build her nest—the beaver to build his dam—and the fox to dig his hole. Why, then, shall we not wonder to see the farmer so loose and unsystematic in his *modus operandi*? It is to be deeply regretted that many of my brother farmers convert the enchanting face of a beautiful mound—that which *might* be an earthly paradise—into an Egyptian ruin, as the serpent of the Garden of Eden converted that blissful garden into a scene of misery.

Farmers, let me address you with all the power of a sincere and earnest tongue. Do you not all see wherein you can improve your system (or rather *want* of system) in farming? Is it not policy for you to exercise those God given qualities of taste in the arrangement of your buildings, the grading, seeding and cleanliness of yards, the building of fences, &c. &c.? Do you not wish to delight the eyes of the passer by? When we see a farm house surrounded by tasteful barns and other buildings, we can but consider them typical of the general character of the proprietor.

Agriculture is as old as the oldest time. The

highest powers of created intellect have given us the jewels of experience, handed down to us by the long arm of the past; leaves of antiquity have been lain before our eyes by the chronicler. Shall we not heed when they counsel? Shall we not emulate their example? Shall this reging age of artistic progress, and scientific research, see the cloak of apathy upon the shoulders of the agriculturist? I will answer affirmatively, unless his duties and labors become systemized. A general system of agriculture is among the greatest wants of this era. Agriculture is a precocious science, with gray locks surrounding a boy's intellect. There is a wonderful development locked up in this science—that development accomplished, and we shall see agriculture reduced to a general system, extending at least over a tract of country consisting of a homogeneous soil.

There are at present nearly as many different methods of farming as there are farmers. Now, no one will deny that general principles, deduced from facts, should be regarded and adopted. No one will dispute the assertion that every plant contains the four elements—hydrogen, nitrogen, oxygen and carbon—and that unless a certain soil possesses all these attributes, it will not generate grains. This leads me to suggest the policy, and vindicate the propriety, of establishing more Agricultural Schools, thus giving agriculture the merit it has so long deserved—a systematic development. Our sons should be thorough masters of agricultural chemistry. Then we should not see—as we now often do—a sickly field of barley, striving vainly to mature on a heavy bed of clay, where the hand of ignorance strewed it. We should not see so many oats weighing twenty pounds to the bushel. We should not see so many potatoes resembling marbles and puff balls. Give us a scientific system, and these difficulties will disappear. The traveler will then be able to feast his faculty of taste upon the loveliness of nature, beaming forth from among the artistic polishings of the systematic farmer.

A want of system is symbolical of ignorance. Many of our loveliest vales and grandest table-lands are converted into African deserts. What a shame—yea, what a sin—to destroy the only means by which the inhabitants of the earth are kept in organic existence. The soil of this earth may be considered the great savior which is served out to eight hundred millions of persons; and how amply would the platter be filled—how much more beautifully would life be enhanced—if each tiller would bring his wisdom into a systematic focus.

I have not space to particularize, but I do claim indulgence while I expose some few faults sequent upon a want of system. Brutes, like ourselves, are subject to frigid intensity, and when the mercury shrinks to thirty degrees below zero their suffering must be excruciating, when kept in some of the old, rickety barns, which have a ventilator to every plank, board or shingle, standing, perhaps, alone, on a chilly, bleak elevation. The nicest skill of the mechanic must be employed in building and arranging habitations for our comfort, while the brute must be given the very generous opportunity of a *hardening process*. Could the brutes speak, they would call for a system in the arrangement of their buildings, so as to form a complete enclosure, bidding defiance to the raging winds of our latitude; they would ask you to double board your barns, to line the floors tightly, &c.

The indubitable fact that your cattle will require much less food, ought to have a strong pecuniary influence. If you have a heart that throbs for animal suffering, then let a moral prompting incite you to the means of prevention. Finally, if you are a man, and desire to do right in every action, remember that the best way to do all things, is the systematic way.

GEORGE W. CAMPBELL.

Piackney, Lewis Co., N. Y.

FARM ACCOUNTS.

MESSRS. EDITORS:—Nine years ago I commenced farming for myself, and from the first resolved to know just how much I should gain or lose by the business. Friends predicted that I would soon get tired of keeping an account with my farm, and abandon the attempt; but I have persevered, for nine years, and do not now feel inclined to change for the ordinary loose way in which farmers conduct their operations. Being unacquainted with book-keeping, I adopted a plan of my own, which I have improved from year to year, in accordance with the suggestions of experience.

In keeping an accurate farm account, we first want to ascertain what is justly chargeable to the farm. As a general rule, it should be charged with all those expenses that are caused, directly or indirectly, by the farm—the interest on its cost, the depreciation in its value, (if any,) the real estate taxes, the interest on and wear of implements, the seed, the fertilizers purchased, the labor of men and teams, always including board, &c. The farm should be credited with the value of all its products, pasturage included.

I have not attempted to keep an account with my kitchen garden, as that, for obvious reasons, would be almost impossible. I think the best way to manage that, is to credit the farm the amount for which your house and garden would probably rent.

At the beginning of every year, the farmer should take an inventory of his stock and farming utensils, and enter it on his farm-book at the commencement of the year's account. When balancing his account at the close of the year, he should charge the farm the interest on the cost of utensils, the cost of repairs, and the wear of utensils. The amount to be charged for the wear of implements may be arrived at with sufficient accuracy in this way: let him estimate the number of years any implement will probably last, with the wear to which it will be likely to be exposed on his farm, and assess a just proportion upon each year. For example, supposing a plow cost eight dollars, and will last four years—the annual charge for wear would be two dollars. The interest on the portion unpaid, and the expense for repairs, should likewise be added.

To keep a debit and credit account with the farm, two account books will suffice—one, a day-book, or journal, in which should be entered, every evening, the nature and value of the day's labor, thus:

May 1st.—To 1 day's work, self, sowing oats, (six acres,) on lot No. 4, containing ten acres,	\$1.00
“ “ 1 day's work, A, dragging in oats,	75
“ “ 1 day's work, team,	1.00
“ “ 12 bushels seed oats, at 50 cents per bushel,	6.00

At the end of the week, copy the value of the week's labor, seed, &c., in your weekly book, or ledger. The products may be credited when harvested, at the market value at home.

At the end of the year, you have a plain record of your operations before you, from which you can collate such tables as you wish. You can know the profit or loss of the whole farm, and also of every crop; you can know the cost of every bushel of grain, fruit and vegetables—the value thereof, and the resulting profit or loss.

But the intelligent agriculturist will not stop here. He will wish to make experiments, and keep a careful record of them, and all the attending circumstances and results. In this way he may be acquiring knowledge from year to year, which, if he is liberal, he will be ready to impart to others, through the agricultural journals. The judicious farmer will keep other accounts besides these, which I will not stop to indicate.

So you perceive, Messrs. Editors, that the farmer has opportunity, in his own vocation, for the vigorous exercise of his intellect, which he will find a certain antidote to that stupidity, that rust of the mind, to which farmers, as a class, are so much exposed. It keeps him in the practice of writing and composing, both of which farmers too generally neglect. If young men, who have received a liberal education, and have chosen for their vocation the noble and honorable one of cultivating the soil, would apply their intellect to their business, I am certain they would find it much more attractive, and better calculated to develop the spiritual man—which is the great end of life—than is generally conceded.

Near Palmyra, N. Y.

P. C. REYNOLDS.

BENEFITS OF AGRICULTURAL FAIRS.

MESSRS. EDITORS:—No fact is more apparent to the reflecting mind, than the immense benefits Agricultural Fairs have contributed to our material prosperity. They have contributed more to our vigorous growth as a nation, than all the gold California can pour into our country for ages. They have awakened a spirit of inquiry in the breasts of thousands, who have elaborated and made known their experience to the world—through the Agricultural Press—contributing their experiments to the general stock of information (which at best is made up of atoms) garnered together,—a rich legacy of facts, from which the principles of *Truth* shall be deduced by the hand of the future historian. All this has been done quietly. The silent step of agricultural progress has not been noted by the world—as it should have been—for the simple reason that it took time to nurture in man the high obligation he owed to his Maker, his country and himself, to so use and develop that which was intrusted to his hand, that it might be improved, and the true design of our Creator carried out.

And what is an Agricultural Fair? Is it a place where the most superior specimens of agricultural products are exhibited to the view of the visitors? Yes. What then? is that all the object, the aim, the end, to be accomplished? If so, let them go by the board. But a higher object is to be accomplished—has been, and will continue to be—the interchange of thought among those who have produced the articles on exhibition. It is in this light that Agricultural Fairs are accomplishing the grand results which will continue to rank us as a practical farming and progressive people. It is not enough that we should see the superior crop of grain, &c.,

but we should have the man with us, that we may know by what process he produced it, so that his co-laborers may know and realize the facts which are brought before them in its most practical form. It is not enough that we see fat cattle, but that we see the husbandman who produced them, that our less fortunate husbandmen may, by inquiry and observation, be aroused to the necessity of doing likewise—so that the object of the Fair may be the means of perpetuating the progressive spirit of political and rural economy.

Fairs, rightly conducted, are great stimulants to good and thorough cultivation of the soil. Nothing is so well calculated to create as healthy a feeling, or develop so thoroughly the true dignity of Nature's noblemen, as this theatre, where all may meet in the exhibition of the arts of peace and usefulness: where those who have failed to realize their fond anticipations from the exhibition of their products, rejoice in the success of their neighbors. It is this feature which endears them to all good men who know the wants of our farmers, and who have, from the earliest stage of their existence, stood by them, believing they were destined to accomplish as much good in their sphere of usefulness, as Education has in hers.

The benefits accruing from Agricultural Fairs are of a two-fold nature, and apparent to all. Where the Fairs are made an object of attraction, you will find the greatest amount of thriftiness and prosperity prevailing in the sections which contribute to, and take an interest in, their prosperity. The benefits flowing from them are not to be estimated in a pecuniary sense. There are benefits conferred on the agricultural interest through the influence of this institution, which command our most hearty admiration and respect for those public benefactors of our race who have nurtured and expanded this germ, so that agriculture should take once more her rank as one of the most honorable pursuits of man.

Williamsburgh, N. Y.

T. C. W.

A FEW WORDS ABOUT FENCES.

MESSRS. EDITORS:—When this part of the country was new, we had plenty of fencing timber, such as white oak, red oak, white ash, black ash, white elm, red elm, basswood, and a very little whitewood and butternut. Our fences were uniformly made of rails, into what is called a "worm fence." This is made by putting three or more stakes in a straight line where the fence is to be made—one at each end, and one in the centre. If the ground is level, these stakes can all be seen from either end of the line. In order to make a straight fence, the man who lays the bottom rail uses a fence gauge, viz.—a stake six or seven feet long, the size of a good handspike, sharpened at the lower end, with a hole one and a quarter inches in diameter—and a stick three feet long, to give the fence a crook, or angle, of six feet. Beginning at one end, the stake is stuck in the ground to range with the stakes above mentioned; then put each corner of the fence, at the end of the three feet stick, or gauge, to the right or left. The fence is laid from five to eight rails high, and staked and ridged, or not, according to circumstances. Since our timber has been cleared off, fences are very liable to blow down, unless they are well staked and capped.

When farmers began to get their farms cleared up, they put up board fences in front, and around their

houses, and occasionally pickets around their gardens.

At length the post and rail fence was introduced. This was considered a great saving of timber, and was made by cutting and splitting oak posts, six and a half feet long, and making five holes with a post-axe, and setting each post about two feet in the ground, leaving about four and a half feet above. The rails were split flatwise, sharpened, and driven together in each post. This kind of fence did well for a few years, and took up but a small space of ground; but it was much exposed to the wind, and the posts soon rotted off at the surface of the ground, and it has been out of use for quite a number of years.

At the present time there is a large amount of board fence made. White oak posts are used. Cedar and chestnut are brought from a distance, and used sometimes. All kinds of boards are used—pine, hemlock, oak, beach, basswood and maple.

I have made a great deal of fence, of posts, boards and stones, as follows: I cut my posts six feet long, split them when the timber is good, and saw them when I cannot split. I set my posts seven feet apart, build up a wall from eighteen to twenty-four inches high, and put on three boards, from five to nine inches wide, about five or seven inches apart. I then bank up with dirt to the bottom of the lower board, and seed it well with any kind of grass seed. This makes a very good fence, takes up but little ground, and is not easily blown down.

In building fences now, I wholly dispense with stones, and make my bank with dirt, and raise it a height to suit my boards. I usually put on three boards, about six inches wide. The banking should be well done, and carefully seeded. I consider this the cheapest fence that can be built with timber. The posts should be cut six feet long, and split small, when the timber runs free. When the timber is on the ground, three men can put up thirty rods, and bank it, in two days.

NATHANIEL SMITH.

SUBSOIL PLOWING.

MESSEES. EDITORS:—The farmer who thinks of subsoiling, should study well the nature of his soil. Mr. A., who owns a farm with a surface soil about six or eight inches deep, underlaid with a hard, compact clay subsoil, impenetrable alike to the roots of plants or the refreshing shower, finds, upon subsoiling a part of his fields, that upon the portion thus treated his crops not only stand the drouth better, but are not affected by water standing upon the surface. He proclaims this to his neighbors, or heralds it through the columns of the Agricultural Press; and Mr. B., who owns a farm with a deep gravelly or sandy soil, without considering that nature has already subsoiled his land, immediately orders a plow from Boston, or some other distant place, at a great expense, and, after trying a portion of his fields, and finding no perceptible difference in the crop upon that which is subsoiled and that which is not, he proclaims the subsoil plow a humbug,—when a few moments' reflection would have taught him that Nature had already done more for his land than his neighbor could do for his by years of subsoiling.

A shallow surface soil, with a hard, compact subsoil, will derive much benefit from subsoil plowing. We cannot plow such lands deeply, without throwing the subsoil to the surface, which injures the land, especially for spring crops. But by using the subsoil

plow, the earth is mellowed to a greater depth, and the subsoil remains in the bottom of the furrow, giving the roots an opportunity to penetrate more deeply into the earth in search of moisture,—consequently the crop will not suffer so much from drouth; and in a few years this soil will become enriched from the gases absorbed from the atmosphere, decayed roots, &c., and the surface water in filtering through it will be robbed of its ammonia, when it can be turned to the surface with much benefit.

The subsoil plow here spoken of is the real subsoil plow, not the so-called Michigan subsoil plow. The genuine subsoil plow is used by following in the furrow of the common plow, loosening the earth to a greater depth, and leaving the subsoil in the bottom of the furrow, while the Michigan plow throws the subsoil to the surface.

C. C. WILSON.

Newfane, Niagara Co., N. Y.

FARMING A SCIENCE.

MESSEES. EDITORS:—Why need we compare the tidy, skillful, neat and industrious farmer, with the loose, thoughtless, slack and careless one, who takes no pride whatever in keeping up his fences, and keeping their corners free from rubbish, in having things snug about the barn, (his wife, of course, manages the house,) and, in short, wholly void of forethought in all his operations? Surely, there is no comparison between these two farmers; they differ as widely as the untaught Indian and the man who works on principles based upon science and practical observation.

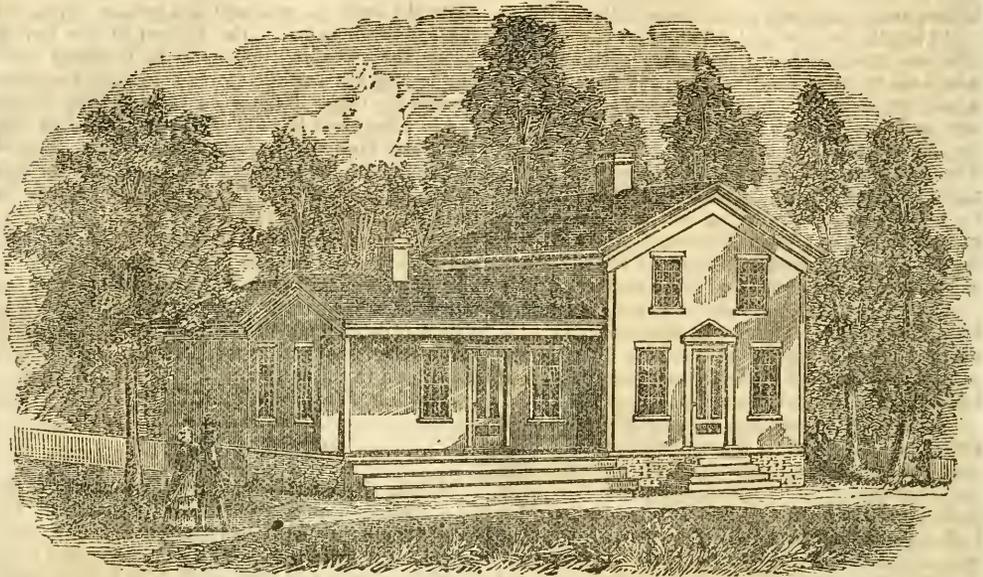
It is an easy matter to distinguish these two farmers apart, and in passing their farms the contrast comes very forcibly upon us. On the one hand, we see a neat and elegant cottage, with its green blinds, shaded walks, good fence, with a garden near the house, and in immediate proximity to the kitchen. On the other hand, a lone, dilapidated, wood-colored house, standing alone, exposed to the severity of the cold winter winds and the scorching rays of the summer's sun, unprotected by a few friendly shade trees; all this for the want of a little more care and economy—a lack of industry, a want of forethought, an uncultivated and unrefined intellect, gross and unnatural tastes—which are a detriment to all successful farming operations, remedied only by a theoretical, practical, and straight-forward course, with a determination to secure his crop by a good fence, and tend it by the hand of industry, when Nature will not fail to reward his labors by an abundant harvest.

W. N. C.

CULTIVATION OF TURNIPS.—The flat turnip is much esteemed for table use. The time for sowing is during the present month. Large crops have been raised on newly-cleared land, which was *too rooty* to be plowed, by raking and burning it over, and then harrowing it before sowing the seed. Where the ground can be cultivated properly, it should be freshly broken and harrowed before sowing. Sow in cloudy, damp weather—before a moderate rain, if possible. A top dressing of ashes, sown broadcast, will be very beneficial to the plants. If troubled by the fly, sow some flour of brimstone on the plants while wet with dew. Keep the weeds down, and the ground loose with a hoe, if you want an extra yield.

Laceyville, Ohio.

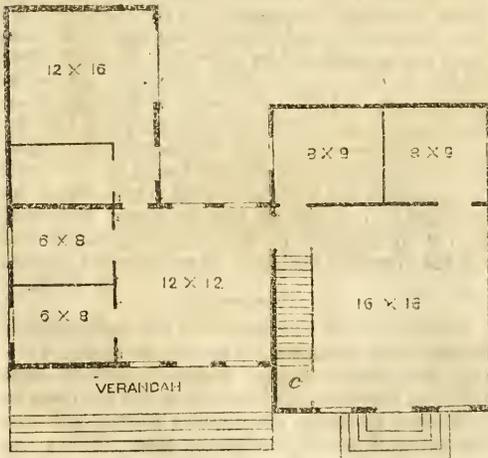
J. G. SAMPSON.



DESIGN FOR A FARM HOUSE.

THE above excellent plan of a house, we received from G. N. CHASE, JR., of Wiscoy, N. Y. It commends itself to our readers for its simplicity and cheapness, as well as for its convenience and beauty. There is a home-like look about it, that bespeaks the comfort of its occupant, and which is not seen about the "gingerbread" ornamented houses for which there has been such a rage for the past two years, and which, we are happy to say, is gradually subsiding.

The interior arrangement is as follows: In the main body of the house, on the first floor, is a large par-



GROUND PLAN.

lor, lighted by three large windows. Back of the parlor are two bed-rooms, each eight feet by nine. On the left of the parlor, at the front, is a closet. *c*. The stairway is also on the left of the parlor. The entrance to the stairs is towards the back of the house. A door communicates with the kitchen,

which is twelve feet square. On the left side are two bed-rooms, each six feet by eight. Back of the kitchen is a passage leading to the wood-shed; on the left of the passage is a large pantry. The wood-shed is twelve by sixteen feet. It may be used as a kitchen, if desired; and the kitchen in the wing can be used as a sitting or dining room.

We think the house could be made still more convenient, by constructing a hall in the main building, where the stairway is, having the front door near where the left front window is situated. The hall should be at least eight feet wide. This would still leave a large parlor.

The chamber floor is to be divided into one large-chamber, the size of the parlor, and two smaller ones, corresponding with those below; or it can be arranged to suit the builder.

The house is to be constructed of wood or brick, as suits the builder's wishes. The lower rooms should be nine feet high; the upper chambers seven feet. The interior finish should be plain, to correspond with the general expression of the house. Although no window blinds are given in the engraving, yet we think there is nothing adds more to the appearance of a house. They give it a look of comfort that is always pleasing to see. A house without them, always seems to us to be staring at something; and in winter it has a cold appearance. Inside blinds, to be sure, do away with this appearance somewhat, and are, in our opinion, much more convenient than outside ones; but they are more expensive than the others, and therefore are seldom seen in our country houses. Yet, if there are inside blinds, there is no need of curtains, and in the end, perhaps, they are the cheaper.

A house like the above should be situated on a level piece of ground, and well surrounded with trees and shrubs, which will not only add greatly to the appearance of the house, but will serve as a protection from severe winds, and make it much more pleasant in both winter and summer.



SHORT-HORN BULL, DON.

Don (12,197), white; bred by the late N. J. HICORN, of New York; calved July 31st, 1852. By Lord of Eryholme (12,205); dam, Apricot, by Third Duke of York (10,166); E. d., Annie, by Fourth Duke of Northumberland (8,940); E. E. d., Ann, by Short-hill (2,621); E. E. S. d., Acorn, by Belvidere (1,705). Don is now the property of the Illinois Breeding Association, at Summit, Illinois.



Horticultural Department.

THE PLUM CURCULIO.

THE plum weevil, or curculio, (*Rhynchænus nenuphar*), is a small, dark brown beetle, scarcely one-fifth of an inch in length, and of a nature so shy and retiring that he is seldom seen, unless searched for purposely. He is, however, a most mischievous little scamp, and has been the subject of more newspaper articles than any other insect injurious to fruit trees. He is the uncompromising enemy of all smooth stone fruits, and, in many sections of the country, has caused the cultivation of the plum to be entirely abandoned.

The habits of the curculio are pretty well known. It deposits its eggs in the plum shortly after the small cap formed by the blossom falls off, making a semi-circular or crescent-shaped mark on the side of the young fruit. In four or five days after the egg is laid, a small bluish line, near the skin, may be seen extending from the incision, which affords conclusive evidence that the egg is hatched. The larva, or grub, consumes the juices of the plum, and causes it to shrivel and fall from the tree. Almost immediately after the fruit has fallen, the grub leaves the plum and burrows into the ground, where it remains in the pupa form till the next spring, when it undergoes its last transformation, and comes out of the ground ready to ascend the tree and commence its work of destruction by the propagation of its species. The accompanying engravings will illustrate these trans-



FIG. 1.



FIG. 2.



FIG. 3.



FIG. 4.

formations. Fig. 1 represents the larva, or worm, as found in the fruit when it falls; fig. 2, the pupa, or form in which it lives in the ground; fig. 3, its appearance in the perfect or beetle state; fig. 4, its assumed form when shaken from the tree. The annexed cut shows the crescent-shaped mark on a stung plum, magnified to about twice its usual size. Our engraver has placed a curculio on the plum, which, we are free to confess, is not a very accurate likeness. His antennæ are usually bent between the fore legs, and not lifted up, as in the engraving.

No certain remedy against the injurious attacks of the curculio has yet been discovered. Good crops of plums, apricots, nectarines, and other smooth stone

fruit, however, can be obtained by the diligent use of processes founded on the well known habits of the "Grand Turk." The most efficacious, is that known as "jarring the tree." As soon as the insects make their appearance, or when the plums are about the size of peas, spread white cotton sheets under the tree, and shake off the curculio. The plan usually recommended, is to strike the end of a limb that has been sawed off with a mallet or an axe, or to rap the branches with a long pole having a bumper at the end, such as an old India rubber overshoe, to prevent injury to the bark. The insects will drop from the tree, and should be summarily disposed of by pinching them gently with the thumb and finger. If the cotton sheeting is spread out and tacked to a light frame, six feet wide by twelve long, and doubling in the middle like the leaves of a book, it will be much more convenient. Two such frames, one on each side of the stem, will be large enough for a good sized tree. The sheets can be easily doubled together, and the curculios poured into a pail of hot water. This process must be repeated every morning, as long as any curculios are found on the trees. A sharp rap is requisite to jar them all off.

Another method, nearly if not quite as efficacious, and requiring much less labor, is to dig up the soil around the trees in the spring, and tread it smooth and hard, and sweep up all the stung fruit as soon as it falls from the tree. It is not too late to adopt this method the present season, and our object in writing this article is to urge our readers to give it a trial. True, it will not save the fruit this year; but if the plums are picked up as soon as they fall, the larvæ will not get into the ground, and next year there will be but few curculios to molest the fruit. Messrs. ELLWANGER & BARRY, of this city, we believe originated this method, or at least adopt it in their extensive nurseries with great success. All their plum trees last year were loaded with fruit. We recollect especially a *Bradshaw* tree that was so completely covered with large and beautiful plums as to be the admiration of all who saw it.

The efficaciousness of this process is corroborated by the well known fact that where hogs and poultry have free access to the plum trees, and eat the plums as soon as they drop, the curculio is not troublesome. It has also been observed, that where trees are surrounded with a close brick or stone pavement, and where, consequently, the larvæ cannot burrow into the ground, the fruit is not injuriously attacked by the curculio. Mr. LONGWORTH, of Cincinnati, has twenty-seven trees so situated, and which have borne crops for the last twenty-five years, while trees in other parts of his grounds, where the soil is cultivated, have only borne two crops in the same period.

PRESERVING FRUITS WITHOUT SUGAR.

ALL the successful methods of preserving fruit without sugar, though perhaps empirically discovered, are based on principles which it cannot but be interesting and useful to understand. A few of these we will briefly state.

As a general rule, no substance can ferment or decay without the presence of air and moisture, and a temperature above the freezing, and below the boiling, point of water.

Substances which contain no nitrogen, such as pure sugar, starch, gum, oil, &c., will not ferment or decay.

All nitrogenous compounds, under favorable circumstances, not only undergo rapid fermentation themselves, but have the power of disturbing the elements of non-nitrogenous bodies with which they are in contact.

A compact and insoluble nitrogenous substance is not as liable to ferment, or to induce fermentation in other bodies, as one which is porous and soluble.

Heat renders many nitrogenous substances more compact, and otherwise retards fermentation. For instance, fresh milk soon curdles in a warm room; its nitrogenous ingredient, caseine, or curd, absorbs oxygen from the air and ferments, and in this state rapidly converts the sugar of milk into lactic acid. This acid neutralizes the soda which holds the caseine in solution, and the milk becomes curdled. Now, it is well known that if milk is boiled, it will keep sweet much longer. In fact, if milk is boiled every day, it may be kept sweet for an indefinite period.

All fruits contain a nitrogenous substance, generally albumen (the white of egg) or gluten. In a perfect fruit, this is separated from the sugar, starch, gum, and other non-fermenting ingredients of the fruit, by cellular matter. In compact fruits, too, such as the apple and pear, the skin protects the albumen from the atmosphere to some extent, and it is, therefore, but slowly decomposed. Crush the apple, and the albumen, being brought in direct contact with the atmosphere and with the sugar, rapidly absorbs oxygen, and induces decomposition. The porous fruits, such as the strawberry and raspberry, have little cellular matter or skin to protect the albumen from the air, and hence, though the fruit remains intact, decomposition soon sets in. In the former case, Nature partially excludes the air, and thus the preservation of the fruit is easy; in the latter, the air must be excluded by artificial means, and hence the preservation of the fruit is attended with considerable difficulty.

The oxygen of the air is undoubtedly the exciting cause of decomposition; but it would appear that, under certain circumstances, when the albuminous matter of the fruit has commenced to decay, the exclusion of atmospheric air does not completely arrest it—probably the water of the fruit is decomposed, and thus furnishes oxygen. To preserve fruit, therefore, we must not only exclude atmospheric air, but must arrest decomposition before the fruit is sealed up.

The only practical way of doing this, is by the application of heat. This fact has been generally overlooked by writers on this subject. COUVERCHEL made numerous experiments on the preservation of fruits *in vacuo* and in nitrogen, and the results led him to the conclusion that "the *taste* of fruits cannot, under any circumstances, be preserved." MULDER, another eminent chemist, is of the same opinion, and says: "Apples, sent from Holland to India, packed in vessels free of air, became perfectly tasteless, although not a trace of putrefaction could be perceived." The fact that gooseberries, currants, cherries, peaches, and other fruits, have been preserved without sugar by expelling the air from the vessels containing them, and which retained their flavor but little if any impaired, cannot be doubted. The failure of these chemical experiments is attributable, in all probability, to the cause we have alluded to. It is essential to cook the fruit sufficiently to arrest all decay, and to coagulate the albumen before the vessels are sealed.

A lady who has had considerable success in preserving cherries without sugar, has kindly furnished us the following recipe: "Take the common red cherries, and remove the stones. Put them in wide-mouthed, light glass bottles. Then set the bottles in a boiler of cold water, within an inch or so of the neck. Let them boil from fifteen to twenty minutes. Put the corks in the bottles as tightly as possible, while the water is boiling. Then take out the bottles, tighten the corks, and seal them with a wax made of equal quantities of rosin and beeswax."

This method has proved quite satisfactory. The *rationale* of the process will be readily perceived. The heat coagulates the albumen of the fruit, and arrests all change which may have taken place by the absorption of oxygen, and at the same time expels the air from the bottles. The corks, being put in while the bottles are filled with steam, and quickly tightened and sealed, effectually exclude the air, and with it all exciting cause of fermentation. The reason why the bottles are placed in cold water, is to prevent them from breaking. If tin cans are used, there will be no need of this precaution. Sometimes, too, the bottles break after being taken out of the water, and it is advisable to wrap a cloth around them for a few minutes.

Green gooseberries and currants may be preserved in the same way, except that they do not need so much boiling. If the bottles are heated sufficiently to drive out most of the air by expansion, and carefully corked and sealed while hot, nothing more will be required. In fact, they are sometimes kept by simply putting them in tightly sealed bottles, without any boiling. In this case, the gooseberries, not being ripe, absorb the oxygen from the small quantity of air in the bottles without injury. If the bottles, after being sealed, are placed in hot water for a few minutes, this absorption of oxygen takes place much more rapidly, with the formation of carbonic acid. Unless the fruit is quite green, the former method is undoubtedly the best.

Green peas can be preserved in the same manner as gooseberries and currants.

In England, green gooseberries are frequently preserved by placing them, when dry, in a stone jar or other vessel, and burying it in the soil, below the reach of frost.

MULCHING.—In our dry, hot climate, mulching is of great benefit to all garden crops on light, sandy soils. Its effect is to check evaporation, and keep the soil moist. Spent tan-bark is probably the best of mulches, but sawdust, chip-manure, peat, coal ashes, &c., answer a very good purpose. All recently transplanted trees are much benefitted by mulching on such soils. Strawberries are greatly improved, and the necessity of weeding obviated, if the mulch is thick enough—as it should be—to smother the weeds. Mulching is the best preventive of mildew on the gooseberry yet discovered.

On rather heavy, retentive loams, mulching is also beneficial, but a different mode of application is desirable. We should *mulch with the soil itself*. In other words, stir constantly the surface soil with the hoe or fork, three or four inches deep, and it will be the best of mulching, not only retarding evaporation, but drawing fertilizing gases and water from the atmosphere.



THE SCARLET-FLOWERED HORSE CHESTNUT.

THE HORSE CHESTNUT AS AN ORNAMENTAL TREE.

At this season of the year, when in full bloom, there is no tree to us more beautiful than the common Horse Chestnut. There are many fine specimens in this city, and we rarely pass one without stopping to admire it. The rapidity of its growth after the foliage begins to expand, is truly astonishing. It exhausts itself, however, in a short time, and, on the whole, is rather a slow-growing tree. Still, there are few, if any, trees at the North, having blossoms so rich and beautiful, that attain to such dimensions. Imaginative writers have termed it the "Gigantic Hyacinth," the "Lupine Tree," &c. Others, to point a moral, alluding to the gaiety of its blossoms, and the prodigality with which it scatters them on the grass, and the comparative uselessness of its fruit and timber, have regarded it as a fit emblem of ostentation.

The principal value of the horse chestnut is as an ornamental tree. In point of floral beauty, it is unequalled by any tree of equal size that will endure our Northern winters. Still, it is not without other useful qualities. Though not of a spreading habit, its ample foliage affords considerable shade; charcoal made from it is used in the manufacture of gunpowder; the bark is employed for tanning, and also for dyeing yellow. In some countries, the nuts are fed to goats, sheep and deer; and when ground and mixed with other food, they are said to be good for broken winded horses.

The horse chestnut is easily propagated from seed. Well ripened nuts should be sown in a rich, deep,

free loam. A bushel of nuts is sufficient for a bed four feet wide and sixty feet long. When one year old, the seedlings should be transplanted into nursery rows, two feet apart, and one foot in the rows. In three years, they will require to be removed to more commodious quarters. Any farmer may easily raise all he requires. The fibrous nature of the roots of this tree, particularly after being frequently transplanted in the nursery, prepares it for being removed with safety when of considerable size. This valuable property fits it for immediate effect in decorating grounds and in forming avenues of verdure.

The scarlet-flowered horse chestnut (*Æsculus rubicunda*) is a smaller tree than the common horse chestnut, and of a less vigorous growth. It flowers at an earlier age, and the leaves are of a deeper green than those of the common horse chestnut. The accompanying engraving hardly does it justice. Loudon justly observes: "It is, without doubt, the most ornamental sort of the genus."

The double-flowering white horse chestnut, figured in the *Genesee Farmer* for January, 1852, (we observe that the *same cut* is given in last week's *Rural New Yorker!*) is a variety of the common horse chestnut, with double flowers. It is a new and beautiful tree, and, though still scarce, can be obtained, probably, at any of the leading nurseries.

The Ohio Buckeye belongs to the Horse Chestnut family. In fact, Loudon thinks it only a variety of the common horse chestnut, and "far inferior to it in point of beauty." He judged from two specimens which had been taken to England.

SPECIAL MANURES.

UNDER this head, the *Horticulturist* publishes a letter from L. WYMAN, JR., of West Cambridge, Mass., in which GOULD'S Muriate of Lime is recommended to horticulturists as the very best of all manures for fruit trees. It may be well to inform our horticultural readers that this manure has been analyzed recently by Prof. JOHNSON, of Yale College, with the following result:

Analysis of Gould's Muriate of Lime.

Organic matter, mostly coal-dust,.....	6.48
Sand,.....	6.38
Soluble Silica, combined with lime or alkalies,.....	6.79
Sulphuric Acid,.....	.62
Lime,.....	43.55
Magnesia,.....	2.07
Peroxyd of Iron and Alumina,.....	4.12
Potash,.....	2.10
Soda,.....	.45
Chlorine,.....	1.27
Water, mostly combined with lime,.....	6.63
Carbonic Acid,.....	19.54
	100.00

Two analyses of the article were made, and the results were the same in both cases. Prof. JOHNSON is one of the ablest and most reliable chemists in the country, and it is impossible to doubt the accuracy of the above analysis. No one at all acquainted with the composition and value of manures, and the requirements of plants, can for a moment doubt that GOULD'S Muriate of Lime is an *unmilitated humbug*. There is scarcely a trace of "muriate of lime" in it, no phosphoric acid, and no ammonia, actual or potential.

Prof. JOHNSON well observes; "If the specimen I examined was a fair one, it is evident that the 'muriate of lime' is chiefly remarkable for its supplying to the farmer a stuff having a value *inferior* to leached ashes."

DWARF TREES OF CHINA.

ALL have heard of the dwarf trees of China. The dense population, the low price of labor, and the general taste for horticulture, all conspire to render the cultivation of dwarf trees particularly attractive and profitable to the Chinese. Anything which retards the free circulation of the sap, prevents, to a certain extent, the formation of wood and leaves. The Chinese understand this principle perfectly, and, as a general rule, their system of dwarfing is founded upon it. But in a recent work, *China and the Chinese*, a description is given of a mode of dwarfing, embodying a somewhat different principle. The branch of a grown tree is covered with mould, which is bound round with cloth or matting, and kept constantly wet; the fibres of the branch thus covered soon shoot into the mould, and then the branch is carefully cut from the tree, the bandage is removed, and it is planted in new earth. The fibres then become roots, and thus that which was previously a branch on the parent tree becomes a trunk, bearing flowers and fruit. The buds at the extremity of the branches which are intended to be dwarfed, are torn off as soon as they appear, and by this means the branches are arrested in their growth, and other buds and branches shoot out. After a certain time, sugar juice is applied to the trunk of the dwarf tree, by which means insects are attracted, and thus the bark is injured, and that knotted appearance, peculiar to old trees, is produced. The author says he has had

in his possession an oak, two feet high, bearing acorns, and its trunk exhibiting all the external marks of an aged tree. He has also had orange and citron trees, not over two feet high, bearing fruit of very fine flavor. One of these orange trees had on it, at the same moment, incipient buds, blossoms in full flower, fruit newly set and of full size, in a green state and ripe. He has also had a bamboo tree, two and a half feet high, so distorted as to represent a dragon with a boy seated on his back!

LIME BARRELS FOR PRESERVING APPLES.—A correspondent of the *New Jersey Farmer* says: "I had occasion to overhaul some apples the other day. They were picked in the same orchard, and on the same day, and were put away the same day; and some in flour barrels and some in lime barrels. Those in the flour barrels were much decayed, while those in the lime barrels were sound, and but very few showed any signs of decay. The apples were of the same variety."

Under certain circumstances, it is well known that lime acts as an antiseptic, though under other circumstances it accelerates decomposition. For instance, it will preserve *dry* straw, but decompose *wet* straw. In the above instance, the lime on the barrels probably excluded the air, and absorbed the moisture given off by the apples, and thus counteracted two of the principal causes of decay.

HORTICULTURAL OPERATIONS FOR JULY.

It will not be too late to repeat the sowings of peas, string beans, sweet corn, spinach, lettuce, radish, mustard and cress.

PEAS.—To have a late supply of good peas, it will be necessary to give them the best piece of ground that can be commanded—for when sown on poor, shallow, or very dry soil, they are almost sure to be spoiled by the mildew; therefore let the ground be deeply spaded and highly manured—if trenched two spades deep, so much the better. Dwarf Blue Imperial, and Knight's Dwarf Marrow, will be the best varieties for late sowings. They grow three feet high.

DWARF BEANS may still be sown, and will do moderately well on poorer ground than almost any other crop, although the better the ground the better will be the success. Should there be more sown than are wanted for the table, they will come in excellently well for pickling.

SWEET CORN may still be sown, up to the middle of the month. There will be no occasion to hoe the soil into hills; it will be better to sow the corn on the flat surface—for there will be no danger of the ground being too wet or too cold at this time of the year.

SPINACH.—Another sowing of spinach may still be made, for summer use; but it will be necessary to give it a rich, moist piece of ground, to enable it to make large, succulent leaves. It will be found very useful all through September.

RADISHES, MUSTARD AND CRESS will do excellently well when sown on the north side of a wall or board fence at this time of the year. They should be watered every evening, in dry weather.

PURPLE EGG, CAULIFLOWER AND CELERY, in dry and hot weather, will require frequent waterings. If the egg plant and cauliflower were planted in trenches,

as recommended, it will be well to stir the earth immediately about their roots, and hoe earth up to their stems a little, still preserving a gutter to hold water. Pick off any decayed or broken leaves, if there be any, and give a thorough soaking of clear manure water or soap-suds twice or three times a week, in hot, dry weather; give at least half a pailful to each plant. For the celery, stir the soil with the hoe a little in the trench, and apply the water a few inches from the plants, to avoid washing the earth into the hearts of them, which would be liable to rot them out. Give a thorough soaking, so that the water will penetrate to the extremities of their roots. It will help them a great deal, if a little Peruvian guano be mixed in the soil in the trench, before the application of the water.

EARTHING UP THE CELERY.—About the last week of the month, it will be time to earth up a few of the best plants for early use in September; but for the main crop, the last week in August will be early enough to begin. Before earthing, clear away the soil a little around the collar of each plant, if necessary, and pick off all the broken and cracked leaves and suckers, if there be any, leaving nothing but straight, strong and upright leaves. Now give a thorough soaking of water; then take a number of pieces of string—as many as you have plants in a row—about eighteen inches long, and take each plant separately, collect its leaves together and hold them tightly in the left hand, keeping its heart well protected by the outer green leaves, and with the right hand tie a piece of string around it, with a slip-knot, that will easily untie. Tie as many plants in this way as may be wanted for early use. Then, with a spade, earth them up about four inches, leaving the earth falling a little from the plants, to prevent the applications of water from washing it into the hearts. Repeat this operation every two weeks for the early crop, and every three for the late.

Keep the ground between the crops frequently stirred with the hoe, and all clear of weeds. Keep the edges of the beds neatly trimmed, and the walks scrupulously clean. Nothing tends so much to the good appearance of a place, as neat walks and a smooth lawn.

JOSIAH SALTER.

SULPHUR TO KILL ROSE BUGS.

MESSRS. EDITORS:—In looking over the June number of the *Genesee Farmer*, I noticed an article headed "Sulphur to Kill Rose Bugs." Your correspondent says:

"When visiting in and around Richmond, Ind., last autumn, I was delighted with the abundance of splendid roses that ever met my view, and which seemed then to be in their glory. I inquired of several if the bug had not visited them. The reply invariably was, 'Oh yes, but we destroyed them with sulphur.' The plan for so doing was to put sulphur (the hard) on a plate under the bush, and set on fire, and then cover something over the bush while the fumes lasted. I remarked that sulphurous inhalations must agree with the bush, for they appeared extremely healthy, a few of the under leaves only dropping off."

Now, gentlemen, with much deference to your correspondent, I feel constrained, from knowing the ill effects of the fumes of burning sulphur upon the tender foliage of plants, to make one or two remarks. 1st. When sulphur is burned, sulphuric acid gas is produced, which, if it comes in contact with

the foliage of plants, is as surely destructive as immersing them in boiling water. I have seen it tried many times. 2d. I would advise amateurs to use burning sulphur *very cautiously* among their pets; and if they wish to try a few experiments, to try them on the smallest possible scale.

If I am not taking up too much of your valuable space, I will instance one or two cases in my humble experience. In the year 1846 I had a very splendid gooseberry tree, of the Warrington variety, four feet high and four feet in diameter, and perfectly symmetrical in all its parts. It was a picture of usefulness and beauty, for it was laden with luscious fruit, which we desired to preserve as late in the fall as we could. But they were so attacked by the birds and wasps that it was evident we should soon have no gooseberries left, unless something was done to protect them. We therefore covered the tree with thin canvas, but the wasps found their way in at the bottom, by hundreds, and it was evident that something else must be done. I thought this time I would give them a settler. I loosened the canvas at the bottom, and placed a tea-saucer with some burning brimstone in it directly under the opening, so that the fumes would go up into the tree. The wasps came tumbling down by scores, and we laughed and danced over our fallen victims. But, alas! the next morning we laughed on the "other side of the mouth," for the leaves came tumbling down by *tens* of scores. The fruit, what was left of it, hung on longer than the leaves; but the tree was ruined for the season, and it did not feel very well the next, for it looked as though it had the fever and ague all the time.

Again, in 1852, I had the care of a viney of exotic grapes, which had been somewhat neglected the year before, and consequently the vines had on them a few more fritters, thrips and red spiders than I liked to see. Not having any fumigator, I took some thick, soft blue paper, and saturated it in strong saltpetre water. When the paper was dry, I divided half a pound of cut tobacco into three parts, and rolled it up in the paper; I then laid them at equal distances from each other on the floor, and set them on fire. They burned very well, smoking without flaring, and filled the house with smoke, and had the desired effect, so far as the killing of the insects. But at the end, near the door, we had a nectarine tree growing, which harbored the red spiders; and knowing it to be very difficult to drive them away with tobacco alone, I ventured to put on the roll of burning tobacco nearest the tree about a table-spoonful of the flowers of sulphur, and stood with my face over it all the time, ready to jerk it off the instant I could detect the smell of burning sulphur. I did not smell it, and allowed it to burn out, but the fumes of the tobacco nearly made me vomit. On opening the door the next morning, to my great consternation, the house smelled as though a great pile of green leaves was just beginning to ferment. I looked up, and beheld all the leaves on the upper part of two of the vines as literally dead as though they had been dipped in boiling water, and was very sorry to be obliged to cut off eight or ten splendid bunches of Hamburg grapes, about half grown, to save the vines. I have been very cautious in regard to burning sulphur among plants ever since.

Where there are insects on rose trees out of doors, I would advise you to syringe your plants all over and under, and on each side of the leaves, with clear tobacco

water, every evening for a week or two, or from the time the insects are first seen until they have disappeared. It will not hurt even the tenderest leaves of any plant, if applied in a clear state. It is certain death to thrip and fritters, and all the family of aphides, and is very annoying to even the red spider and the rose bug. It will make even a pig sick, although I have seen men chew tobacco.

JOSIAH SALTER.

IN "MY NEW GARDEN."—No. 1.

It may be, Mr. Editor, that you will not refuse to walk with me occasionally in my new garden, and let me tell you of some things suggested by the "working and watching" I perform therein. Any one, with half an eye for the operations of Nature, may find much food for reflection, as well as business for the hands, in such a place. The growth of plants, the operation of manures, the ever active insects, harmful and harmless, the thousand things I can only wonder at, not understand, seem to me worthy of careful study, and I am sorry I am so illy prepared to talk upon them. May I not hope for the assistance of yourself and correspondents upon the themes on which experience enables you to throw light, as such may be brought before us in these brief rambles?

ASPARAGUS.—Come and look at my bed, made April 30th. I first dug out the top soil as deep as it had ever been plowed, and placed it on one side for returning; then took out a spade's depth of the under soil—removing it entirely—then loosened up the bottom of the pit six or eight inches deep. In quantity then added eight or ten inches in depth of decomposed barn-yard manure, mixing it with the returned surface soil, and placing three or four inches of good garden mould upon the top of the whole. From the old bed, roots were procured and planted, about eighteen inches apart, and I then rounded up my bed slightly and called it complete. I should have mentioned, however, that the soil was loosened up from one end of the pit, so as to form a drain for the same; for in compact soils such an excavation would retain an over proportion of moisture.

The roots have mostly sent up vigorous shoots, and promise well. I cut none this summer, as they are all needed to promote bottom growth, and prepare for future productiveness. My only care, now, is to keep the soil mellow, and to apply waste brine enough to keep down all the weeds, but in autumn the bed will need a blanket of half-rotten manure. What a "power of roots" an old asparagus bed contains—it seems as though there was one for every shoot removed.

PEAS were planted the same day, and have made a fine growth. The dwarfs seem the most thrifty—they are certainly less trouble to raise, and appear handsomely, either in flower or in bearing. I have forgotten the names of the two varieties, for the seed is some of our own growing. I might have planted peas two weeks before, but thought best to wait until the garden was plowed—which wet weather prevented until the 29th. Bush peas should be planted in double drills, ten inches apart, so as to place the bush in the centre, but leave a space of two feet between each row of bushes.

ONIONS were set and sown that same April 30th. They are growing, as you see, and a liberal dressing of hen manure, chip-dust and ashes, composted together—two parts of the first to one each of the

last—does not "set them back" in the least. It is a good thing for almost any garden crop, to my fancy—and more about it, hereafter. I do not expect a large crop of onions, after sowing so late; yet, if the season is favorable, there will be a handsome product of "Large Reds," and not a few fine "Top Seed" onions.

HOING AND WEEDING take up considerable time, especially in such rainy weather. One can weed at almost any time, but it is better not to hoe when the ground is very wet—it leaves it hard, and, somehow, not so well fitted to the growth of plants. I have my hoe set out pretty well, so that I can loosen up the soil about two inches deep, by chopping it up, among my peas and onions. A loose soil is best for either wet or dry weather, for most plants—perhaps for all.

BUGS AND WORMS are not wanting in "my new garden." The dark brown cut worm, the wire worm, and a large beetle, (probably the May-bug,) seem most plenty—but there are others, one of whom now figures in Dr. FITCH's collection. I send you some notice of it in another article.

Maple Hill, N. Y. A COUNTRY INVALID.

THE STRAWBERRY PLANT—ITS INSECTS.

A STRAWBERRY BED was mentioned in "My New Garden" in the April number, as having been planted out last autumn. Let me refer to it again, briefly. May 7th I had an equal space dug up about fifteen inches deep, and placed thereon, eighteen inches apart, sets of Burr's New Pine, Hovey's and Genesee Seedlings, and the Early Scarlet varieties. The season was so backward here, it was equivalent to planting in April, and most of the roots have taken well, and look likely to produce a few berries. Just now some of the autumn sets are throwing out vigorous runners, but I pinch them back—it is too much to expect good fruit and increase of vines at once. As to manure, I placed a quantity of strong drainage mud from the barn-yard upon the bed, suffering it to lie through a shower or two, and then (when dry) raked it off. If the object is to get fruit instead of vines, we must not have too rich a soil.

In all "the books" on strawberries which I have been able to consult, I find no mention of the insect enemies of this plant. I find some of my vines destroyed, however, by the large white grub of the May-bug, which eat off the roots below the ground. They are, I believe, rather indiscriminate in their appetites, eating every root which comes in their way, of grain or grass, corn, potatoes or beans, and other garden plants. But the *Omaloptia sericea* seems to take hold of the strawberry plant alone, eating off the leaf and blossom stems just above the ground—its work resembling that of the cut worm upon corn and cabbage plants. Dr. FITCH, to whom it was submitted, says it is nearly allied to the rose-bug, and it resembles that insect in some degree. The specimen captured was a beetle-like insect, three eighths of an inch long, of a dark brown color, and seems to have been the only one on the bed, since no more of its work has been seen thereon, or anything resembling it.

If cultivators of the strawberry would be observant in this respect, we should soon be better acquainted with the insects injurious to the plant and fruit, and know better how to guard against them.

Maple Hill, June 12. A COUNTRY INVALID.

DRYING FRUIT.

Messrs. Editors:—Permit me to describe a little building I have on my premises for drying fruit. I call it little, for it is only about eight feet square, and the same in height. It has got a very pretty little cornice on it, is painted, has a little green blind in each gable, and a chimney in it. Under it there is a stone cellar, four feet deep, which is used as an ash-house, and above we have hooks for hanging up meat to smoke, building the fire in the ashes below; so you see there is no danger of setting our little building on fire. "But," says one, "what has all this to do with drying fruit?" I have already told you that we used this little building for an ash-house and smoke-house. Now for the third use. In the first place, we have boards the right length to reach across the sills, to form a floor over the cellar, or ash-hole, which we take up or lay down at pleasure. For drying fruit, we have racks made of very light stuff, in the following manner: We make a frame eighteen inches wide, and long enough to reach from one side of the building to the other; then, on the under side of the frame, we nail slats, about three-fourths of an inch wide and one-fourth of an inch apart. This forms a very good rack for drying all kinds of fruit not strung. Now, we have a number of the racks, and we nail brackets, or small blocks, on the sides of the building, from the floor up, for the ends of the racks to rest upon. We then fill the racks with fruit, put a little stove in the centre of the building, run the pipe up into the chimney above, and fire up, and the way fruit dries in our little ash, smoke and fruit-drying house is a caution!

C. T.

Kingsville, Ohio.

OLD VARIETIES OF FRUIT WEARING OUT.

The following extracts from an article on this subject, by a correspondent of the *London Cottage Gardener*, will be read with interest, even though we are not disposed to admit the conclusions of the writer. We should be glad to hear from our experienced readers on this point:

"Beginning with STRAWBERRIES, it is somewhat odd that Keens' Seedling, a variety that has done thirty years' or more hard service, should be as healthy and vigorous as ever, and is by far the most popular variety we have, while Wilmot's Superb, and some others which followed it, are nowhere to be found. It is, perhaps, wrong to infer that these were worn out; but if we come to a much later variety, Myat's British Queen, we see unmistakable tokens of an exhausted constitution, for there are many situations it cannot be made to grow in, even by all the careful treatment that can be devised, whereas a few years ago it answered moderately, though never so vigorous, certainly, as Keens' Seedling and some others. Maybe some will be saying that it first came into existence with a debilitated constitution, and consequently cannot survive long. If that be admitted, the key of the whole argument is surrend-red, for it is only a matter of time whether a variety lasts five years or fifty years, or whether one lasts the former period and another the latter.

"Human and animal life is governed by like laws, and doubtless a time will come when Keens' Seedling will cease to be as healthy, prolific and useful as it is now; but we hope to see its place taken by others of equal if not superior merit. Other examples of strawberries might be given, but we pass on.

"GOOSEBERRIES.—There being no lack of good varieties of this fruit, few care what becomes of the old ones; but one old favorite kind is certainly consumptive, the old Warrington, or what, in the north of En. land, is called the Ashton Red. The limited growth and unhealthy appearance of this tree, convey the lesson that it has got one foot in the grave. Another favorite old sort, the Green Gage, is still further advanced in disease; and though the Warrington is still grown, because it has established a name which we are unwilling to part with, there are few extensive plantations of it now, and the Green Gage gooseberry is all but extinct among those who grow for the market. Perhaps the most common one grown about here, (Staplehurst,) is a rough yellow one, early, but of no other merit than being a heavy bearer, and the buds on its shoots are less tempting to small birds than those of other kinds. Large Reds, Greens and Whites are also grown, but few Warringtons.

"PEARS.—Whoever has seen two or three good crops in succession of Gansell's Bergamout, the fruit being also good? or where is the Crasanne grown as perfect as it was thirty years ago? Probably thirty years hence the Jargonelle will be a fruit known only to history, for healthy trees of this variety are few and far between. Many other useful old varieties are fast approaching the same end. Green Chissell, Autumn Bergamout, St. Germain, Crawford and Chaumontelle are rarely met with in the healthy condition they were some years ago; and assuredly we cannot attribute their decay to any other source than the debility of the tree—the soil, treatment and other things being the same as before.

"APPLES.—This is the fruit so often referred to for examples, and numerous old kinds are significantly pointed to as affording decisive proofs of decay. The old Golden Pippin, Golden Reinette, several of the Pearmains and Codlins, and a host of others, are no longer to be met with in the healthy, profitable, bearing condition they once were, while some are discarded entirely. The Ribston Pippin and Golden Knob are fast following to the same end, and would, perhaps, have been extinct before, only they being particular favorites have been propagated wherever there was a chance of their succeeding; still the supply of them is daily diminishing, and in a few years Ribstons will cease to exist in very many places. To account for this on any other score than that of 'wearing out,' I confess to being unable; and to suggest a remedy or preventive, would be only recommending what had been done over and over again with successive disappointments.

"As it is needless to multiply examples, it is only necessary to take a glance at the condition under which fruit trees are grown. Apples, for instance, are the offspring of crabs, the best kinds being the produce of repeated sowings of the seeds of improved varieties; but be it remarked that this *improvement* cannot be effected without in some way sacrificing the constitution of the plant, and like the *breeding in and in* of animals, a delicate race is the result, differing more or less in degree as the case may be, yet still bearing tokens of that effeminacy resulting from the artificial position a grafted tree is in. This would be still more so, were it not for the vigorous nourishment it receives from the hardy stock it is worked on. Still this is not sufficient to maintain in good health scions taken from aged or long-propagated varieties, and each succeeding generation getting weaker, an abandonment of the whole takes place, as is the case in the old apples no longer cultivated. Some varieties threaten to be very short-lived; the Hawthornden apple, for instance, is seldom seen in good condition, and is often a complete mass of canker."

Ladies' Department.

WESTERN AMUSEMENTS.

MESSRS. EDITORS:—As all of your readers may not be conversant with matters and things in the West, or how the wives and daughters of Western farmers find amusement, I will give you a sketch of some of our doings. Indeed, I imagine from the doleful and oh-how-I-pity-you faces of some of our Eastern friends who visit us, (particularly those from the cities,) that we have no amusements—that “it’s all work and no play.” This, however, is a great mistake. There is no place in the world equal to a newly settled country for true social enjoyment. It is true, we eschew all that fastidious refinement which forbids a hearty laugh at a good joke, or a cordial grasp of the hand instead of the mere touch of the tips of the fingers; but we enjoy ourselves none the less for all that. It will never do to emigrate to a new country, and sigh after the “flesh pots of Egypt,” or turn back, like Lot’s wife—though a pillar of salt now and then would not come amiss; but if people come West to live, they must take things as they find them, without grumbling, and improve as much as they please afterwards.

But I am wandering from my promised sketch of a fishing and plummig excursion. You must know we boast of two streets—North and South Yankee street. At such a time, all that are able turn out from both streets to enjoy the trip, and every available team is put in requisition. On this particular occasion, our destination was to the mouth of Honey Creek, a small branch of the Skunk River, where fish are generally abundant. After wending our way through the tall, rank grass of the river bottom, we at last reached the scene of operations. We had neither hook nor line, and I presume your city anglers would be at a loss to know how to get at the fish; but here the old proverb of “where there’s a will there’s a way,” was amply verified. The men lost no time, but immediately commenced cutting off large branches from the trees and brush which skirt the creek, tying and twisting them together, until they had secured enough for a cable (if I may so call it) long enough to reach from shore to shore, and about four feet in diameter. Then some fifteen or twenty of them plunged into the stream, dragging their branch rope entirely across, and some distance down, the creek; then, lowering it down to the bottom, all commenced pushing up again, until they got near a desirable place to land the fish, when those on the opposite shore pushed inward, till they reached the side with the others. Thus the fish were fairly pushed on shore, though some got caught in the branches, and were taken out by hand. Truth compels me to admit, however, that we did not get a very great haul on this occasion; for the merry peals of laughter which resounded from the spectators, joined with the shouts of those in the water, must have frightened the poor fish before they were encircled, so that many made good their escape to the river. I was told they were sometimes taken in large quantities in this way, when all was done silently. However, we came for amusement, and we got it, at least those of us who were spectators; how it was with the others I cannot say, only they appeared to enjoy the sport as

well as any of us. One or two of the young men who did not volunteer to take the bath, were plunged headlong into the stream by those who did.

Leaving the workers to change their dripping garments, we preceded them into a grove at a short distance, to prepare for our lunch, to which all contributed. Here I witnessed another Western expedient: a large wagon-box was lifted from its place and reversed upon the ground, making an excellent table, which was soon covered with clean table linen, and a great variety of biscuits, cakes, pies, cheese, cold meats, &c., and of a quality to suit even the fastidious appetite of HORACE GREELEY himself—for we boast of cooks in this neighborhood who know how to make sweet bread, and boil potatoes. After we all had refreshed ourselves, we prepared to gather our plums, which grow spontaneously in the woods, or “timber,” as it is here called; after which we separated to go to our several homes. VIOLA.

Clay, Washington Co., Iowa.

THE WIFE'S INFLUENCE.

WIVES and daughters, strive to make your home a cheerful and happy one; do all you can to make it comfortable and pleasant. When the husband and father returns weary from his labor, O then remember, if you feel for his happiness, that it is you, and you alone, who can soften and subdue the care-worn features, can calm the ruffled brow, lighten his countenance with a smile, drive from his bosom the cares of the day, and give new life and animation to his dejected spirits, burying the fatigues of the day in the tide of love and respect. You have the power to make his home pleasant and attractive. 'Tis your smile that sheds a gleam of joy and contentment through his household; or 'tis your frown that darkens his prospects, dampens his brow, makes his home unpleasant and unattractive, destroys the charm of rural life, and drives him from his home, to spend his evenings elsewhere.

And sisters, fail not to exert your influence (which is great) in keeping your brothers at home. Strive to amuse them, and thus keep them from spending their time in the bar-room, imbibing habits of dissipation, which grow upon them—which habits, once formed, are hard to shun. It is our opinion, that if you felt the interest in your brothers you should feel, there would not be so many farmers' sons seeking employment in the city. W.

HOME INFLUENCE.

MESSRS. EDITORS:—Having seen an article in your valuable agricultural magazine respecting the encouragement to be given to the sons of landholders who labor upon the farm, I must concur in the opinion broached by a farmer's sensible wife, that the occupation of a farmer is of a most manly and honorable character, and that every possible comfort ought to be afforded them after enduring the fatigue and labor of the day. Mothers and daughters ought to vie with each other in arousing every latent energy to entertain and interest them, so that, in long evenings and inclement weather, they may enjoy the leisure and freedom from toil which the city clerks and mechanics invariably sigh for. I have known many families where social happiness is enjoyed, in which the mothers and sisters of such worthy young men

have read aloud to them biography, travels or history, when they have been *too weary to read themselves*, or, by the sweet strains of music, have softened, refined and animated their feelings. Oh, let there be as much emulation shown by American mothers and sisters to *solace and amuse* their partners and sons, to mental actions, as the Spartan matrons showed to stimulate *their sons* to the highest execution at the Olympic games. There will not *then* be so many sons wandering to the *Far West* for employment, and leaving the family homestead to be managed by the hands of strangers; all that roughness and uncouth behaviour, so often attributed to the farmer, will be done away, and in its place will be the utmost genial courtesy, and refinement of mind and manners. The longer I live, the *more I see* how *much* depends upon wives and daughters—their *domestic* kindness promoting intelligence, as well as virtuous actions and industry. A MOTHER.

Ogden, N. Y.

"THE HOMESTEAD."—How many associations cluster around this word, yet how few of the farms are owned by the sons or grandsons of those who cleared them of their forests. I wish not for the laws of some countries to entail the landed estate to the oldest son, but there should be enough veneration in every child to desire the possession of the homestead. But as only one can have it, it should be the one who means sacredly to keep it, because it was the home of his forefathers. I am in favor of small farms—and many of the old homesteads are much too large; divide them, and thereby render them doubly valuable with improvements. Never be afraid to plant a tree, for fear you cannot eat *all* the fruit yourself. Make permanent fixtures, and bring up your children, by *example*, to so love the homestead that nothing would be thought a worse calamity than to have it pass out of the family.

A FARMER'S WIFE.

ORIGINAL DOMESTIC RECEIPTS.

STRAWBERRY JELLY.—Take of the juice of strawberries, four pounds. Add two pounds sugar, and boil down.

APPLE JELLY.—Take of strained apple juice, four pounds; sugar, two pounds. Boil down.

CURRANT JELLY.—Mash, and strain the currants through a cloth. To one pint of the juice, add one pound of sugar, and boil. The time for boiling will depend upon the quality of sugar used. If loaf, two minutes is sufficient; if an inferior quality, containing moisture, is used, from two to twenty minutes. Jelly will not always seem hard on first cooling; but if it forms over the top and around the sides of the dish, it will be hard enough in a day or two.

CURRANT JAM.—Take of the quantity of fruit required, one-half, from which squeeze the juice. Add the remainder of the fruit to the juice, and, with an equal weight of sugar, boil twenty minutes.

TO PRESERVE CURRANTS.—To a pound of fruit, add a pound of sugar (cold). When sufficient juice is extracted to prevent them from burning, put them over the fire, and stew until they are cooked through. Put them away in tumblers, with paper pasted over them.

CURRANT WINE.—To each quart of juice, (pressed out cold,) add three pounds fine loaf sugar, and as much water as will make a gallon. Fill the cask with this mixture, and permit it to work. Draw it off the same as cider, and bottle. Put in no spirits. Wine made in this way cannot be beaten for mildness and agreeableness. We have some five years old.

BLACK CURRANT WINE.—Pick the currants when fully ripe, and squeeze the juice from them. To one gallon of juice, add six quarts of water; and to each gallon of this mixture, add nine ounces of sugar. Then strain, and put into a ventilated cask until the fermentation is passed, when it may be corked tight, and, as it improves by age, it may stand upon the lees for years, unless sooner called for.

PICKLED TOMATOES.—Take small, smooth tomatoes, not very ripe; scald them until the skin will slip off easily, and sprinkle salt over them. After they have stood twenty-four hours, drain off the juice, and pour on a boiling hot pickle, composed of one pound of sugar to every quart of vinegar, and two tea-spoonful, each, of cinnamon and cloves. Drain off the liquid, scald it, and pour it on them again, every two days for a week, and they will require no further care.

TOMATO CATSUP.—Take one-half bushel of tomatoes, scald them, and press them through a common sieve. Boil them down one-half; then add two table-spoonful of salt, one of black pepper, one tea-spoonful of cayenne pepper, one-half of cloves, one-half of cinnamon, and one-half of mace. Mix well, and add one tea-cupful of vinegar. Bottle and seal, and set in a cool place. Preserved in this way, they retain their natural flavor.

TO PRESERVE CHERRIES.—Add to the cherries an equal weight of nice loaf sugar. Melt the sugar with the fruit, taking care not to boil. After the sugar is melted, let them stand in a hot place for three hours; then pour out in soup plates, cover them with a thin cloth, and set in the sun for several days. By preserving this way, the fruit retains its natural flavor and color, and will keep the year round.

TO PRESERVE STRAWBERRIES.—To one pound of strawberries, add one pound of sugar. Put them into a preserving kettle, and let them remain until warm, so that the sugar will dissolve. Then seal them in glass jars, and bury them in sand. By this method, their flavor is entirely preserved.

TO SEAL PRESERVES.—Beat the white of an egg; take good white paper, (tissue is best,) cut it the size you require, and dip it in the egg, wetting both sides. Cover your jars or tumblers, carefully pressing down the edges of the paper. When dry, it will be as tight as a drum-head.

TO REMOVE FRUIT STAINS.—Let the stained part of the cloth imbibe a little water, without dipping. Hold the part over a lighted common brimstone match, at a proper distance. The sulphurous gas which is discharged by burning the match soon causes the spots to disappear.

INDIAN BREAD.—Two quarts sweet milk, eight cups Indian meal, four cups flour, one cup molasses, one tea-spoonful saleratus, and one of salt. Bake three hours in a slow oven.

JOHNNY CAKE.—One pint buttermilk, one cup of cream, one egg, a little flour and soda; thicken with Indian meal. Add a little salt, and bake.

Editor's Table.

State Fairs for 1857.

Ohio,	Cincinnati,	September 15—18.
Canada East,	Montreal,	September 16—18.
Illinois,	Peoria,	September 21—26.
Pennsylvania,	Sept 29 to Oct. 2.	
Wisconsin,	Janesville,	Sept. 29 to Oct. 2.
New Jersey,	New Brunswick,	Sept. 29 to Oct. 2.
Canada West,	Brantford,	Sept. 29 to Oct. 2.
Vermont,	Montpelier,	Sept. 30 to Oct. 2.
United States,	Louisville, Ky.,	October 1—6.
Indiana,	Indianapolis,	October 4—10.
New York,	Buffalo,	October 6—9.
Iowa,	Muscatine,	October 6—9.
Michigan,	Detroit,	
New Hampshire,	Concord,	October 7—9.
Kentucky,	Henderson,	October 12—16.
Connecticut,	Bridgeport,	October 13—16.
East Tennessee,	Knoxville,	October 20—23.
Massachusetts,	Boston,	October 20—24.
Maryland,	Baltimore,	October 21—25.
West Tennessee,	Jackson,	October 27—30.
Alabama,	Montgomery,	October 27—30.
Virginia,		October 28—31.

Premiums for Short Essays.

SEVERAL of our correspondents have acceded to our request to name subjects for short essays. We give them below, and offer a book or books, of the value of one dollar, for the best essay on any of the following subjects:

For the best answer to the question, "Why do so few Farmers write for Agricultural Papers?"

For the best answer to the question, "Why is Farming considered by many a Degrading Vocation?"

On the Advantages of Agricultural Schools.

On the best time for Cutting the various Grasses for Fodder.

On the best time for Cutting the various kinds of Grain.

On the best time to Cut Timber for Building and Fencing Purposes.

On the Propriety of Agricultural Societies offering Premiums to Practical Farmers for the Best Essays on various Agricultural Subjects.

On the Benefits to be derived from Competition for the Premiums offered for Short Essays by the *Genesee Farmer*.

For the best essay detailing Experiments in the use of Muck applied Unmixed to the Soil.

On the use of Muck in Composts, and as Litter for Stables and Yards.

On the best method of Seeding Land to Timothy or Herd's Grass.

On the Management of Calves.

On the best means of Escaping Injury from Drouth.

On the Management of Barn-yard Fowls.

For the best answer to the question, "Should Farmers' Wives be Educated?"

For the best answer to the question, "Is it Proper for Ladies to assist in the Garden?"

On the Cultivation of the Chinese Sugar Cane.

On the Management of Dwarf Fruit Trees.

On the Cultivation and Management of Tobacco.

For the best answer to the question, "How can Fathers render Farm Life Attractive to their Sons?"

For the best answer to the question, "Is it desirable to Plant Fruit Trees in the Highway?"

For the best answer to the question, "How much Education, and what kind, do Farmers need?"

For the best answer to the question, "Is the Raising of Barley to be converted into Beer a Proper Employment for Temperance Men?"

For the best answer to the question, "How can Setting Hens be taught to forsake the lazy habit?"

The essays should not exceed one page of the *Genesee Farmer*—say eight pages of foolscap—and must be received on or before the first of September, so that they can appear in the October number. We shall be glad if our readers will furnish us more subjects.

MOLASSES FROM THE CHINESE SUGAR CANE.—Mr. ISAAC H. CORWIN, of Newark, Wayne Co., has shown us a sample of molasses made last year from the Chinese sugar cane. It is a very superior article, of agreeable flavor, and well calculated to supersede ordinary syrup. Mr. C. had but twenty-seven hills of sugar cane. It was planted the first of June, and cut about the first of October, before it was ripe. He pressed the stalks between a pair of rollers, such as blacksmiths use in bending tire. The juice was strained, a little milk added, and then boiled down, and the scum removed as it arose to the surface. From three to five quarts of juice gave one of molasses.

NATIONAL TRIAL OF REAPERS AND MOWERS.—A great Trial of Reaping and Mowing Machines will be held the latter part of this month near Syracuse, N. Y., under the auspices of the U. S. Ag. Society. We learn from President WILDER that 24 machines had been entered up to June 4th. The precise time of the trial will be announced as soon as it can be ascertained when the crops will be ready for harvest. The crowded state of our columns forbids farther notice; full particulars can be obtained by addressing H. S. OLCOTT, Mount Vernon, N. Y.

ECONOMY OF MOWING MACHINES.—The editor of the *Agricultural Department of the New York Observer*, says that last season he made a fair test of the relative economy of cutting hay with the scythe and with the mowing machine. Having marked off parallel strips of standing grass of the same dimensions, a driver and team, with one of HALLENBACK'S mowers, commenced in one, while six good mowers made their best efforts on the other. The machine finished its acre some minutes first. That cut by the mowing machine was beautifully and uniformly spread. It required two persons to spread that cut by hand as fast as mowed.

MORE GOOD STOCK FOR THE WEST.—We learn from our English exchanges that the Illinois Cattle Importing Association have recently made extensive purchases of cattle, sheep and pigs from some of the most celebrated breeders of Great Britain. They were shipped at Liverpool for Philadelphia on the 20th of May, and we hope to hear of their safe arrival in a few days. The *Liverpool Daily Post* speaks of this shipment as "the most valuable exportation of breeding stock ever sent from Liverpool." It consists of 32 head of Short-horn cattle, 3 horses, 25 sheep, and 35 pigs. It is said that the cost of these 95 animals, including freight and forage to Philadelphia, will not be less than \$40,000.

INSTINCT OF PIGEONS.—On the 6th or 7th of October, 1850, Sir JOHN ROSS dispatched a young pair of pigeons from Assistance Bay, a little to the west of Wellington Sound, and on the 18th of October a pigeon made its appearance at the dovecot in Ayrshire, from whence Sir JOHN had the two pairs of pigeons which he took out. The distance direct between the two places is about 2,000 miles. The dovecot was under repair at this time, and the pigeons belonging to it had been removed, but the servants of the house were struck with the appearance and motions of this stranger. After a short stay it went to the pigeon-house of a neighboring proprietor, where it was caught and sent back to the lady who originally owned it. She at once recognised it as one of those which she had given to Sir JOHN ROSS: but to put the matter to the test, it was carried to the pigeon-house, when, out of many niches, it directly went to the one in which it had been hatched. No doubt remained in the mind of the lady of the identity of the bird. By what extraordinary power did this bird find its way, and by what route did it come?

PROLIFIC GOOSE.—The *Boston Cultivator* states that "DR. EBEN WIGHT, of Dedham, Mass., has a goose—a cross of the Bremen and large Chinese (sometimes called the Hong Kong)—which, from the middle of February to the middle of May last, laid sixty-five eggs. She laid about the same number last year. The greater portion were disposed of by being set under hens and other geese, but when the goose in question showed a disposition to attend to maternal duties, the proper number of eggs were allowed her, and in due time she brought out her annual brood. It should be noticed that this goose is a hybrid between two very distinct varieties. Some naturalists have even contended that the stock to which the male parent of this specimen belongs, is a different species from other geese. We have not room to go into the merits of the case, but will simply remark that several members of the same brood as the goose mentioned, have shown the same prolific character, and we offer the fact for the consideration of persons who hold that crossing tends to sterility."

"SCIENTIFIC."—The *Plough, the Loom and the Anvil* has a "Scientific" Department. The editor, Prof. NASU, in publishing an article on guano, says: "We place it under the head of Scientific, as it illustrates the science of *spunging*, and that is certainly a great science." We are sometimes asked, "Is the editor of the ——— as great a scientific man as he pretends?" We are always glad to speak well of our contemporaries, and, taking Prof. NASU's view of the subject, shall for the future answer *yes*,—as we can do so with a good conscience.

DESIGNS FOR HOUSES, BARNs, &c.—We shall feel greatly obliged to any of our readers who will send us designs for farm houses, barns, &c., especially of those which have been erected and which prove convenient. Let us have a sketch of the outside—no matter if it is a rough one, we can get it drawn over—and an accurate ground plan, with a full and detailed description of the interior arrangements, with such hints in regard to the construction as may prove useful to those who may wish to build from the design.

SAGACITY OF RATS.—The *London Quarterly Review*, speaking of the sagacity of rats, says: "Incredible as the story may appear of their removing hens' eggs by one fellow lying on his back and grasping tightly his ovoid burden with his paws, while his comrades drag him away by the tail, we have no reason to disbelieve it, knowing as we do that they will carry eggs from the bottom to the top of the house, lifting them from stair to stair, the first pushing them on its hind, and the second lifting them with its fore legs. They will extract the cotton from a flask of Florence oil, dipping in their long tails, and repeating the manoeuvre until they had consumed every drop. We have found lumps of sugar in deep drawers at a distance of thirty feet from the place where the petty larceny was committed; and a friend saw a rat mount a table on which a drum of figs was placed, and straightway tip it over, scattering its contents on the floor beneath, where a score of his expectant brethren sat watching for the windfall."

PORTUGUESE CATTLE.—The King of Portugal has recently sent over to England a present of cattle of a very peculiar breed to Queen VICTORIA, consisting of a bull, two heifers, and a bull calf. The animals are of the most perfect symmetry, and very diminutive, standing scarcely forty inches high. They are of a dun color, and in fine condition. The cows are very docile; but the bull, on being driven from the station to Prince ALBERT's model farm at Frogmore, where they are now installed, exhibited a disposition rather the reverse of that of his companions, by tossing an unfortunate donkey about his own size, which happened to come in his way. These Lilliputian animals much resemble the Alderney or Jersey breed, but appear to be scarcely more than half the size.

THE PLOUGH, THE LOOM AND THE ANVIL.—This excellent monthly commences a new volume this month. The price is \$2 per annum, but the publishers say that "for the purpose of bringing the future volumes into accordance with the year, the tenth volume will comprise but six months, ending with January, 1858. It will be complete in itself, with title page and index; will contain 400 pages, (half the usual number,) and will be sold at \$1 to single subscribers, and 75 cents each to clubs of four." The *P., L. and A.* is edited by Prof. J. A. NASU and M. P. PARISU, and is an instructive, interesting and reliable agricultural journal. Give it a trial for six months.

CURE FOR RINGBONE.—The editor of the *London Field* says there is nothing so likely to cure ringbone as an ointment composed of two drachms of biniodide of mercury and one ounce of lard. On the following day apply soft soap, rubbing it on gently with the hand; leave it there until it falls off itself. Be sure to purchase the biniodide at a first-rate druggist's, and keep it in a glass-stopped bottle.

SHEEP FOR CALIFORNIA.—A. AUSTIN, of California, has purchased four French Merino sheep—two rams and two ewes—from J. D. PARTEBSON, Westfield, Chautauque Co., N. Y. They were taken out in the last California steamer from New York. We hope to hear of their safe arrival. The price said to have been paid for them was \$1,400.

NOTES FROM MINNESOTA.—We have had a cold, backward spring. The farmers have but just completed their seeding. Our soil, however, is so warm and quick that we expect good crops. But little fall wheat was sown; that looks well. The spring wheat already shades the ground, and grows finely. Considerable of the corn is already up, but some has only been planted for a few days. The Dent corn is mostly raised here; I have planted a variety of the Dent, and some of the Dutton. More oats have been sown this spring than last, but not enough to supply the home consumption. They do well here, sixty to eighty bushels per acre being a common crop. All of the grains are scarce here now. Wheat, corn, oats and potatoes are each selling for over one dollar per bushel. Our spring wheat makes as good and as white flour as the best Genessee ever did. Our wives make snow-white bread with it. I would like to give some of the Monroe county people a sample.

It is true that our winters are cold, but the summers and autumns are delightful. E. HODGES.

Marion, Olmsted Co., Minnesota, May 30.

APPLYING MANURE ON THE SURFACE IN THE AUTUMN.—Our esteemed correspondent, JOHN JOHNSTON, in a private letter, says: "I like your friend B., of Niagara Co. I am much pleased that he is going to try my plan of manuring. I know fall manuring will have a hard struggle to get into use; but it is like any other improvement that does not correspond with the notions of old fogies, theorists, and of professors of agricultural science, falsely so called. I would rather have two loads of manure applied to the surface in the fall, than five plowed under."

A PROLIFIC SOW.—I have a sow, three years old last March, which, in nineteen months, or a little more than a year and a half, has dropped 70 pigs, of which 34 have lived, as follows: In September, 1855, she had a litter of 13, of which 10 lived; in April, 1856, a litter of 23, of which 4 lived; in September, 1856, a litter of 12, of which 10 lived; in April, 1857, a litter of 22, of which 10 lived; and she is now with pig to drop the last of August. Her pigs are large, healthy and vigorous. R. HARRIS.

Jackson, Pa.

PROFITS OF RHUBARB CULTURE.—The *Boston Cultivator* is informed that a noted cultivator on Long Island sold this season from four acres of rhubarb, two hundred dollars worth per day, for four weeks, and would probably average a hundred dollars a day for two weeks more. The variety was the Linnean, which, we believe, originated in England.

NEW ADVERTISEMENTS.—H. E. HOOKER & Co. offer Quince Stocks for sale, at low rates; ROBERT SEARS wants Agents to sell his Pictorial Bible; DUNHAM & WOOD can supply thorough-bred Stock; T. J. PATERSON will supply all orders for McCORMACK'S celebrated Reaping and Mowing Machines; and C. H. SEYMOUR will furnish one of the best Seed Drills that we are acquainted with.

THE *Boston Cultivator* says it has been observed that timber exposed to the elements in the South, will decay two years earlier than the same kind of timber equally exposed in the Northern States.

A GOOD COW.—The *Rural Intelligencer*, published at Augusta, Maine, says there is a cow owned by Capt. PAUL BROWN, of that city, which, from May 1, 1856, to May 1, 1857, supplied his family of three persons with all the butter, cream and milk wanted for the year, and enabled him, in addition, to sell *four hundred and twenty pounds of butter*. Bro. DREW, of the *Rural*, asks, "Who among the great breeders in Kentucky, Ohio, Pennsylvania, New York or Massachusetts, can produce a better cow than that?" The cow had no extra feed.

DR. DADD recommends equal parts of salt, sulphur and charcoal for the hog cholera. A table-spoonful per day should be given in the food.

Inquiries and Answers.

(G. A. F., Virginia.) EGYPTIAN CLOVER.—We are not aware that this clover has been tried in this country. If it has, we should be glad to hear from those who have had experience with it. In Egypt it is universally cultivated, and forms the best and principal fodder for cattle. It is an annual. It is sown when the ground is wet, either from artificial irrigation or from the overflowing of the Nile. When cut for fodder or for soiling, two or three crops are obtained in a season, from eighteen inches to two feet high. When raised for seed, only one crop is obtained, and the usual practice is to sow it with wheat, harvest and thresh both together, and separate the clover seed by means of fine sieves. Some years ago this clover attracted much attention in Great Britain, and in 1833 the Messrs. LAWSON, of Edinburgh, imported a considerable quantity of seed, but, on trial, it was found less productive than had been anticipated. In the warmer sections of this country it might prove valuable on our river bottoms, and we would advise you to give it a trial in Virginia.

(J. R.) Your suggestion is not new. The fact that vessels engaged in the lime trade lasted a long time has been observed, and the experiment of impregnating wood with lime-water, in order to increase its durability, has been tried; but, according to DUPIN, (*Ann. de Chimie*, t. xvii., p. 286.) the result did not answer expectation. In fact, the timber treated with lime did not last the usual time.

(S. K., C. W.) Mr. ADAMS simply quoted the phrase "Benighted Canadians" from the communication of one of our *Canadian* correspondents in the preceding number of the *Farmer*. Mr. A., we are certain, did not intend to give offence.

HOW SHOULD LIME BE APPLIED.—I have a farm of good land, part beech and sugar tree, and mixed with walnut, cherry, buckeye, &c., in the richer parts. I think, from short grain crops, and other indications, that there is a deficiency of lime in the soil. I cannot obtain lime at a less distance than thirty miles, at twelve and a half cents per bushel, or pay at Mansfield, to which place it is brought by railroad, twenty-five cents. I wish to apply a few loads of lime to a field or two this fall, and if I find it pays, lime in succession all, but do not know how best to apply it. Some of my neighbors talk of scattering a load or two on the manure in the barn-yard; but I think I have read somewhere that that mode of applying it causes a loss by chemical process, (of ammonia, perhaps,)—at any rate, that it was injurious. If you have any knowledge on the subject, will you please inform me, in the *Genessee*

Farmer, the best mode of applying lime to such land, and also the quantity necessary and that will pay? If not, a few remarks from you in the *Farmer* will elicit from some of your intelligent correspondents the desired information.

I have a small farm where I live, near Mansfield, different from the other, being high upland, and good. The timber has been chestnut and oak, mixed with poplar, sugar and black and white walnut. I wish to apply lime to a field of five acres, which I propose putting in wheat this fall. This farm has been worked out in corn and grain, till the constituents of grain are exhausted. On coming to it, a year ago, I sowed two fields with clover, but the drouth destroyed it; and I expect that clovering, with the addition of lime, will renovate the soil, and I wish to do it as quickly as possible. The prompt modern fertilizers—guano, poudrette, &c.—are of course out of the question here, and I have not heard of anything but barn-yard manure being applied anywhere about here, except a small amount of plaster. CHARLES PALMER.—*Mansfield, Ohio.*

We hope some of our correspondents will give us their experience on the use of lime. If we had such a farm, thirty miles from a lime-kiln, we should, as our friend proposes, try it at first on a small piece of land. At the same time, we should try, by good tillage and the use of plaster and ashes, to raise a crop of clover. We think our correspondent can do this without lime; and if you can raise clover, you can raise wheat. We place a high value on lime as a manure, but there are circumstances when its use is not profitable—when, in other words, the same object may be attained in a cheaper way. Since the introduction of guano into England, the use of lime has been discontinued, to a very great extent. The principal value of lime is not in supplying lime to the plant, but in liberating ammonia, potash, &c., from the soil, and it is quite probable that our correspondent can provide these substitutes in a cheaper form. Still, we are not certain on this point, and should be glad to have the opinion of others on this important subject.

SIX GOOD SHADE TREES.—I was much pleased with your article on Evergreens, in the last number of the *Farmer*. I like your idea of naming half a dozen of the best kinds; and the object of my present writing is to request you to name six of the best deciduous trees for ornamental planting and for shade. G. R.—*Rush, N. Y.*

We would gladly comply with our correspondent's request; but there are so many circumstances to be taken into consideration, that it is very difficult to answer the question with any degree of satisfaction. On repeating the question to a friend whom we consider one of our best authorities in such matters, he named the following: Hard Maple, Silver-leaved Maple, Elm, Oak, Horse Chestnut, White-barked Birch. Some, he thinks, may object to the last, who have only seen poor specimens, but, when well grown, it is a beautiful tree for the lawn. All these trees are undoubtedly good—perhaps the best; but we do not like to omit the Linden—the European, especially. Where the borers do not trouble it, we should also plant the Locust, and the Mountain Ash.

SKUNK.—If D., of Gates, has not rid himself from the effluvia of that "striped woodchuck," the best means for so doing is as follows: Dig a place in the ground sufficiently large to receive the clothes when spread out, say four inches deep; wet them thoroughly, spread them in, cover with dirt, and leave them for five or six days. J. C. ADAMS.—*Seymour, N. Y.*

WILL you throw some light on the following queries?

1. In order to effectually protect an orchard from winds, how wide a belt of trees is necessary?
2. How should they be planted—in rows, or irregularly, as they grow in the forest—and how thick?
3. In a high, dry, gravelly and bleak situation, what kind will make the *quickest* and *most effectual* protection?
4. Is there any tree that combines the double properties of shelter and hedge, or that will protect from winds, domestic animals and *thieves* at the same time, and that grows quickly, and is hardy?
5. How long does it require before it affords ample protection? HORTICULTURIST.—*Auburn, Pa.*

I SHOULD be obliged if some of your correspondents would answer the following questions: (1.) Is buckwheat straw worth anything for manure? (2.) What is the best remedy for ringbone on horses? also (3) for the heaves? (4.) Is there any other way to prevent a sow from having pigs, except the common, murdering way of cutting? W. L.

WILL some of the correspondents of your valuable paper inform me of the best time to cut chestnut timber for rails and posts, so as to have them durable? R. HARRIS.—*Jackson, Pa.*

ADVERTISEMENTS,

To secure insertion in the *FARMER*, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. TERMS—Two Dollars for every hundred words, each insertion, PAID IN ADVANCE.

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BREEDERS OF

PURE SHORT HORNS—of choice pedigrees.
 PURE LEICESTER SWINE—fine large hogs.
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 PURE DOMESTIC FOWLS—of choice varieties.
 PURE WILD TURKEYS, domesticated—valuable Farm and Park ornaments.

Choice single animals, and breeding pairs, supplied.
 July 1.—It.*

GRAIN DRILLS.

SEYMOUR'S GRAIN DRILL, capable of sowing all kinds of Grain, from Peas to Grass Seed, and also fine fertilizers, either broadcast or in drills; and SEYMOUR'S GRAIN DRILL FOR ONE HORSE, arranged and completely adapted to drilling among Corn while it stands on the ground as it grew; also, SEYMOUR'S BROADCAST SOWING MACHINE, capable of sowing all kinds of Grain and Seed, and all fine fertilizers, broadcast; are all supplied to order, by C. H. SEYMOUR. Those wishing further information, will receive our Circular, and a prompt reply to all inquiries, by addressing C. H. SEYMOUR, Manufacturer, or P. SEYMOUR, Inventor, East Bloomfield, Ontario County, N. Y.

July 1.—It.

THE BEST BOOKS FOR AGENTS.

EMPLOYMENT FOR THE YEAR.—PLEASE TO READ THIS. —AGENTS WANTED.—All persons in want of employment will at once receive our catalogue of books for the New Year, prepaid, by forwarding us their address. Particular attention is requested to the liberal offers we make to all persons engaging in the sale of our large type Quarto Pictorial Family Bible, with about 1000 engravings. Our books are sold only by canvassers, and are well known to be the most saleable.

NOTICE TO AGENTS.—The season for selling books has now arrived, and we feel assured that our Illustrated Volumes are among the best adapted for general circulation, especially the Pictorial Family Bible. We wish competent Agents in all parts of the country to engage in the sale of it immediately. Send for a sample copy, and try it among your friends. Those who have not the means, or do not wish to order a supply of books to commence with, can send us \$6, (in a registered letter), carefully enclosed in a whole sheet of writing paper, and we will at once forward, prepaid, by express, to any central point, a copy of the Pictorial Bible, with a bound subscription book, and canvassing circulars, for securing the names of subscribers. With these he can get up a list, and afterwards order the Bibles to supply them with. Please address, post-paid, ROBERT SEARS, Publisher, No. 131 William street, New York.

July 1.—It.

MCCORMICK'S REAPING AND MOWING MACHINE.

There is no Machine of the kind as simple in its construction, as strongly built and durable, that requires as little repairing, or that will perform as much with less horse power. Purchasers who see the Machine will be readily convinced of this. No other Machine has the wrought iron finger beam and malleable iron fingers, which add greatly to its strength and durability. I consider it perfect as a Reaper and Mower, having the advantage of a sickle edge, that requires but little grinding, the side delivery and reel—cutting a wider swath with ease, and much faster, than most other Machines. It took the *Council Medal at the World's Fair at London*, and the *GRAND MEDAL OF HONOR at the Great French Exhibition at Paris*, and the *only First Class Medal awarded to any Agricultural Implement at either place*. Manny's Machine and Atkins' Self-raker stood in the Third and Fourth Classes, and received Silver Medals only. After the repeated trials and triumph of my Machine, the Emperor purchased it. As a test of my confidence of the greater simplicity and superiority of the Machine, I will let responsible applicants take it on trial with any other, and keep and pay only for the one they prefer; the Machine in such case to be tested as a Reaper and Mower by the farmer, in the absence of agents and mechanics. The unparalleled success of the Machine, both at home and abroad, makes an extended notice of it unnecessary, and I will only refer to my handbills for a more particular account of it. The broad warranty which permits a trial of it, is a sure guarantee that it is what it is recommended to be.

Machines will be forwarded to any part of New York and the Canadas, if ordered early and in season of THOS. J. PATERSON, General Agent, at Rochester (office at the National Hotel). Price of Reaper and Mower, \$150; \$50 payable on delivery, and the balance, with interest, in December; or \$145 cash. Machines subject to freight from Buffalo.

Local Agents wanted, to sell in the unoccupied districts.

Rochester, N. Y., July 1.—1t.

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By THOS. J. PATERSON.

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25 WITNESSES;

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THE FORGER CONVICTED.

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From an Old Manuscript found in the East. It furnishes the Most Complete History of

ORIENTAL LIFE,

Describing the Most Perplexing Positions in which the Ladies and Gentlemen of that Country have been so often found. These Stories will continue throughout the whole year, and will prove the Most Entertaining ever offered to the Public.

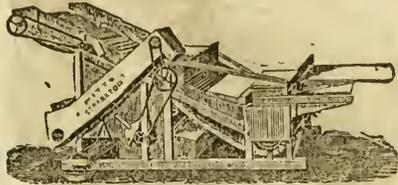
Furnished Weekly to Subscribers only, at \$1 a year. All letters must be addressed to JOHN S. DYE, BROKER, Publisher and Proprietor, 70 Wall street, New York.

May 1, 1857.—1y.

ROCHESTER AGRICULTURAL WORKS.

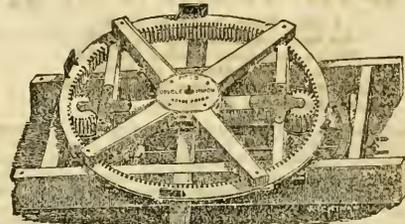
ATTENTION, THRESHERS!

PITTS' PREMIUM SEPARATORS, & DOUBLE PINION HORSE POWERS.



The above cut is a representation of the justly celebrated PITTS' MACHINE FOR THRESHING AND CLEANING GRAIN at one operation. It is the best Machine for threshing and cleaning grain in existence.

The following cut represents PITTS' DOUBLE PINION EIGHT OR TEN HORSE POWER.



As a superior and every way reliable Horse Power, the above stands unrivaled.

We call attention to the fact that we are now manufacturing the above Machines at Rochester, N. Y., in a more substantial and durable manner, and of a larger capacity than any hitherto built in this city, having all the latest improvements made by John A. Pitts.

We can furnish the latest and best all iron Power, for eight, ten or less number of horses.

We invite all who intend purchasing to examine our machines; they will more than equal the best expectations of the public.

FARMERS, YOUR ATTENTION IS ASKED TO

HYDE & WRIGHT'S PATENT HORSE HOE OR CULTIVATOR PLOW,

Designed and better adapted than any other implement for hoeing Corn, Broom Corn, Potatoes, Cotton, or any other crop requiring the use of the Horse or Hand Hoe. It has proved itself the most valuable implement yet invented for the purpose intended. It has been in use in Western New York for the past four years—hundreds of them having been sold on trial, and none returned. Its great utility has been demonstrated in the fact that one day to the acre, with a man and horse, is all the expense of cultivating and hoeing a field of corn for the season. If used as directed, hand hoeing, in nine cases out of ten, may be entirely dispensed with. We have numerous certificates of the most satisfactory character, which we would be happy to show the public.

Farmers may rely on realizing their best expectations from the use of the Horse Hoe. Price, \$8; if ground and polished, \$8.50. No farmer should be without one. They are having an unlimited sale. Sold at wholesale and retail.

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All who are in want of a Feed Cutter, adapted equally well to the cutting of all kinds of fodder, will find our Cutting Box in all respects to answer their wants.

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We are Agents for the sale of HILDRETH'S GANG PLOW which has superior advantages over every other Gang Plow Price, \$25.

CERTIFICATE.

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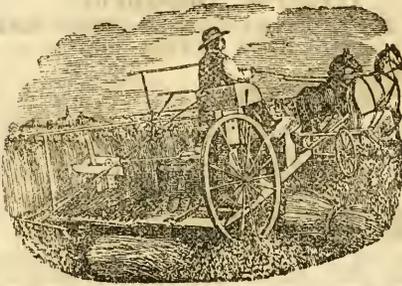
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We shall be happy to impart any further information that may be desired. Orders are respectfully solicited.

May 1.

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SELF-RAKING REAPER AND MOWER.

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- 40 used successfully in 1853.
- 300 in different States in 1854.
- 1,200 well distributed in 1855.
- 2,800 throughout the Union in 1856.
- 5,000 building for 1857.

THERE are six good reasons for this unparalleled increase and great popularity. 1st. It is strong and reliable, and easily managed. 2d. It saves the hard labor of raking. 3d. It saves at least another hand in binding. 4th. It saves shattering by the careful handling in raking; besides, the straw being laid straight, it is well secured in the sheaf, and does not drop in the after-handling, and the heads are not exposed in the stack, so that the GRAIN SAVING even exceeds the LABOR SAVING. 5th. It is a good Mower, being one of the best convertible Machines in use. 6th. It has a knife that does not choke.

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Price of Reaper and Mower, \$190—\$50 cash, balance in note due Jan. 1, 1853. Price of Reaper only, \$165—\$40 cash, balance in note due Jan. 1, 1853.

For cash, 12 per cent. discount from the above prices.

To secure a Machine, order immediately. Though so little known the past season, and none ready for delivery till the first of May, yet not two-thirds of the customers could be supplied. The reputation of the Machine is now widely established, so that 5,000 will not as nearly supply the demand as 2,800 did last year.

Order early, if you would not be disappointed.

PAMPHLETS, giving IMPARTIALLY the OPINIONS OF FARMERS, together with orders, notes, &c., mailed to applicants, and prepaid.

H. P. HAPGOOD, of Rochester, N. Y., is the General Agent for the above Machine in New York, to whom all letters relative to sales, &c., in this State should be addressed. Traveling and Local Agents wanted. June 1.—31.

The Practical and Scientific Farmer's Own Paper.

THE GENESEE FARMER,

A MONTHLY JOURNAL OF

AGRICULTURE AND HORTICULTURE,

ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF

Farm Buildings, Animals, Implements, Fruits, &c.

VOLUME XVIII. FOR 1857.

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June, 1857.

Rochester, New York.

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DEALER in Peruvian, Colombian and Mexican Guano, Superphosphate of Lime, and Bone Dust.

June 1.—41.

Contents of this Number.

Agricultural Quackery.....	201
Cultivation of Buckwheat.....	202
Cutting and Curing Clover and Grass for Fodder.....	203
To Clean Chasses out of Seed Wheat.....	204
Items Suggested by the June Number.....	205
Notes for the Month, by S. W.....	206
Harvesting Carrots.....	206
A Cheap and Commodious Stable.....	207
Culture of Buckwheat.....	207
Cutting Hay and Curing Clover.....	208
Is it Right to ask the Women Folks to Milk the Cows during the Busy Season?.....	208
Butter Making.....	210
Beets and Carrots.....	211
Sowing Wheat after Barley.....	212
The Advantages of System in Farming.....	212
Farm Accounts.....	213
Benefits of Agricultural Fairs.....	214
A Few Words about Fences.....	214
Subsoil Plowing.....	215
Farming a Science.....	215
Cultivation of Turnips.....	215
Design for a Farm House.....	216

HORTICULTURAL DEPARTMENT.

The Plum Curculio.....	218
Preserving Fruits without Sugar.....	218
Mulching.....	219
The Horse Chestnut as an Ornamental Tree.....	220
Special Manures.....	221
Dwarf Trees in China.....	221
Lime Barrels for Preserving Apples.....	221
Horticultural Operations for July.....	221
Sulphur to Kill Rose Bugs.....	222
In "My New Garden"—No. 1.....	222
The Strawberry Plant—Its Insects.....	223
Drying Fruit.....	224
Old Varieties of Fruit Wearing Out.....	224

LADIES' DEPARTMENT.

Western Amusements.....	225
The Wife's Influence.....	225
Home Influence.....	225
The Homestead.....	226
Original Domestic Receipts.....	226

EDITOR'S TABLE.

State Fairs for 1857.....	227
Premiums for Short Essays.....	227
Molasses from the Chinese Sugar Cane.....	227
National Trial of Reapers and Mowers.....	227
Economy of Mowing Machines.....	227
More Good Stock for the West.....	228
Instinct of Pigeons.....	228
Prolific Goose.....	228
"Scientific".....	228
Designs for Houses, Barns, &c.....	228
Sagacity of Rats.....	228
Portuguese Cattle.....	228
The Plough, the Loom and the Anvil.....	228
Cure for Ringbone.....	228
Sleep for California.....	229
Notes from Minnesota.....	229
Applying Manure on the Surface in the Autumn.....	229
A Prolific Sow.....	229
Profits of Rimbarb Culture.....	229
Notice of New Advertisements.....	229
A Good Cow.....	229
Cure for Hog Cholera.....	229
Inquiries and Answers.....	229

ILLUSTRATIONS.

Design for a Cheap and Commodious Stable.....	207
Design for a Farm House.....	216
Short-horn Bull Don.....	217
Four Figures illustrating the different transformations of the Curculio.....	216
Figure showing the appearance of a Plum when stung by the Curculio.....	216
The Scarlet-flowered Horse Chestnut.....	226

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July 1.—41.

Commercial Nurseries, Rochester, N. Y.



THE GENESSEE FARMER.

VOL. XVIII, SECOND SERIES.

ROCHESTER, N. Y., AUGUST, 1857.

No. 8.

CULTIVATION OF WHEAT.

SOME years ago, Mr. B. P. JOHNSON, Secretary of the New York State Agricultural Society, sent the Messrs. LAWSON & SON, of Edinburgh, a considerable number of the most approved varieties of wheat cultivated in this country. On trial, they were found to be well-known European kinds. The probability is that nearly all the wheats at present cultivated in this country and in Canada were derived from Europe, and it is much to be regretted that we are unable to identify them. We have been examining the subject, but can make nothing of it, and have abandoned the investigation in inextricable confusion. It is interesting and useful to know the true origin and correct name of any of our commonly cultivated varieties of wheat, and we shall be thankful for any information our readers can give on this point. In the

THE CHIDDAM WHEAT (fig. 1) is an old and highly esteemed English variety of white wheat; "a free

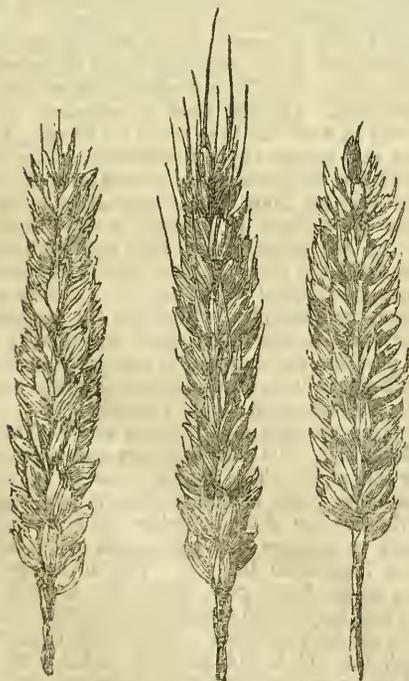


FIG. 1.

FIG. 2.

FIG. 3.

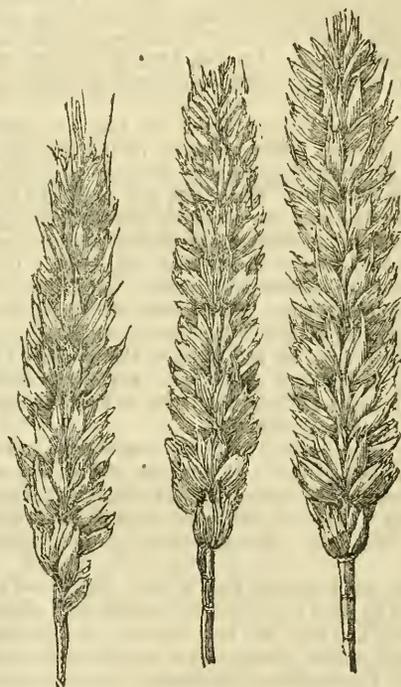


FIG. 4.

FIG. 5.

FIG. 6.

grower, tall strawed, fine square ear, singularly free from awns, grain round." It ripens early, is not liable to lodge, and is remarkably well adapted to loose, rich soils. It is one of the best English varieties, weighing, in dry summers, 66 lbs. per bushel. A gentleman in Michigan who sowed a sample of it, brought over, in 1851, by Mr. B. P. JOHNSON, reported it as "a most capital wheat." Mr. M. B. BATHAM, of the *Ohio Cultivator*, also imported and distributed a number of varieties of British wheats, the Chiddam among them, in 1851, but we have not heard the results.

FENTON WHEAT (fig. 2) has a plump, round grain, of a pale white color; ear of moderate length, but very square and evenly shaped. In the February number of the *Genesee Farmer* of this year, will be found an account of the origin of this variety. The

next time, we will give cuts and descriptions of a few of the most popular kinds cultivated in Great Britain.

straw is not only very short, but of very unequal height. It yields abundantly, owing, it is thought, to the distribution of the ears through the various heights above the land. On this point, our readers will recollect the account, published in the same number, of some experiments made last year in France with some fifteen varieties of wheat. A mixture of all the varieties produced a larger crop than any single variety,—a result which the experimenter, M. ROUSSEAU, attributed, in a great degree, to the fact that the “ears, not being on one level, are more free, afford more protection to each other, and derive more advantage from light.” The Fenton wheat gives the same result, in this respect, as would be obtained by sowing a number of varieties having straw of various heights.

HUNTER'S WHEAT (fig. 3) is one of the oldest and most esteemed varieties in Scotland. It is hardy, tillers well in the spring, and is remarkably well suited to medium and inferior soils. The ear is thickish in the middle, a little awned and tapering to the neck and point; grain of a brownish color, a little elongated in shape, but of a fine, hard, close, flinty texture, and weighing sometimes as much as 66 lbs. per bushel.

WHITE IRISH WHEAT (fig. 4) has long been cultivated in Ireland, under the name of the *Old White Irish*. It is exceedingly hardy, and very productive, but somewhat late. Straw tall, and more like that of rye than wheat; ears very long, loose, pointed and open; chaff white, smooth and slightly awned; grain large, oblong, and of a brownish, dull color. It is best suited to inferior and medium soils. On rich soils it is apt to lodge. It has been introduced with great advantage into Scotland, and JOHN HAXTON, of Cupan Fife, says he is “satisfied that no sort can compete, in point of profit, with the White Irish, when cultivated on light, easy soils, or even on clays, situated in an early climate.”

PEARL WHEAT (fig. 5) is not very hardy, but of most excellent quality. It has long, stiff straw; ear square, and free from awns; grain small, round, plump and white. It is early, and well adapted for sowing on rich, loose soils. It is sometimes sown as a spring wheat.

SPALDING'S PROLIFIC RED WHEAT (fig. 6).—This is said to be the “best of all the red wheats.” Straw tall, strong and stiff; ear long, square, and free from awn; grain round, plump, and of a yellowish color. MORTON'S *Cyclopedia of Agriculture* says: “On the clay soils of the eastern district of Fifeshire, it has been known repeatedly to produce 64 bushels per acre.”

It is quite probable that some of these wheats have been introduced into this country and Canada, and are cultivated under new names. The most approved varieties of wheat in this section at present are the *Soule's*, or the *English Flint*, a bald, white variety; the Improved White Flint; the Blue Stem; and the Hutchinson, or Canada Flint. Some object to the latter on account of its liability to shell out when not cut early. It should be sown thicker than the two former kinds, as it does not tiller so much in the spring. The Australian wheat does not sustain its reputation in this vicinity. On the east end of Long Island, it is cultivated with much advantage. Since the advent of the midge, the chief object in selecting varieties of wheat has been to get the earliest. On this account, the Mediterranean is becoming

every year more and more popular. It is a coarse, bearded variety, with a thick skin, and yielding a dark flour; and on good soils, in districts where the midge is not troublesome, is far inferior to the other kinds. It is, however, earlier than any other kind, and frequently escapes the fly when the later varieties suffer much damage. It is productive, and though the flour is dark, it makes excellent bread.

As we have said, the great object with wheat growers, in many sections of the country, is to get varieties that mature early. On this account, the introduction of seed from more northern and southern latitudes is worthy of more attention than it has yet received; for, paradoxical though it may appear, there are many facts which indicate that wheat is earlier when brought either from a warmer or colder climate. In no other country have farmers such facilities for the interchange of seed as in America, and we entertain no doubt that great benefits will accrue from the practice.

SOIL BEST ADAPTED FOR WHEAT.—A friable loam, or a calcareous, clayey soil, naturally or artificially drained, and abounding in all the elements of plants, is what is generally understood by “a good wheat soil.” In England, this phrase always indicates a dry, firm, compact soil, of considerable depth. In this country, many of our most profitable wheat farms are somewhat sandy, though the calcareous clays are the more durable, and, when well tilled and drained, the most productive. No one, however, who has seen the magnificent crops of wheat which are now raised on the light, sandy soils of Norfolk, or the fens of Lincolnshire, or on the thin chalks of other districts of England, can doubt that any kind of soil, when drained, cleaned, and enriched by judicious manuring, can be made to produce paying crops of wheat.

PREPARATION OF THE SOIL.—If there is one fact more prominent than another in regard to the cultivation of wheat, it is that the wheat plant requires a firm foot-hold. The soil must be compact. It is quite easy to work land too much for wheat. This may be one reason why a modification of the old summer fallow is becoming more general on the lighter soils of Western New York. Instead of plowing the land three times, as formerly, a clover sod is broken up the latter part of June or first of July, and this is all the plowing that is done. The weeds and grass are subdued by the use of the harrow and cultivator, or gang-plow. The cost of preparing land for wheat in this way, is much less than by repeated plowings, and the crops, in most cases, so far as we can learn, quite as good—though there are many good farmers who prefer the old practice.

Fallowing on light land is not as beneficial as on rich, clayey soils. Its chief object on such soils is to destroy the weeds. This can be done by growing corn, potatoes, beans, and other crops, in rows which admit the free use of the horse-hoe. It is, however, a mistake to suppose that the growth of any crop does not impoverish the soil. The advantage of growing clover, beans, peas, turnips, &c., is owing to the fact that they obtain considerable fertilizing gases from the air, dews and rain. But if these crops are removed, the soil is not enriched. They must be plowed under, or consumed on the farm, and the manure made from them returned to the soil—otherwise the land will be made poorer, instead of richer. Soils containing a portion of clay, or, more definitely, the double silicates of alumina and lime, soda, &c.

are much benefited by summer fallowing, from the fact that, when exposed to the air, they attract and retain ammonia. Hence, summer fallowing on such soils actually enriches them. Sandy soils, to a great extent destitute of the double silicates, cannot absorb and retain ammonia; and summer fallowing does not increase the ammonia in such soils, though it may, and probably does, render available some portion of the ammonia locked up in the organic matter of the soil. But as light upland soils are generally deficient in organic matter, it is unwise to resort to summer fallowing, even though, for a few years, it may be followed by good crops of wheat. It is far better to grow clover and other crops which obtain ammonia from the atmosphere, and plow them in, or consume them on the land.

SOWING THE SEED.—In districts affected by the midge, wheat should be sown the first or second week of September. If earlier than this, there is danger of injury from the Hessian fly. We are advocates of thick seeding. When wheat is sown thin, it tilers considerably in the spring, and its ripening is retarded frequently a week or ten days, and is, consequently, more liable to injury from the midge. Two bushels per acre is none too much. If wheat could be hoed in the spring—as we believe it might in many places, with considerable advantage and profit—it should of course be sown with the drill, in rows ten or twelve inches apart. Where wheat is not hoed, there is not much advantage in sowing with the drill. In our opinion, it is better to have the grain scattered as evenly as possible over the whole ground, as it is then more likely to keep the weeds in check than when a portion of the land is bare, as is the case when the wheat is drilled, or cultivated, or plowed in with the gang-plow. Many good farmers, however, entertain a different opinion, and we should be glad to hear from any of our readers on this point, who are not interested in patent drills, cultivators, or gang-plows.

Where wheat is liable to injury from *smut*, the seed should be prepared by wetting it with diluted, fermented chamber lye, and drying it with quick lime. Moistening the seed with a solution of blue vitriol, (*sulphate of copper*), is an effectual remedy. For each bushel of wheat, dissolve three or four ounces of blue vitriol in a quart of hot water. Let it cool. Then spread out the wheat on the floor, six inches thick, and sprinkle the solution over it, and turn over the wheat till it is all moistened. It may be sown in two or three hours, but it is better to do it over night, as the vitriol has then a better chance to kill the spores. This remedy is more effectual, simpler and cheaper than chamber lye, or salt and water and lime. Salt and water, when too strong, we have known to injure the seed. It is, however, frequently used.

PREMIUM CROP OF CARROTS.

The New York State Agricultural Society has awarded the premium for the best crop of carrots to JOHN BRODIE, of Rural Hill, Jefferson Co., N. Y. The last *Journal* of the Society contains an interesting statement of the method of cultivation, from which we make a few extracts:

"The soil sandy loam, and when the farm was purchased, in 1852, by father of applicant, the ground from which the carrots were taken was a worthless swamp, of about three acres, through which cattle

could not pass—it being overflowed spring and autumn. In the summer of 1852 it was drained—stone drains being laid—at a cost of \$32.33 per acre. In the spring of 1853 it was plowed and planted with corn, which yielded 80 bushels per acre. In the spring of 1854, twenty horse cart loads of manure per acre, and sowed to carrots. In the spring of 1855 it was sowed again to carrots, without manure, and on one measured acre the yield was 1,700 bushels. In the spring of 1856 one acre was surveyed, thirty horse cart loads of mixed horse and cow dung, and four barrels of bone dust, spread and plowed in. Carrot seed was drilled in with a Scotch machine, that sows and rolls at the same time—using half a pound of large orange and one and a half pounds of white carrot seed, in rows nine inches apart. On the 3d of July passed through with a cultivator, and on the 12th of July gave it the first weeding. July 16th, went through with the cultivator a second time, and on the 18th and 19th of August gave it the second weeding.

"The yield from the measured acre was 1,610 bushels of carrots, weighing 60 lbs. to the bushel. The yield of the white carrots was much greater than that of the orange. No difference was perceived in the yield of those parts where bone dust was or was not applied.

"The cost of the crop, including interest on land,	
(\$8.) was.....	\$49.21
The value of crop, at 20 cents per bushel,.....	322.00

Leaving a balance in favor of crop of.....\$272.79

"The above statement was verified."

THE HORSE CHARM;

OR, THE GREAT SECRET FOR TAMING HORSES.

We find the following going the rounds of the agricultural papers. We give it to our readers for what it is worth:

"The horse-castor is a wart, or excrescence, which grows on every horse's fore legs, and generally on the hind legs. It has a peculiar, rank, musty smell, and is easily pulled off. The ammoniacal effluvia of the horse seems peculiarly to concentrate in this part, and its very strong odor has a great attraction for all animals, especially canine, and the horse himself.

"For the oil of cumin, the horse has an instinctive passion—both are original natives of Arabia—and when the horse scents the odor, he is instinctively drawn towards it.

"The oil of Rhodium possesses peculiar properties. All animals seem to cherish a fondness for it, and it exercises a kind of subduing influence over them.

"The directions given for taming horses are as follows: "Procure some horse-castor, and grate it fine. Also get some oil of Rhodium and oil of cumin, and keep the three separate in air-tight bottles.

"Rub the oil of cumin upon your hand, and approach the horse in the field, on the windward side, so that he can smell the cumin. The horse will let you come up to him then, without any trouble.

"Immediately rub your hand gently on the horse's nose, getting a little of the oil on it. You can then lead him anywhere. Give him a little of the castor on a piece of loaf sugar, apple or potato.

"Put eight drops of oil of Rhodium into a lady silver thimble. Take the thimble between the thumb and middle finger of your right hand, with the fore finger stopping the mouth of the thimble, to prevent the oil from running out while you are opening the mouth of the horse.

"As soon as you have opened the horse's mouth, tip the thimble over upon his tongue, and he is your servant. He will follow you like a pet dog.

"Ride fearless and promptly, with your knees pressed to the side of the horse, and your toes turned in and heels out; then you will always be on the alert for a shy or sheer from the horse, and he can never throw you.

"Then, if you want to teach him to lie down, stand on his nigh, or left side; have a couple of leather straps, about six feet long; string up his left leg with one of them round his neck; strap the other end of it over his shoulders; hold it in your hand, and when you are ready, tell him to lie down, at the same time, gently, firmly and steadily pulling on the strap, touching him lightly on the knee with a switch. The horse will immediately lie down. Do this a few times, and you can make him lie down without the straps.

"He is now your pupil and friend. You can teach him anything—only be kind to him, be gentle. Love him, and he will love you. Feed him before you do yourself. Shelter him well, groom him yourself; keep him clean, and at night always give him a good bed, at least a foot deep.

"In the winter season, don't let your horse stand out a long time in the cold, without shelter or covering; for remember that the horse is an aboriginal native of a warm climate, and, in many respects, his constitution is as tender as a man's."

HOW NATURE IMPARTS FERTILITY TO LAND.

EVERY farmer who would master the science of Agriculture, and rise to the full height and dignity of his noble calling, should diligently study the ways and means employed by Nature to impart fertility to land, and bring both its vegetable and animal products to the highest perfection. He should learn, if practicable, what elements, and in what conditions, give rise to the great diversity of soils witnessed in all countries. From a few very common and abundant substances, like air, water and earth, Nature forms an endless variety of plants and animals, and soils in every respect adapted to the peculiar wants of each species. The natural requirements of plants and animals, however, are mainly uniform and simple; so that less than twenty elementary bodies, and ordinarily no more than fourteen, enter into the composition of all organized beings, whether they belong to the vegetable or animal kingdom. Indeed, judged by their cellular structure and early growth, the vital germ in a seed, and in an egg, appear to have no other difference than the obvious fact that one is endowed with the life of its plant parent, and the other with the life of its animal parents; so that, as development proceeds, from one may emerge an oak, and from the other a reptile or a bird.

Viewed in their relations to plants, soils may be said to grow as much as a forest tree, not in the same way, nor does a child or a pig grow like a plant, yet both grow, nevertheless, as does also the natural fruitfulness of the land that supports them. If we inquire what substance most promotes the development of all the organized and varied beings in the world, *water* will be found fairly entitled to that distinction; for it not only constitutes, in its elements oxygen and hydrogen, over forty per cent. of their solids, but it alone dissolves their aliment, and gives that freedom of motion without which no seed could possibly germinate, and no ovum produce its young. Water being an universal solvent, is no less active and useful in preparing land for the support of plants and animals, than in preparing the primary cells in the germs of the latter for all their subsequent evolu-

tions and parental functions. It is water that conveys carbonic, sulphuric, silicic and phosphoric acids, united with potash, soda, lime and magnesia, from a soil into the trunks of gigantic forest trees, to remain there for centuries, until they die and decay; it also carries into the earth which surrounds their roots a full equivalent of the substances named. Hence, when an aged oak, poplar or walnut has largely drawn on the soil for two or three hundred summers for the alkalies stored up in its roots, body and numerous limbs, the ground is not exhausted, but, in the wise economy of Nature, the water that has come up from the earth below to supply the place of that evaporated from its countless leaves, has brought with it the elements of fertility annually consumed by this long-lived and gigantic plant. Sand, clay, and rocks, which are pervious to water and air, never refuse to yield some minerals needful in the growth of both vegetables and animals, when rain or snow-water percolates through them. Water charged with carbonic acid, derived partly from the atmosphere and partly from passing through vegetable mould in the soil, has a much greater solvent power over both the carbonate and phosphate of lime, the silicates of potash and soda, and other earthy salts, than pure distilled water would have. The decay of annual weeds, grasses and forest leaves, yields not only valuable organic acids, including carbon, but *ammonia*, which, like potash and soda, according to Prof. WALKER, renders silica soluble in water.

All the food of plants being dissolved in water, and that having the most perfect freedom of motion between its particles, we have only to find adequate physical causes for the general distribution of water to account for the almost universal productiveness of the earth. The daily evaporation that takes place from oceans, seas, lakes, rivers, plants and the naked earth, and the fall of water in rain, snow and dew, are too well known to need any remarks in this connection. They often give rise to an excess of water in many soils, which need draining; for it is *moving* water that feeds and enriches land, not that which is stagnant.

To facilitate the ascent of water through a hardpan, or some impervious stratum, of more or less thickness, it should be perforated on the same principle that Artesian wells are bored in Alabama, France and other countries. Science teaches the art and wisdom of fertilizing soils equally from the earth below, and the air above. This is precisely what Nature does in recuperating the old fields of the Southern Atlantic States, without the assistance of man. With his aid, if skillfully rendered, the resources of partially impoverished land may be more rapidly improved and augmented. He must assist Nature, not counteract her beneficent purposes. In all hot climates, *irrigation* has been found, by the experience of ages, most conducive to agricultural production, especially where water is highly charged with the elements of crops. Some rocks yield an incalculable amount of the earthy constituents of plants, and thus fertilize not only the land in their immediate vicinity, but sometimes soils thousands of miles distant from them. There are alkaline springs near the summit of the Rocky Mountains, some that yield potash, others soda, in large quantities, more or less of which will be left in every rood of low land covered by creeks and rivers as their waters flow easterly into the Gulf of Mexico, or westerly into the

Pacific. It is easy to understand how the food of sugar cane may be taken from the mountain gorges in New York and Pennsylvania, where the Alleghany River rises, and conveyed down the Ohio and Mississippi, to be finally left in the loam and clay of Louisiana for the benefit of the sugar planters. Large and universal as is the distributing power of moving water, whether running on the surface of the earth or below it, in the economy of Nature, it is capable of indefinite extension by the knowledge and industry of man. Educated farmers should carefully investigate this matter, and weigh well the fact that it is mainly the mineral and vegetable atoms brought from distant hills and mountains that form the richest alluvial bottoms; and that land equal to such bottoms in fertility may be formed by the aid of moving water, even on the declivities of an upland farm. In one sense, hills may be regarded as manure heaps, although not often as soluble as one might wish; yet, rain-water dissolves not a little of the substances that improve any soil through which it may percolate, and on that account it is wise to irrigate, as far as practicable, all uplands, just as low ground is so often, and advantageously, irrigated by Nature. In many places on side-hills, one may dig wells till water is found, and then excavate the earth on the lower side, so that living springs are formed, whose perennial flow will be alike useful for live stock, and for enriching many acres of land. Spring-water never fails to abound in the fertilizing elements of the earth and rocks through which it has passed. These elements are both organic and inorganic, as may be seen by simply evaporating a gallon or so of the water to dryness. BERZELIUS gave the names *crenic* and *apocrenic* to two acids of organic origin, because he first found them in spring water. *Krene* is the Greek name for spring. Usually about half of the dry residuum is combustible, like ulmic and humic acids, and the other moiety incombustible earthy salts. The character of these dissolved substances depends on the composition of the clay, sand, stones or rocks with which spring-water has been in contact. Where the ground, and especially the rocks below, are permeable to water, and abound in soluble minerals, as is the case with the Onondaga Salt Group, one would naturally expect to find many mineral springs—and such is the fact in all quarters of the world. In his work on the *Minerology of the State of New York*, Dr. BROCK describes a spring in Byron, Genesee county, that issues from the Onondaga Salt Group, whose volume is large enough to drive a small grist mill, the water of which is so charged with sulphuric acid as to char vegetables about the spring. Could the acid that issues from the earth at this point in twenty-four hours be conveniently saturated with lime, it would yield daily several tons of gypsum. Sulphur springs abound in Western New York, and as the sulphur needs only a chemical union with oxygen to form oil of vitriol, one is at no loss to comprehend how plaster beds grow in that limestone region. Dr. HADLEY found ten and a half grains of gypsum in a pint of the water taken from one of the Avon springs. Epsom and glauber salts, or the sulphates of magnesia and soda, are only a little less abundant.

No other group of rocks of the same age in America is so rich in the mineral food of plants as the Onondaga Salt Group, if there is any of any age that equals the rocks in question. Some of the more

recent formations in Southern Georgia, Alabama and Florida, are richer in the phosphate of lime, and the remains of marine animals, which will form the subject of a separate article, in connection with the agricultural resources of Upper Georgia.

Heat, frost, electricity, light, atmospheric air, with its oxygen, carbonic acid, rain, snow and dew, are the principal agents employed by Nature to augment the fruitfulness of the earth, using at the same time, and for the same purpose, both vegetable and animal Vitality. Besides these, Nature has ever at her service *gravitation*, which acts on masses of matter at sensible distances, and *chemical affinity*, which operates on molecules, or atoms, at insensible distances from each other. In these facts, which are in no respect exaggerated, may be seen the elements of astronomy, geology, chemistry, meteorology, vegetable and animal physiology, and natural philosophy. No intelligent mind can devote a few years to the earnest study of the primary sources and causes of fertility in land and not be convinced that it is dealing with a truly noble department of Science. It is impossible in a short article, hastily written, like the present, to do anything like justice to so large and important a theme. There are chemical changes wrought at and near the surface of the ground, which operate to increase its fruitfulness, that cannot be satisfactorily explained without assuming much as already known by the reader, or giving a lengthened exposition of elementary principles, which, in either case, would appear unprofitable to many. To the writer, it is satisfactory to know that Science, in its application to agriculture, as to all other industrial arts, is steadily advancing, and that its ultimate triumph over all opposition is certain. If it cannot always create an *oasis* in a desert, it can sometimes bring one to life and fruitfulness, when about to be lost forever, as the following recent facts will show: In a late number of the *Moniteur de l'Armée*, (a French military journal,) there is an interesting account of the boring of an Artesian well at Sidi Rached, in Algeria, by a French engineer. The oasis that supported the village had become nearly burnt up, and threatened to disappear altogether, from the want of water. Some knowledge of geology as applied to water-bearing strata in connection with the subject of Artesian wells, satisfied the engineer that an artificial fountain was attainable. Boring to the depth of only fifty-four metres, (about one hundred and fifty-seven feet,) he perforated the impervious stratum, and reached one filled with water, which sent up above the surface of the ground a thousand gallons per minute. The scene is thus described by an eye witness:

"At the moment of the water's bursting forth, no Arab was present, but the news quickly spread, and in a few minutes the whole population of the village was to the spot, and threw themselves upon the works with such phrenzy that force was necessary to remove them. Women and children lay down in the stream, as if they had never seen water before. The Sheik of Sidi Rached could not repress his emotion; he threw himself on his knees, and wept for joy. The next day the inhabitants of the neighboring villages came to thank the engineer, and bless the fountain, while in the evening there was a dance and a grand merry-making, and this festival was kept up six days. In the mean time, the people went to work and constructed a sluice to convey the vivifying stream to the portion of the oasis which was dead from the want of moisture."

Such is the service of Science to man in a desert of Africa. In a thousand ways, it renders his life more valuable to himself and to his posterity; for no one will deny that an existence at Sidi Rached is truly worth more with a living fountain that yields a thousand gallons of pure water every minute, than it would without any advantage of the kind. There are already nearly one hundred such Artesian wells in the United States; and tens of thousands might aid in fertilizing American soil. In connection with the improvement of land, the readers of the *Genesee Farmer* will permit an old friend to commend to their favorable consideration the subject of Agricultural Engineering.

D. LEE.

Athens, Ga.

ITEMS SUGGESTED BY THE JULY NUMBER.

A WEEK of "real summer weather" has brought vegetation forward amazingly—corn is coming on under its influence—clover is in blossom, and the wheat already in the ear. The *midge* is here, too, but time must determine what share of our crop it takes this year. Our fields *look* like twenty-five bushels per acre, though the wire-worm has made some thin spots too poor for five.

BUCKWHEAT.—A "precarious crop," truly, according to my experience. Sowed some last year on a good, but heavy soil—the weather was too dry to bring it up for a long time, and at last it was cut off in all its luxuriant growth and blossoming by an early frost. Plowed it under and sowed on wheat, and looked for our breakfast-cakes from our more fortunate neighbors. Shall try it again in a few days—some have sown already.

CUTTING AND CURING CLOVER.—There never was brighter, better clover hay made, than we saved last season. It was cut when fully in bloom, allowed to wilt in the swath—then raked up and cocked to stand over two nights—and drawn in generally without further stirring. Thus placed in the mow, still damp, not with water, but its own sweet juices, most of it came out in the winter like well preserved specimens from an herbarium, its colors bright, its leaves all clinging to the stalks, and all of it was of superior quality. To the old-style farmer, this hay seemed too damp to keep in the mow—but it did keep, and several years' trial of the same method has convinced me that it is no use to dry clover until the leaves half crumble to powder—that its value is nearly double in the fresher state.

CHEAP AND CONMODIOUS STABLE.—I like this plan of J. F. F's—it is *sui*ted to the wants of the farmer, and hence a real addition to the valuable contents of your journal. The manure should be taken from the stalls twice each day, and intermixed with that from the cows' stable, under some of the sheds surrounding the barn-yard. A better supply of windows for lighting the stable, would be advisable, in my opinion. A dark stall injures the sight of the horse kept therein.

WOMEN FOLKS MILKING.—This subject is pretty fully discussed in the July number. *Appropos* of T. M. W.'s remarks on the testimony of the cows themselves against women milkers—some cows speak just as strongly the other way—refusing to let a man come near them.

BUTTER MAKING.—Your Jefferson Co. correspon-

dent gives us a truly suggestive article on this subject, and he reasons it out well. I mean to give his plan a trial—for I have often thought it a needless thing to put in extra salt just to work it out again as soon as dissolved, as is the general practice. His hints in setting milk are also worth heeding. I have noticed that the cream did not rise alike on different shelves in the dairy, and now see that it was because the fresh milk was set under that set the morning or evening before, and its heat affected it.

WHEAT AFTER BARLEY.—I plead guilty to sowing wheat after barley, but the clover seed failed, and we gave an intermediate dressing of muck, twenty-five two-horse loads to the acre. The wheat is now looking very well. I shall probably do the same on a small scale this fall; but when the farm is arranged and improved as I am *trying* to have it, I shall not sow wheat after barley, and only after clover, with fine manure harrowed in with the seed.

FARM ACCOUNTS.—I heartily agree with Mr. REYNOLDS in regard to farm accounts. It is no great trouble to keep them, and it is a great satisfaction to know the results of your labor—besides giving many useful lessons to the farmer himself.

—Pleasant as the task is, I can itemize no further. I have hurriedly written this while watching by the sick-bed. The reader will please excuse all failure, as you, Mr. Editor, will sympathizingly do, I am sure, *Niagara Co., N. Y.*

B.

NOTES FOR THE MONTH, BY S. W.

CORN ROTTING IN THE GROUND.—The corn and sorghum planted on the tenth of May came up well, after ten days of cold, wet weather, and several frosty nights. This is another proof that it is not cold, wet weather that rots corn in the ground. But other rows of corn on the same tile-drained soil, planted on the fifth of June, did rot in the ground this season, owing to ten days' continuous floods of warm rain. Hence I take it the corn remains safe in the cold, wet weather, and only rots in warm and very wet weather.

TURNIPS AMONG CORN.—RADISHES AND BEETS BETWEEN SORGHUM.—The *American Agriculturist* says: "Sow turnips at the last hoeing among corn." I have done this repeatedly after suckering the corn, and never got anything but wormy little turnips, with large tops; but I have no turnip soil, and do not live, thank Heaven, in a turnip climate, where, as GREELEY says, the sun resembles a boiled turnip. The best turnips I ever saw, were grown at foggy Newport, R. I., in the spring. In this dry climate I could never grow a good one; they grow so slow that insects destroy them. But turnips grow large, even here, on a new, porous, vegetable soil; but they have no sweetness, and turn pithy in a week after they are marketed. Sorghum is of so slow a growth that radishes or beets may be grown fit for the table before the former is a foot high. My early planted corn is now, this sixth of July, more than two feet high; sorghum, in the next rows, planted the same day, is only eight inches high, but it is healthy, strong, and full of suckers. It is a very hardy grass that does not wilt in transplanting. Methinks it must be both thinned and suckered before it can grow to sugar cane.

TOMATOES AMONG CORN.—Some of the best tomatoes I have, are left where they come up from self-

sown seeds among sweet corn. The moment the green ears are picked, cut up the corn, and the tomatoes, before small and spindling, now spread and gain strength with great rapidity, leaving bushels for the cows when the vines are cut by a late October frost.

SCARCITY OF FARM STOCK.—Here are three large distilleries, giving away or selling for a trifle most of their slop, because they cannot stock either their cattle-sheds or hog-pens; with enormous prices, our farmers have nothing to sell. But to show that the farmers, and not the seasons, are at fault, here is a farmer who winters a large stock well, and he says he has, since the first of January, sold \$700 worth of corn, hay, &c., all to *shiftless farmers*, without hauling away a single load to sell at the villages. Many of these farmers, he says, have sent money West to buy land, or to loan at Western interest, while they let both land and stock starve at home. Some of them sold their corn early at fifty to sixty cents a bushel, and bought of him, in April, at seventy-five cents.

PRAIRIE HAY AND WHITE BUTTER.—In my last, I adverted to the advantages of a grass-growing country as compared with those of the corn-growing region of the West and South-west. A lady, writing from Ossawatamie, Kansas, says: "To be two months without butter, gives one her first notion of its full value." But the butter from prairie grass is white, aromaless, and in stinted supply at that. She advises her brother not to bring his Chautauque horses to Kansas, as they are too quick for the sloughy roads, and may not relish, much less thrive on, prairie hay. But she also gives the bright side of the picture, *con amore*. Tomatoes in blossom and wild strawberries ripe on the first of June, and radishes for tea on the seventh; then the large, smooth gooseberries, and wild plums growing in wild profusion; the everlasting prairie, blooming with many floral specimens, known here only as house-plants. But then there is a paucity of timber and shade trees, except along the creek bottoms, where no man can stay with impunity until cold weather has expelled both mosquitoes and miasma. There are thirteen inhabited shanties in sight from her log cabin, and many more the other side of the knoll, some of which have a family holding two or three *claims*, and every claim is taken up for many miles beyond. The lowest price, even for an open prairie claim, at second hand, was \$350. The Hoosier they bought of left a table, which, after being scraped and washed with weak lye, was a fine substitute for their awkward, cumbersome dry-goods box. But all are in happy exhilaration, amused rather than annoyed or tried by their daily make-shifts and sore privations—relieved always by success and happiness in continual perspective. Even when the prairies dry up blossomless, and the cows fail to give milk, the mighty ears of Indian corn come forward in such abundance as to do away with all fear that hog and hominy will ever again fail; and if health continues, ever-blessed custom soon reconciles both man and woman to the circumstances around them. As all are now in the same category, the equality of social privation makes it not only endurable, but even interestingly picturesque. When a few families, by industry and thrift, get so far ahead of their neighbors as to furnish a painted house, then, and not till then, will social troubles begin.

Waterloo, N. Y.

THE MAY-BEETLE.

MR. HARRIS:—The "field grub," of which such a clear and exact description is given in the interesting communication of Mr. ADAMS, is plainly the larva of an insect of the group or tribe named MELOLONTHIDÆ, in the order COLEOPTERA; and I presume the insect into which these grubs will change, is our common "May-bug," or May-beetle, as it ought to be designated*—though, as we have several other insects nearly related to this, and possessing probably the same habits, it may possibly be one of these. This can only be conclusively ascertained by watching these grubs until they complete their growth, and issue from the ground in their perfect or winged state. As it is so very probable, however, that these grubs are the larvæ of the May-beetle, I send you an account of this insect, it being a vile culprit, both in its larva and its perfect state. And if the field grub of which Mr. ADAMS solicits information is not this very insect, it will be a kindred one, closely similar to it in every respect.

It is a matter of the utmost importance to ascertain the correct scientific name of an insect, a plant, or other natural object—for, though unfortunately such name is often most ungainly and difficult to pronounce by common persons, it still has the great recommendation that it clearly and definitely specifies the very thing to which it refers, all the world over, and will continue to be the name of that thing through all coming time; whereas, common or popular names are liable to differ in different neighborhoods of the same country, and to be changed from time to time. Scientific names are composed of two words, and are quite analogous to the names of persons—one of these words being the generic or family name, and the other the specific or baptismal name. The former name may change from time to time, as when a woman becomes married or re-married; but the specific or baptismal name is never changed. A false name, however, or as we commonly term it, a *nickname*, may happen to be given to a person quite extensively, but no gentlemen will apply that name to him when informed that it is not his original baptismal name. Such names, in science, are termed synonyms. Though many of the readers of the *Genesee Farmer* may already be familiar with this subject, I presume others of them will understand more clearly what is to follow, from the explanation now made. As the May-beetle is one of our most injurious insects, it is particularly important that its correct scientific name be well ascertained and definitely established. And we regret that the position in which this matter at present stands is such that we are obliged to make an unpleasant exposure, yet one which it is impossible to avoid in elucidating the topic before us.

As to the generic name of this insect, some confusion has arisen among authors, from a most dis-

* The custom of calling all insects "bugs," is often denounced as being an Americanism; but this, like many others of these reputed Americanisms, we obtained from our father-land. Thus, the European analogue of the insect we are treating upon, we see is termed the *May-bug* in the English translation of KOLLAR'S Treatise—a clear evidence that we have obtained the name which we give to our insect, from England. And in several other instances, the name *bug* will be met with in British publications, applied to beetles. Still, every person intelligent upon this subject is aware it will be an improvement in our language to give the name *beetle* to all hard, crustaceous-coated insects, which belong to the order COLEOPTERA, and restrict the name *bug* to the order HEMIPTERA, or those flat-backed insects which emit the same disgusting scent as the well-known bed-bug.

genous statement (to use as mild a term as the circumstances will allow) made by Dr. HARRIS, in his *Treatise on Injurious Insects*, page 28 of the first edition, 26 of the second, where he says the genus *Phyllophaga* was "proposed by me in 1826. DEJEAN subsequently called this genus *Ancylonycha*." Now, the number of the *Massachusetts Agricultural Repository* in which Dr. HARRIS' essay appears, (vol. x., pages 1—12.) bears the date of July, 1827! and the name *Phyllophaga* is there merely suggested for this insect and its kindred, without any statement of the marks by which the group can be recognized. In the year 1827, also, a distinguished British entomologist, Rev. F. W. HOPE, published the first part of his *Coleopterist's Manual*, in which this same group is distinctly set apart and clearly characterized, and the name *Lachno-sterna* (i. e., hairy-breast) is given it. This, name, therefore, is clearly the one which the established rules of scientific nomenclature will give to the genus to which our insect belongs, DEJEAN'S name, mentioned above by Dr. HARRIS, not having been proposed until some years later. It is truly painful to meet with such instances of a lack of candor, which must ever remain as blemishes upon the reputation of one now in his grave, who has done so much to advance this branch of science in our country, and done it so well. Let it impress upon us who come after him the maxim, that, in all cases, "honesty is the best policy."

This insect has hitherto been generally entered under the specific name *quercina*, but Dr. LECOSTE has recently ascertained that nearly ten years before his name was given to it, FROHLICH, a German naturalist, had in the year 1792 described it, under the name of *fusca*.

We thus reach the conclusion that *Lachno-sterna usca*, a term meaning blackish hairy-breast, is the correct technical name of our common May-beetle, which has so often hitherto been called *Phyllophaga quercina* in our agricultural periodicals.

This insect is also frequently termed "horn-bug," being confounded with a larger, perfectly smooth and more flattened beetle, (*Lucanus capreolus*, LINNÆUS,) which comes out later in the season. It is thus called more particularly, when, like the true horn-bug, it flies in at the open windows of our dwellings upon warm evenings, which both of them frequently do, to the great annoyance and even terror of the female portion of the household. Neither of these insects, however, can harm our persons; and when they intrude into my room in this manner, I find the quickest way to dispose of the pests, is with my fingers to hold their heads in the candle a moment or two, and then toss them out the window.

The May-beetle is a very thick-bodied, glossy insect, somewhat less than an inch long and nearly half as broad, varying in color from chestnut-brown to black, its legs of a lighter mahogany-red, and its breast pale and coated over with grayish-yellow hairs. Two or three straight, elevated lines are also discernible, running lengthwise upon its wing-covers.

Early in spring, in spading or plowing the ground, these beetles are frequently exhumed, or sometimes, in turning over a large stone, one of them will be found beneath, lying in a smooth cavity or little round hollow in the dirt, like a chicken in its shell. This cavity, or cell, is formed by the grub in the preceding autumn. Turning itself around and around, it presses upon and compacts the dirt and moulds it

into this cell, for its winter residence; and in this state it changes first to a pupa, in which the legs and wing-cases of the insect are seen in their rudimentary state, and afterwards to a beetle, such as we have above described. This beetle lies dormant in its cell until the warmth of the incoming summer penetrates the ground sufficiently to awaken it into activity. It then breaks from its prison, and works its way out of the ground.

These beetles begin to make their appearance each year about the first of May, and become most numerous in the middle of that month. They are sluggish, inactive, and seemingly stupid in their movements. They repose during the day-time, hid in the grass, or any other covert which they find. At dusk, they awake and fly about slowly, and with a humming noise, hitting among the leaves of the trees and clinging thereto, and feeding upon them. They are most fond of the leaves of the cherry and plum, which trees they every year injure more or less, and occasionally they congregate in such numbers as to wholly strip them of their foliage, destroying all hopes of any fruit from them that season. An instance of this kind was communicated to me four years since, by MILO INGALSBEE, Esq., of South Hartford, at that time President of the Agricultural Society of this (Washington) county. He had seventy plum trees, and a number of cherry trees, of the choicer varieties, which never gave fairer promise of an abundant yield of fruit than at that time. But a swarm of these May-beetles suddenly gathered upon the trees, many of them being then splendidly in bloom, and in two nights, the 15th and 16th of May, wholly stripped them of their foliage, so that many of them were as naked as in winter. With their humming noise, these beetles were flying about the trees every evening until about ten o'clock, when they would settle in clusters of eight, ten, twenty or more, and would thus remain until daylight, when they would tumble down from the trees, flying but little, however, and hiding themselves wherever convenient, to stay through the day. These observations are important, showing that between midnight and daylight is the best time for spreading sheets beneath the trees, to shake and beat these insects into them. In a subsequent letter, dated June 29th, Mr. I states that these beetles had then disappeared from all his trees except an Ox-heart cherry, on which about a dozen were found, this being the choicest variety among his cherry trees—indicating that though seemingly such stupid creatures, they are good connoisseurs in selecting their food. And among his plums, it was the Washington, Jefferson, Lawrence, and others of his best kinds, which had been attacked with the greatest avidity. Apple trees, which were standing alternately with his plum trees, were not in the least molested. Meeting Mr. J. a few days ago, I learned that his trees have never been re-invaded by these beetles since that time.

These insects are numerous all over our country. In my own neighborhood they have been common every year, I think, since I first became acquainted with them, more than twenty-five years ago; yet I have here never known the trees to be stripped of their foliage by them, or the turf to be severed by their larvæ, although two or three instances of the latter have been related to me as having occurred in this town, and I have several times heard of the same phenomenon in other places. It appears to be a

most singular and remarkable circumstance in the economy of these insects, that, while it is their ordinary habit to live dispersed and apart from each other, they at times become gregarious, both in their larva and their perfect state, multitudes of them assembling together in a flock, and by their conjoined labors utterly devastating what they attack. Some other insects, however, show this same habit. It is only occasionally that the migratory locust of the East, so renowned in story, congregates together in swarms and flies off to a distance. And instances have occurred in which the common red-legged grasshopper, which is scattered about the fields of our own country, has done the same, in years when it has been unusually abundant.

The history of our May-beetle, and its transformations, have never been fully observed; but everything known respecting it, concurs to show that it is exactly analagous to the cockchaffer or May-bug of Europe, (*Polyphylla Melolontha*, LINN.) and occupies the place of that species upon this continent. The grubs of that insect are about five years in obtaining their growth. The beetles pair soon after they come from the ground, and the male lives but a few days. The female crawls back into the ground and there drops her eggs, which are nearly a hundred in number, after which she again emerges, and being now decrepit with age, she feeds but little and dies in a short time.

Among the natural destroyers of our May-beetle is the skunk, whose food appears to consist of these insects almost entirely, during the short period of their existence. Some cats will also eat them, though I suppose it to be more for sport than food that grimalkin is frequently seen at twilight stealthily creeping through the grass of the door-yard, and springing upon these beetles as they crawl therefrom to take wing. Our domestic fowls are also very fond of the grubs. But of all the destroyers of these insects, no other animal can vie with the crow, which frequently follows the track of the plow, to feed upon the grubs of the May-beetle which are turned up thereby.

With regard to remedies, we may observe that in Europe the experience of centuries has failed to discover any efficient measure for destroying a similar insect during the larva period of its existence. And concealed in the ground as these grubs are, it is not probable that any substance can be applied to the soil, of sufficient power to destroy them, without destroying also whatever vegetation is there growing. But where these grubs are so numerous as to sever the roots of the grass and pare the turf, in the manner related by Mr. ADAMS, I think there is a measure which may readily be resorted to, whereby they may be exterminated; whereas, if they are permitted to remain unmolested, their ravages will probably continue to extend farther and wider, and another generation will succeed them, which perhaps will be more numerous than the present. I would recommend the placing of a temporary fence around that part of the meadow or pasture which is so thronged with these grubs, and enclosing a number of swine therein, thus for a while converting the patch into a hog pasture. The propensity of these animals for rooting and tearing up the turf, we are all aware, is for the very purpose of coming at and feeding upon the grubs and worms which are lurking therein; and who knows but this rooting propensity, which has all

along been complained of as being the most troublesome and vicious habit which belongs to swine, may after all turn out to be the most valuable and necessary to us of any of the habits with which they are endowed? At all events, it is one of man's greatest achievements to so observe and study the habits and instincts of the lower animals, as to devise ways whereby those habits and instincts, instead of being exerted to his injury, are brought into his service and made to work for his benefit. Therefore, do not let us, lords of creation, allow these vile field grubs to rob us of two or three acres of grass, without obliging them to give back to us an equivalent for it. Let us have the value of that grass returned to us in the increased size and thriftiness of our swine. I cannot but think these animals, confined upon a spot so over-stocked with grubs, would in a short time ferret out and devour every one of them, leaving the soil cleansed, mellowed, manured, and well prepared for being immediately laid down to grass again, or for receiving any rotation of crops for which the proprietor may deem, the spot best adapted. It should be observed that when cold weather approaches, these worms sink themselves deep into the ground, so as to be beyond the reach of frost during the winter, and return back to near the surface again when spring returns; so that at this date there will probably be none deeper than hogs are accustomed to root. It will be interesting to know how long a given number of swine will be occupied in cleansing an acre of ground containing from twelve to twenty of these grubs in every square foot. And I earnestly hope those who have lands which are devastated in the manner spoken of, will try the experiment which I have now proposed, and will make the result known to the public, whether it be successful or otherwise.

When these grubs have completed their growth, and come abroad in their perfect state, another opportunity is presented for destroying them and preventing their future increase. Every year, when the middle of May is approaching, cherry and plum trees should be inspected each evening, particularly our choicest varieties of these trees, to ascertain if the May-beetle is collecting in numbers upon them; and if they are, they should immediately be shaken off upon sheets spread beneath the trees, and emptied into bags or covered pails, and should be killed by immersing them in boiling water, or pouring this upon them; after which they may be fed to the swine and poultry. Many years ago, a writer in the *New York Evening Post* stated that trees could in this manner be entirely freed from these beetles in a very few evenings. Trees from which two pailsful were collected the first evening, furnished a much less number upon each succeeding night, until the fifth, when only two beetles could be found upon them.

Salem, N. Y.

ASA FIRCH.

A GLANCE AT VIRGINIA AGRICULTURE.

MESSRS. EDITORS:—A recent visit to a portion of the tide-water country of Virginia, inclines me to write a few lines for your paper. At the North, we are apt to have incorrect ideas of the quality and profit of Southern agriculture, and we find it difficult to reconcile slave labor with that thorough development of the resources of tillage which we think we have in our own region. One fact is evident, both North and South, and that is, that the earth is, as a

general rule, very inadequately cultivated, and that the bounteous bosom of our common mother is made to yield far less than it should. Superficial and even ruinous cultivation are far too frequently seen, and hence lands "run out," lose their productiveness, are left to waste, and their occupants seek other virgin soil, where the same destructive experiment may be repeated.

A more frequent interchange of personal views, and more frequent observation of various sections of our country, by the residents of other portions, would serve to correct many errors, and show us that our preconceived ideas were baseless. A mere census return, which rates New York land many dollars an acre more than that of Virginia, may yet not show that New York tillage is therefore proportionately the more profitable. Labor and the price of living may be proportionately higher here, and thus the net returns of the investment be much diminished. The high price of land, is not always the symbol of prosperity or thrift.

It is undoubtedly a mystery to a Northern man, how the Southern farmer can exist and make money, with so many hands to support, and yet the Southerner does this, and, in multitudes of cases, without ever resorting to the sale of any portion of his laborers, as he might do where the "peculiar institution" exists.

In tide-water Virginia, the products are corn, wheat, oats and potatoes. Fifty bushels of corn to the acre, or twenty of wheat, are regarded as a good yield. The farms are large, often of one thousand acres, but more frequently of from three hundred to seven hundred acres. The farmers own from thirty to three hundred slaves—and a fair per centage of field hands is one to seven or eight, often not more than one in ten or twelve. There are farms on which may be found over fifty slaves yet too young to work, and as many more who have passed the age of active labor, and all these to be sustained by the labor of the few field hands I have named. The farmers have plenty of horses and mules of fine quality, and numbers of cattle of fair quality. Hogs are abundant, but small—one hundred and fifty pounds at killing time being the ideal of excellence for Virginia bacon.

Plows and hoes are hardly up to our Northern standard, but the first quality of reaping and mowing machines is used. The land is underlaid with deposits of marl, but the farmers find it cheaper to buy guano, and this they use freely. No where, is scientific agriculture more thoroughly practiced, so far as fertilizers are concerned. The negroes are comfortably housed, fed and clothed, and the whitewashed "quarters" are like the humble cottages of our suburbs. We see, occasionally, tumble-down and rickety buildings, but the hand of the slothful man curses towns and settlements everywhere. There is in tide-water Virginia, an appearance of thrift and prosperity which is calculated to surprise a Northern man who turns from the prejudiced observations of some books and newspapers, to look at life as it actually presents itself.

Land here is worth from \$12 to \$40 an acre. The latter price bringing a well cultivated place, with buildings in perfect order. Some land is cheaper, even, than the lowest price I have named, but it is worn-out land, unfavorably located, and with poor buildings, if, indeed, it has any at all. I am acquainted with one farm in the region referred to,

which, eight years ago, cost about \$4,200, and included over three hundred acres. It has in this time paid for itself, and sustained thirty slaves, of whom five were field hands. It is now in prime order, with good buildings and "quarters," and is valued at over \$12,000. It has been a handsome source of revenue to its owner, who is justly proud of the results of a prudent management. I know another farm, in which the investment is \$17,000, and which yields a revenue, yearly, over and above its expenses, of \$10,000. In this case, the proprietor uses the labor of hired slaves, and of course does not have a host of unproductive young and old negroes to support. These two instances, out of many others, I have noted down, not as extreme cases, but as good examples.

Virginia has a milder climate than ours. Its rivers teem with fish and oysters. It is generally healthy. It is an agricultural State, emphatically, and it returns a handsome support to those who cultivate its soil lovingly and prudently. Its houses and furniture are plain, but its people are given to hospitality, and their tables groan under a profusion of good things. Virginians delight in showing up strangers, and not less in exhibiting to them the peculiarities of the system under which they live. It would require time to break in a Northern farmer to their way of doing things, and perhaps he might never succeed as well as they do, with the class of labor they employ. But some might learn lessons of patience and contentment, to say nothing of the effect that might be produced upon a too common, and really stupid, prejudice against "book-farming," as they style scientific agriculture.

The rewards of agriculture are rarely as large and tempting as those of other professions, but its failures are less disastrous and less numerous. The true policy, is a small farm and a careful tillage, which shall cause the willing earth to do its best, and which shall make many ears of corn to grow where only one is now produced. North and South, the evil of large and unmanageable farms is too common. Acres of land are to the cultivator like the Sybilline books, of which a portion was successively destroyed, till out of the original twelve only three remained, and for these the same price was asked as for the whole original number. More money is often made from fifty acres than from two hundred. Deep plowing and steady care are essential.

P.

Western New York, July, 1837.

OBJECTS OF HOEING.

MESSES. EDITORS:—The publication of my crude thoughts on the "Objects of Plowing," in the April number, encourages me to send you a few remarks on the use of another implement—one often in my hands, now-a-days. I mean *the hoe*—that universal soil-stirrer among all nations which till the ground.

"What are the objects of hoeing?" They are three, and may be stated as follows:

1. We hoe to mellow the soil.
2. We hoe to destroy weeds.
3. We hoe to form hills.

How shall we use the hoe to best secure these objects?

1. The cultivator, the horse-hoe and the like, are a pre-requisite to the hand-hoe in all field culture. Let them "do their perfect work" in mellowing and cleaning the soil. Then "take up the hoe"—but

first, look at what there is to be done. The soil in, and immediately around, the hill, remains unstirred. It is to be *mellowed*. Strike the corner or side of the hoe, well in, first on one side of the plants, and then the other, and draw it toward you, so as to loosen the soil without much displacement, at least two inches deep. Do this as often as is needed to thoroughly loosen all the soil, untouched by the cultivator or horse-hoe.

2. On good ground, planted and hoed in season, to *destroy the weeds* will be a secondary consideration—there will be so few to destroy. But when plentiful, first cut them up, scrape away the surface-earth which contains them, and in the course of the week *bury* them out of sight. Very weedy ground requires careful hoeing—such hoeing and culture as will *kill the weeds*, in one way or another.

3. The third use of the hoe—to *form hills* for plants—is fast getting obsolete or out of date. Potatoes only require hills—and these should be slight mounds only, not steep pyramids of earth. How does an unskilled workman undertake to hill potatoes? He strikes in his hoe so near the roots as nearly to dig them up, he chops and haggles at random, forming a botch in the end. A skillful hand, (myself, for instance!) first, with two strokes of the hoe, clears away the weeds; with two or four more, mellows the soil in the hill; and with about six more, forms a perfect hill, regular in shape and slightly dishing in the centre, to take a little extra share of the rain to the roots. It is done quickly, easily, and *philosophically*, or, with a reason for every movement.

The hoe—*par excellence*—is light and thin in the blade, and “*set right*” on a long, smooth, springy handle, with a sharp edge, well tempered, “too hard to batter, and too soft to break.” The blade should not be too long, but nearly twice as wide as long, so that when we strike with the side, we make a narrow, deep cut—so convenient in *mellowing* the hills.

In conclusion, “The Objects of Hoeing” can only be accomplished by keeping these implements bright, and their handles shined, by *constant usage* for at least six weeks after planting. *Corn grows by hoeing*—by agitation of the soil. Make the horse-hoe do all that it can—let the hand-hoe finish up the work. But my *Sorgho sucre* calls for the hoe, so I will lay down my pen, take that up, and go at it.

B. F.

APPLYING AND LEAVING MANURES UPON THE SURFACE.

MESSEES. EDITORS:—I have been in the practice of applying manures free from noxious weeds, by spreading and leaving upon the surface, at any and all times of year when most convenient; but prefer to apply upon close-cropped grazing or meadow land, in the autumn, winter or early spring, as grass, when much grown, is partially and temporarily killed by the application.

When manures (of the ordinary quality and quantity) come in close contact with the soil, the grass readily penetrates and thickens upon them, the manure operating at once as a mulch, a fertilizer, and a retainer of ammonia, or other atmospheric elements, and forming a greatly increased and productive turf or sod, of unappreciated value to the succeeding crops, whether taken one or many years after the application.

In this way, farmers who choose may have the barn-yard mostly cleaned out before the busy season comes on, nor need there be any fear of dissipation of values, as the rains and dissolving snow will distribute the more soluble portions among the soil, and the growing grass will seize upon the substance with as much avidity as a hungry pig will upon clover, and the sun will evaporate nothing but pure water. As to the gases, are they not evolved from all manures when brought into a state of fermentation, and to a greater extent than when manures are in contact with the appropriating activities of living vegetation and with the soil?

I have long been in obscurity as to the natural processes which, as is claimed, take so much value from manures spread and left upon the surface, and have given limited suggestion to the practice recommended by your correspondent, JOHN JOHNSTON.—Nature, a somewhat respectable and reproductive “institution,” of long standing, and which, as proceeding from an all-wise and beneficent source, never makes a mistake, invariably spreads her manures in the autumn. She draws her nurslings under cover, and lays down her leaves and surplus grasses to protect them from the cold, and yield their substance to the next year's product; and mark how uniformly, in our climate, a blanket of snow is laid upon the earth before the advent of a cold snap.

I believe the recommendation of Mr. JOHNSTON, that manures should be applied in the autumn, will be sustained by experience; and that on this subject the Doctors of Agriculture are wise beyond what is written.

JOHN McVEAN.

Scottsville, N. Y.

CULTIVATION OF WINTER WHEAT.

MESSEES. EDITORS:—The cultivation of wheat under different circumstances or in different localities, like various diseases incident to the human system under different circumstances, requires different treatment. He who assumes to write a specific routine, or prescription, for the cultivation of wheat upon the hard granite hills of New Hampshire, upon the deep alluvial prairies of Illinois, upon the cold, clayey hills of North-eastern Pennsylvania, upon the deep rich loam of Western New York, will find, in my opinion, to say the least of it, an “up hill” business, or rather, perhaps, they who attempt to grow wheat in all these localities from the same specific formula, will fail in some of them. I know nothing about the raising of wheat in New Hampshire, Illinois or New York, but I wish to speak of North-eastern Pennsylvania.

The soil here is not peculiarly adapted to the growing of wheat. It is wanting in lime, I suppose, and other ingredients that go to make up the elements of a good wheat soil. Though some good crops have been grown here, especially when the country was new, yet now, as our lands grow older, one of our most implacable enemies is a certain Mr. Frost, more familiarly known, perhaps, as “Jack Frost.” For us, in most cases, to sow winter wheat on old ground, thoroughly summer fallowed and pulverized, would be equal to throwing the wheat away, and losing all trouble and expense of preparing the ground. And in order to avoid the action of the said Mr. Frost as much as possible, some of our farmers pursue a course something like the following:

Select a good, dry, warm and rich field, of two years old clover sod; invert it sometime between the middle of July and the middle of August, with or without the crop of clover, as you can afford, (better with, no doubt,) to the depth of from four to six inches—not very deep, unless the soil is deep and strong, because the cold subsoil will retard the starting and growth of the plants. This plowing can be done on odd and livery days during haying time, when the weather is unpropitious to mow or gather in, and not too wet to work the ground. After the ground has been nicely and evenly turned, and lain till the surface has become dry and warm, put on a harrow and give it a thorough harrowing, and then, if you have it, draw thereon ten or twelve loads of thoroughly decomposed manure, or one hundred and fifty to two hundred pounds of guano, to the acre, and spread it evenly and harrow in well. This will supply food for the plant till it can support itself, and give it a good start. Do not allow the harrow teeth to cut in deep enough to disturb the sod.

As to the seed, procure only the most hardy and productive varieties, combined with good quality. If you raise your own seed, so much the better. To prepare seed, select from your growing wheat a part of the field where it will ripen early and well, (not prematurely, from a want of depth of soil or otherwise,) and where the plant, head and kernel will be fully developed; from this, clean out all rye, chess, cockle, or other vicious seeds, and let this plant stand a week longer than that you cut for family use, or at least until it fully matures; and when you thresh it, do it with that old-fashioned threshing machine, to wit, the *flail*—then you will have no cracked or broken seed. With a fanning mill, separate it from the chaff, clean the chaff from the floor, and prepare the mill for ranning the wheat through again; repeat this operation till you have reduced the bulk of the wheat one half, and separated all the smaller and shriveled seed, leaving nothing at the tail end of the mill but the largest, plumpest, healthiest and most vigorous kernels of wheat. Of this, sow about one and a half bushels to the acre—some prefer more, some less. With a light plow, plow it in with light furrows, to the depth of two or three inches; and I have known it cultivated in with a corn cultivator, with first-rate success. Drilling, perhaps, would be better, but we are unacquainted with that mode of seeding. If it should be plowed in, do it in that direction that will most readily conduct the water from the field; if harrowed, go over it afterwards with a good roller, and then, if there should be any hollows or spongy places where water would be likely to stand, cut some shallow furrows through them often enough to prevent any possibility of water being left standing. Sow from the 25th of August to the 5th of September.

The culture of rye is similar, only an older sod and more impoverished soil can be sown. An old pasture or meadow, with a crop of hay first taken off, will do. I have known an old pasture, probably of thirty years' standing, so treated with excellent success, and one, too, so flat that water on it did not know which way to run, but through the wetter part of the season stood upon the ground—that is, in the midlands and hollows. A good sod tends to keep it above the water, while it serves as a "backbone" against frost. Sow from the first to the middle of September.

Something after this manner we treat winter grain in this section, and I have no doubt the same method would be beneficial in other parts where the soil and obstacles to be overcome are the same.

Susquehanna, Pa.

UNCLE SAM.

KEEPING SHEEP ON GOOD LAND.

MESSRS. EDITORS:—I have heard it said by many for several years past, say at least for fifteen, that sheep could not be kept profitably on our best lands, and I have heard the same in addresses by learned and fluent speakers. But I have always dissented from such doctrine. I have seen the beginning and ending of many undertakings to keep sheep on our most valuable lands, and believe I know why they did not make them profitable, and have long had a wish to publish my views on the subject, but they being so much at variance with the opinion of some of our most learned men, I felt a diffidence in giving them.

I never saw a farmer begin with a small flock of sheep, in this neighborhood, who was not surprised how much they paid him for their keeping; but whenever he increased them to hundreds, and still kept his former stock of cattle, then came the time that they would not pay. They were turned into the fields as soon as the snow was off the ground, to run around to get their living, and often they would almost eat the surface of the earth; consequently, they became very poor and overrun with ticks, and the ewes had no milk for their lambs, and, of course, few lambs were raised. They sheared light fleeces, which would not pay; for having been turned out six weeks before any grass began to grow, they ate off all the old wool, if there was any on them, and when the grass began to grow, they picked it up as fast as it appeared. Then they would be put on fallows, woodland and pasture, alternately, through the summer, and after hay was cut, put in the meadows to keep them alive, which will almost always ruin the next hay crop. They went in to winter poor, and of course, many would die during the next winter. The owner then concludes that sheep do not do well kept long on the same farm, and he will sell them for whatever he can get for them, and abandon sheep farming. Now, I do not here state only one case, but I have known a great many such cases during the last twenty years. I have also heard learned men say, that our low, rich land was not congenial to keeping sheep; they wanted high, hilly land. Now, Messrs. Editors, I never saw land *too low* to keep sheep, if dry; and the hills, *if wet*, will not answer for sheep.

The way to keep them profitably on good land, or any other land, is to keep them as good farmers keep their cattle. Give them good, dry yards and sheds for shelter in winter, with feed enough to keep them thriving—yes, *improving*—all winter, keeping them in the yards until there is a fall bite of fresh grass, and give them *enough of it during summer and fall*, and I have no doubt that every farmer on the best, or worst farms, will find they will pay as well for what they consume as any stock he keeps. It was perfectly absurd for men to think they could begin and keep from one hundred to two hundred sheep over and above their usual stock, yet many, very many, undertook to do so some twenty to twenty-five years ago; hence, sheep would not pay on a cod land. Seven or eight sheep should have as much feed as a four year old steer, and with that they are a safer in-

vestment than the steer, and in general will pay better; but so long as farmers expect to keep sheep in woods and fallows in summer, and pick around straw stacks in winter, they will not pay. The true way to winter sheep by wheat raisers, is to feed straw very plentifully for fodder, and give a bushel of corn, or its equivalent in other grain, to each sheep during the winter. In this way they will come through winter far better than when fed on ripe timothy hay, and at much less expense. And if he wishes them to pay still better, let him feed each sheep a bushel and a half of corn, or oil-cake meal, and I can guarantee they will pay very well. Oats, peas or buckwheat will answer, but they will require about two bushels of oats to one of corn or oil-cake meal, and about one and a half bushels of buckwheat to one of corn. I know nothing that pays better for what they eat than sheep, and I should like to know what animal will pay for bad feeding. If farmers would only keep sheep as they ought to be kept, there would be no more talk about "sheep not paying on good land." *Land cannot be too good for sheep*; such is my opinion, and I have kept sheep on both good and poor land, for many years, and I can make more interest on my farm by keeping sheep, calling the land worth \$100 per acre, than by keeping them on many of the hill farms that I am acquainted with in this State, calling these farms worth \$15 an acre, and I question if any of them can be bought under \$25 or \$30 per acre.

JOHN JOHNSTON.

Near Geneva, N. Y.

CATTLE DISEASE IN OHIO.

MESSRS EDITORS:—In consequence of the appearance of a severe and fatal disease among cattle in some part of Portage county (Ohio) the past winter, the Farmers' Association of Edinburgh appointed the undersigned a Committee to investigate the subject, and ascertain, if possible, the nature, cause and cure of this malady. The report of this Committee we herewith forward for publication in the *Genesee Farmer*, together with a resolution adopted by the Association at the close of an instructive discussion upon the adoption of the Report.

REPORT.

The disease is not caused by freezing, neither is it what has been called hoof-ail, foot-rot, or fowls. Its symptoms seem to be a deadness of the end of the tail, extending upwards till in some cases the flesh separates from the bone and falls off. About the same time, there is a purple appearance just at the edge of the hair, above the hoof. It then commences swelling, becomes feverish, extending upward to the ancle, and in some instances causing a separation of the coffin-bone from the postern joint. The lameness is confined entirely to the hind feet. The blood is pale and thin, and in most cases the animal retains a good appetite till near the last. The cause we apprehend to be feeding on hay containing ergot (a parasitic fungus growing within the glumes of various grasses) in considerable quantities. We arrive at this conclusion, from the fact that the hay fed by one individual who had lost a large number of cows contained much of this article, and also that the farmer from whom he purchased the hay lost cattle from the same disease, and in both instances cattle fed on other hay were not affected. In every well-marked case of this disease, it has been ascertained that the hay on which the animals were fed contained the ergot. The hay in which the ergot was

found the most, was the kind called the June, or Spear-grass, growing in old meadows where the soil is rich and the growth rank.

The severe frost on the 31st of May, 1856, is supposed by some to have been the cause of this disease in the grass, by destroying the vitality of the seed before it arrived at perfection; while by others it is attributed to the extreme warm growing weather in June causing an overflow of sap.

Although we consider the whole subject involved in much obscurity and uncertainty, and requiring further investigation, yet we are satisfied the best manner of treating the disease is immediate resort to restoratives, and a change of diet, whereby an increase of animal heat and vitality is obtained, at the same time making an application of suitable remedies to the affected parts, by cutting off the toes until they bleed, and blue vitriol moderately applied to the foot has in several instances been found beneficial. A free use of charcoal and salt in various ways is undoubtedly a good preventive; and a careful examination of the hay or grass on which stock is fed is indispensable—if ergot is found in hay, it may be removed by thrashing or tramping.

Of the specific nature and properties of the ergot in hay, or whether they are identical with that of rye, we are not well informed. The immediate effects of the latter in large doses is well known, but it has no affinity to the ordinary known effects of vegetable poisons. What effect would be produced by its gradual and continual use, we are not in possession of sufficient information to warrant us in speaking positively; but we do suppose, after a careful examination, that it operates on the blood of the animal, and unless immediate remedies are applied it proves fatal.

P. BARRON, M. D.,

R. M. HART, Esq.,

J. Y. PEARSON,

JONAS BOND,

Committee.

The following resolution was unanimously adopted:

Resolved, (inasmuch as the evidence adduced is conclusive,) That ergot in hay is the cause of this disease. The Association cannot decide that it is the real cause of a poison being introduced into the system, owing to our inability to analyze this substance; therefore we desire to ask the editors of our agricultural papers for more information, and to obtain a chemical analysis of ergot.

Edinburgh, Portage Co., Ohio.

SOUND CORN.

MESSRS. EDITORS.—In looking over the last volume of the *Farmer*, my attention has been called to an article on this subject, from the pen of your correspondent, J. C. ADAMS; and, as I think he holds some mistaken views, it may not be out of place for me to give some ideas with regard to this subject, which is of importance to every farmer.

As to planting in rows, east and west, I believe Mr. A.'s reasoning is correct. But I think he is mistaken as to the best manner of securing corn and corn-stalks in autumn. My plan is something like this: Cut it up by the roots, before the heavy frosts set in; tie in small sheaves, with a straw band, above the ear; set enough of these together in a shock to stand sufficiently firm; then secure it with two or three bands, near the top. It may stand in this way until sufficiently dry to be husked. My reasons for this mode are, that the corn is without doubt sounder than when left on the hill; and it has been

proved, by actual experiment, that corn cut up by the roots and cured in shocks, is about four pounds per bushel heavier than the same variety, on the same kind of ground, left to ripen in the hill. The reason of this seems to be, that when cut up before it is killed by the frost, the sap then in the stalk goes to maturing the ear.

Mr. A.'s picture of a person seated upon a bundle of damp corn stalks, endeavoring to extricate the slippery, half-rotten ears from their mouldy coverings, is a picture of some slap-dash farmer, who leans his corn against the fence, or pole set up for that purpose, to avoid the trouble of shocking. When such a course is pursued, mouldy, half-rotten and slippery ears are all that common sense would look for. But trying fairly the plan I have laid down, and when hushing time comes you will find your corn sound and dry; and besides, you will have the thanks of your dumb animals for the excellent fodder.

Indiana Co., Pa.

W. H. M.

A FARMER'S OPINION OF "AGRICULTURAL QUACKERY."

MESSEURS. EDITORS:—In order to derive the greatest benefits from agricultural pursuits, it is necessary that every farmer should contribute his "mite," in the way of *practical* experience, through the pages of some reliable agricultural journal. Let every tiller of the soil, of however limited an extent, write out his own observations and experience—not giving explosive theories, or "quackery," as you term it in your July number, in lieu of sound, practical experiments. In this way, each writer, as well as reader, will be benefitted, as thought begets thought; each adding his suggestions to those already added, is the track over which all great improvements have been forced to pass before their principles have become fully developed. I would suggest that we may assist the great minds who are continually laboring to benefit the farmer by applying the various sciences to the cultivation and improvement of our different soils, by adding such ingredients as are found to be deficient.

We certainly have derived great benefits from the labors of many eminent chemists abroad, as well as from the efforts of great minds at home. Mechanics, also, bestow much benefit, by studying to improve labor-saving machinery. Still, we may arrive at greater perfection, by giving, through the Agricultural Press, our suggestions for improvements in the practical workings of the different agricultural implements. It is a fact that improvements in mechanical pursuits are disseminated with much more rapidity than any in connection with the farming interest; and why is it so? It may safely be said, it is owing, in a great measure, to "agricultural quackery," or, in other words, to promulgating theories that will not stand the test of experience. This must be remedied, by writing out plain, simple facts, as noticed on the spot from day to day. Perhaps it is owing to this same "quackery," that the deep prejudice against "book farming" is perpetuated, which prejudice drives many young aspirants for fame from the paternal roof, to seek room for their really promising intellect to develop. Thus are our best minds drawn from one of the noblest pursuits, in which they might shine and be benefactors to their race, and in which there is room, to some of the

crowded professions, in which their hopes, in more cases than a mere majority, are totally wrecked—where they drag out their existence, nothing more than lesser lights, never realizing the independence and happiness they anticipated, when, deriding the low calling of a farmer, they entered the office of some half-successful lawyer, or a more bustling doctor. Still, agriculture may be made as honorable in its progress as any other pursuit—aye, it has already become a profession from which many *working farmers* are selected to fill honorable and responsible posts under government. The ignorance and prejudices formerly existing among farmers, as a class, are fast giving way before the lights which are brought to bear upon them by the batteries of science.

I have been lead to these thoughts by reading your truly excellent remarks on "Agricultural Quackery;" and it is that same quackery which operates on the agricultural community with such effect as to cause them to be suspicious of, and slow to adopt, the theories advanced by political farmers. It cannot be charged to a lack of intelligence on the part of the farmer, but rather to those who profess to have the facilities (which the laboring farmer has not) and disposition to prosecute the necessary researches, through the aid of science, and who, for selfish purposes, near election times, advance false, yet somewhat plausible ideas, as being the result of substantial experiments. As you continue to expose quackery in all its forms, where connected with agriculture, so may your corporosity, (circulation,) like an alderman of the old school, continue to increase in rotundity, (number of subscribers,) until you can view yourself (the *Genesee Farmer*) with great complacency. D.

Gates, Monroe Co., N. Y.

REASONS WHY OUR AGRICULTURAL SOCIETIES SHOULD AND SHOULD NOT OFFER PREMIUMS FOR A PUBLIC EXHIBITION OF LADY EQUESTRIANISM?

[The following extracts are selected from some of the numerous articles we have received on the above subject.]—Eds.

Our Agricultural Societies should offer premiums for lady equestrianism, in order to induce young ladies to ride on horseback. The horse is a noble animal, and every lady in the country ought to be able to manage him, whether in the harness or saddle. Horseback riding is very conducive to health and good morals; it imparts the glow of health to the cheek, and gives vigor to the whole frame. If it were not for the premiums offered by our Agricultural Societies, many young ladies might not take pains to learn to ride, and consequently be deprived of that exercise, which, above all others, they need for the promotion of health. E. A. T.

Clarkstown, Rockland Co., N. Y.

The great object of Agricultural Fairs is to improve the farming interests of the country—to induce farmers to cultivate the soil in a better manner, to breed and rear better stock, to procure and use the best farm implements, and to influence the ladies to effort, to excel in domestic products and manufactures. By the exhibition of superior stock, superior farm products and the like, an interest is awakened in the

subject. Men thus have a practical demonstration of what can be effected. They see the results of well directed efforts—of labor conducted on scientific principles.

But what has lady equestrianism to do with improvement in farm management? When practiced at our Fairs, it is only a *parasite*, that destroys the interest designed to be awakened—a gangrenous excrescence, that eats out the vitality of the Fair. The attention is diverted from the real object of the day to one that is foreign, and deleterious to the interests designed to be promoted. Why, then, should it be encouraged? Crowds of people, both old and young, both male and female, will stand for hours around the ring to witness the performance, while other exhibitions, of substantial worth, hardly receive a passing glance. With a large share of the people, this is the *lion of the day*—the great object that attracts them there. Even before the day arrives, and during the exhibition, the question is often heard, “At what hour are the ladies to ride?” thus showing that, with many, this is the all-engrossing thought. The attention is thus diverted from the great object of the day, to one in no measure calculated to benefit the community. Even farmers themselves, instead of seeking for mutual improvement, by an interchange of opinion respecting the best methods of farm management in all its varied features, and in discussing the merits of the animals and articles exhibited, will suffer their attention to be engrossed by this exciting amusement, and thus the benefits to be derived from the Fair are in a measure lost. HUBERT.

THE object of our Fairs is to advance the science of the farmer; and to offer premiums for lady equestrianism, is a direct perversion of their object. Our opinions of what a *real lady* is, differ very much indeed; but *I do think* that no *true woman* would thus expose herself to be hooted at and cheered by a crowd of low, sensual men. And besides this, she does no more for the *advancement of agriculture* than she does for the advancement of *astronomy*, and has no more right to a premium at such places, than she would have before a company of scientific men, who had met for the investigation of matters relating to the above-named science. D. S.

Salem, Ohio.

TEACHING ANIMALS.

MESSEES. EDITORS:—The farmer is the “school-master” of his herds. They are in the habit of doing daily as he allows them to do. They show training, or the want of it. They fly at his approach, or welcome him. They are gentle, or not, as he teaches them to be. They watch his feet, if he is *accustomed* to kicking them. They kick back, if he allows it.

Nothing adds to the market value of farm stock more materially, with so little cost, as the habits acquired in youth. The cow, the horse, the ox, and the dog, are valued much according to their habits or education—so is the man. The horse is, frequently, carefully trained—so is the dog; the ox and cow are as frequently “walloped into duty” as any way. I cannot see the propriety in offering premiums for well-trained speed horses, and not for plow or draught horses, or oxen and well trained cows. In real importance to the farmer, the latter are far preferable.

I would wish to urge upon the farmer, and the farmer's sons, the importance of careful, thorough training of all farm animals. Use tenderness and gentleness, at all ages, and you will see them manifest pleasure rather than fear at your presence. In teaching them to work, or to perform any duty, you need to be thorough, not harsh—kind, not cruel—and your forbearance will gain their labor, and your kindness their love. JNO. SANFIELD.

CLEAN MEADOWS.

MESSEES. EDITORS:—The importance of having a clean meadow, with a smooth and level bottom, is known to those who have mowed on both rough and smooth bottoms; they can speak from experience. I ask them if it is not better for their boys to pick up stones and roots on the meadow, when they are not at school, than to spend their time in idleness? If they have no boys of their own, is it not better to hire men or boys in the spring to clean the meadow, at the rate of from four to six shillings per day, than to pay a man ten or twelve shillings, in haying, to mow it, and have him several days longer about it than he would have been had it been smooth?

What is there that dampens one in their success, in their first attempt at mowing, more than to have their scythe strike a root, which, rolling over or fastening on the edge of the scythe, destroys the motion, when several lighter strokes are necessary to straighten it out before the mower can proceed, and frequently not until he has whetted his scythe anew? The heel of the scythe should run near the ground—therefore the necessity of having the meadow clean and free from loose stones and roots. Farmers, if you have a boy who is learning to mow, give him a good scythe and good grass to commence with, and then let him go ahead. W.

TO CLEAN COCKLE OUT OF WHEAT.

MESSEES. EDITORS:—Having written you about chess, I will say a few words about cockle, which I have found far more trouble in cleaning out of my wheat and land than chess. I sifted the cockle out by hand for some years when I first began farming here; but this I found a slow process, the sieves here being so small. Afterwards I went to a fanning-mill maker, and ordered him to get a screen made for my fanning-mill, considerably coarser than those in use. After getting that, and by letting the wheat run slowly through the mill, and turning slowly, all the cockle ran through the screen into the box under the fanning-mill. In that way I got clear of cockle. True, a considerable quantity of small wheat ran through the coarse screen along with the cockle, but it was not lost, and I had made clean seed, far better to raise wheat, in place of the chess and cockle. I guarantee that the plan for cleaning both chess and cockle will answer. I also guarantee that neither will grow unless sown, either by man or beast. So long as my woods were not fenced, I saw lots of chess, cockle and pigeon weed growing there, from the droppings of my neighbors' cattle.

Near Geneva, N. Y.

JOHN JOHNSTON.

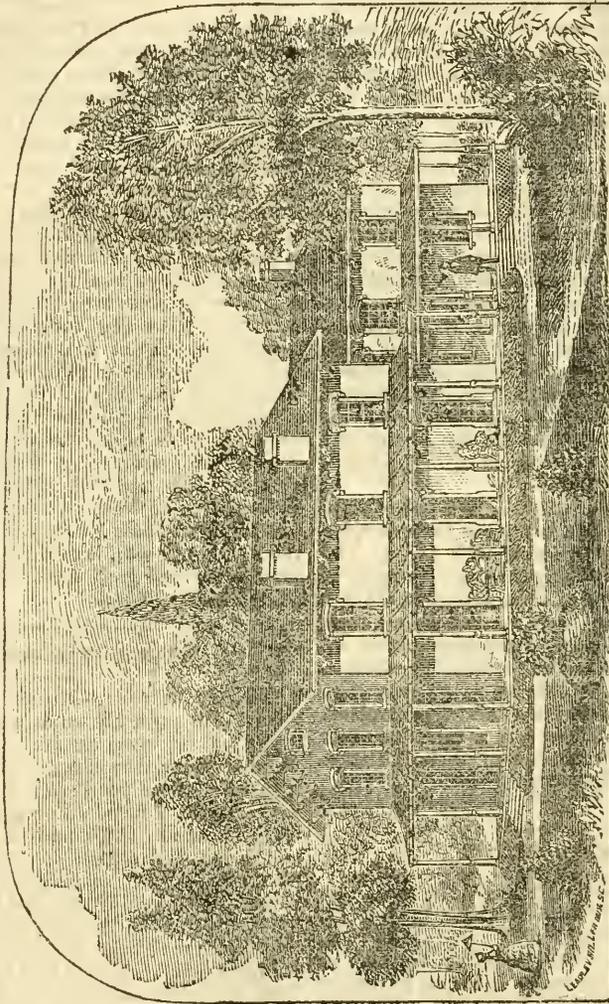
It is as important to take good care of animals, as it is to procure those which are good.

DESIGN FOR A BRICK FARM HOUSE.

THE accompanying plan of a commodious farm house, I think may be worthy the attention of some of your readers. The exterior is plain, yet having a pleasant appearance. The absence of needless ornaments gives it a substantial look, which is always desirable in a home. The broad verandas afford a pleasant place for the weary farmer to sit and enjoy the cool evening breeze, after the toils of the day

are over. The interior arrangements will be found, I think, convenient and comfortable.

This house should be built of brick, in the bracketed mode. The window caps and sills should be of iron, or heavily wrought wood, and all the wood-work should be made in a substantial manner. The house should be situated in a moderately level country, facing the west and south. It should be pretty well surrounded with trees and shrubs, which will serve to give it a pleasant appearance. It is impossible to



BRICK FARM HOUSE.

determine definitely the cost of erection, as there is so much difference in the price of labor and materials at different points. Here the cost would be from \$1,500 to \$2,000, according to the manner of building.

DESCRIPTION OF THE GROUND PLAN.—A, main hall; B, parlor; C, bed room; D, living room; E, dining room; F, principal stairway; G, kitchen; H, pantry; I, bedroom; J, back stairs. A wood-house should be erected back of the kitchen, but which is not shown in the plan.

The second story is arranged as follows: Over the

parlor, (B,) is a bed room, 12 by 16 feet. Over C is a bed room, 10 by 12 feet. Between these rooms are two closets, 4 feet wide, one communicating with each room. Over D is a bed room, 12 feet square, and over E is another of the same size. Between these rooms are the stairs leading to the attic, and under these stairs are closets communicating with each room. Over the kitchen are two large bed rooms, and a store room.

Although in general so little is said of cellars, yet they are as important as any other part of the house. For a house like the above, I would arrange the cel-

lar in this manner: The inside entrance should be under the back, or kitchen stairway. There should also be a spacious entrance from the outside, or from the wood shed, leading into the cellar. Under the kitchen, there should be one large room for storing provisions, &c., for family use. Under D, I would have a milk room, 12 by 15 feet, with stone shelves,

quence has been, that, when this insect did come, it found hundreds depending upon their wheat crop for the means with which to meet their pecuniary liabilities.

The question, "What can we raise?" is one of serious importance to the farmer; but still, if he is intelligent and wide-awake, he can easily answer it. We propose to name a few products, which the "signs of the times" indicate may be profitably raised, hoping thereby to call the attention of our farmers, not only to these, but to many others which may be sought out.

RAISE STOCK.—Any one, on looking at the present price of meats in New York, can but realize that such prices must afford immense profits to the stock raiser; and the prospect is that meats will be just as high, one year hence, as at the present time. Who, then, can doubt for a moment the profitableness of raising stock?

RAISE CORN.—Corn is now selling readily at one dollar per bushel, and in some localities it has been sold, for seed, as high as one dollar and a half. This shows another source of profit to the farmer. But supposing the price is not as good another year as this, will it not pay you abundantly to raise it and fatten stock for market, thereby enriching your land with most valuable manure, which will enable you to raise larger crops, and, consequently, increase your income? The stalks will also furnish a most valuable fodder.

RAISE POTATOES.—The present price of potatoes, renders this, also, a most profitable crop to raise for market; and, indeed, they would pay a handsome profit at a considerably lower figure than that at which they are now selling. Upon good ground, well manured and thoroughly cultivated, large crops may be raised, and crops which will most surely "pay."

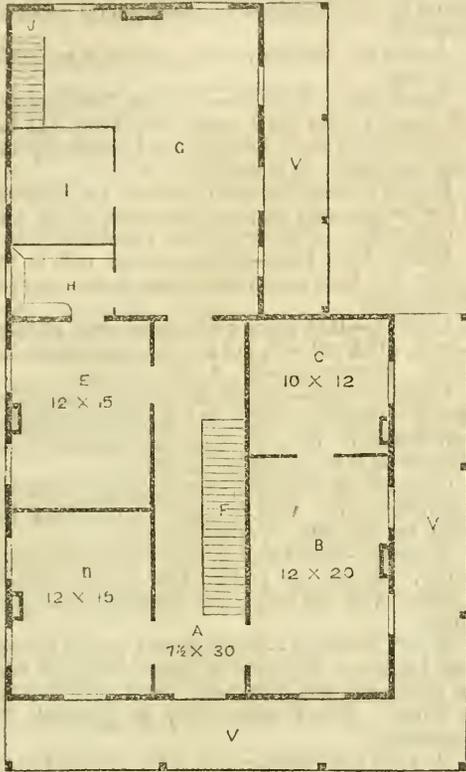
RAISE ROOTS—for, by so doing, you not only save much hay and other fodder, but your stock will do better upon a change of food, and you will not be as likely to be "short" of fodder, as were many of our farmers last spring, which caused rather a larger supply of hides in market than there would otherwise have been.

There are many other sources of profit that might be sought out in the present emergency, but of which we have not space to speak; and if our farmers will use them to their own advantage, we shall not suffer long from "hard times." R. D. KNOWLES.

Wilson, N. Y.

HOW TO BIND THE WILDEST HORSE FOR SHOEING, AND THE WILDEST COW FOR MILKING.—The way to do it is simply this: Put around the animal, just back of the fore legs, a strong rope, or chain; into this twist a stick, so that at every turn the rope will be drawn tighter, until the animal will submit to being handled at your pleasure. The most unmanageable animals can be subdued in a few minutes in this manner. JNO. SANFIELD.

"I SAY, Sambo, does you know what makes de corn grow so fast when you put de manure on it?" "No, I don't know, 'cept it make de ground stronger for de corn." "No—I just tell you; when de corn begins to smell de manure, it don't like de 'fumery, so it hurries out of de ground, so it can't breathe de bad air."



GROUND PLAN.

tables, &c. Under E, should be a room of the same size, with wood shelves, for pickles and sweetmeats. The remainder of the cellar I would keep for the storage of apples, potatoes, roots, &c. If the house is intended to be heated with a furnace, I would build the furnace room under the front stairway, with the ash and coal room back of it. The cellar should be at least seven feet from floor to ceiling. Floors made of water lime and small gravel I think are better than common ground or boards. J. F. F.

Rochester, N. Y.

WHAT SHALL WE RAISE IN PLACE OF WHEAT?

MESSRS. EDITORS:—The question has often been asked, of late, by our farmers, "What can we raise in place of wheat?" We answer, many things, that will pay you equally well. You have farmed it too long without adapting your crops to the market. You have, year after year, raised wheat, because each year there has been a market for it. It is because you have depended solely upon this crop, that its destruction spreads such panic among you. Year by year you saw the nearer approach of the midge, but still you kept on sowing wheat; and the conse-



Horticultural Department.

ANNUAL NOTES ON STRAWBERRIES.

THE recurrence of the strawberry season is now an event in the annual history of almost everybody. After a fast of some months from such luxuries, the universal nation seem to rage for strawberries, and the consumption, while good berries can be had for twelve or fifteen cents per quart, is enormous. Even the moderately rich buy berries daily in our market; and to all the *rich*, strawberries are an indispensable article of diet. While they last, Strawberry Parties, Strawberry Festivals and Fairs, are all the rage. For ourselves, we think the case quite justifies the enthusiasm, and hold that all information which helps on the good cause, and aids to make the enjoyment richer and more universal, should be brought out and placed in the hands of the public. Our contribution this year seems small; but every little is said to help, so we make a note of it.

June was a very wet month, and had an unfavorable effect upon the fertilizing process; consequently, pistillate varieties have, many of them, been inferior, and imperfect in form—but the varieties having perfect flowers were generally good. All, however, have been somewhat more acid than common, and less finely flavored than in a drier season. We have heard complaints from several market cultivators of the loss of considerable portions of their crops from this cause. It has been commonly supposed that wet weather was very favorable to a crop; but it has not proved so this time. We are inclined to the opinion, that only when a drouth and great heat occur just at the ripening off of the berries, do strawberries, under good management, in rows two and a half feet apart, require artificial aid by watering. We may secure more bulk, but it will be at a loss of quality more than enough to balance. Strawberries do not need diluting, but being well fed at the roots, mellow soil and good exposure to the sun will do the rest, in ordinary seasons.

The exhibition of the Genesee Valley Horticultural Society brought out some splendid dishes and collections of strawberries. Some of the foreign sorts shown were superior in size to any of our natives, and a few of those exhibited may be of value, but it is not generally supposed that they are equally profitable for cultivation. We shall notice some of them as we proceed. There were many of our old varieties shown, but they did not seem to change their relative positions much, in regard to size, quality, &c. We shall, therefore, omit notices of some, because

nothing has transpired to show them better or worse than common.

We have before urged our objections to all varieties having imperfect or pistillate blossoms, and must again say, that as fast as equally good varieties having perfect flowers can be procured, the pistillate sorts should be discarded. We have long held on to one, (Burr's New Pine,) because of its superior flavor, but the experience of this season is decidedly against it.

Among the varieties requiring notice of us are the following:

LARGE EARLY SCARLET.—We have found nothing yet equal to this for a good, early berry. It has perfect flowers, grows strongly, bears abundantly, and most uniformly. It is indispensable.

BOSTON PINE.—Blossomed profusely, and produced a few fine and early berries; the balance of the crop entirely failed. It never has been *reliable* with us.

BURR'S NEW PINE.—Plants looked well in the spring, but have grown feebly, and borne very imperfect fruit.

CUSMING.—Has borne a very great crop of large berries, which sell well, but are quite deficient in fine flavor. Flowers perfect. A strong grower.

CRIMSON CONE.—One of the best for market, although a pistillate variety, and successful only when well fertilized. Its great vigor and handsome color recommend it to the market gardener.

GENESEE.—Is beautiful, very vigorous, productive, and ripens early. Will be good for marketing, but flavor not first rate. Perfect flowers.

WALKER.—Grows moderately, but bears very abundantly. Berries all perfect, but of only medium quality. Will not be popular, although it has good points.

SCOTT'S SEEDLING.—Rapid grower, perfect flowers, very handsome, long, conical berries, of bright scarlet color, and bears abundantly, but is quite deficient in flavor. Would undoubtedly be profitable for marketing.

McAVOY'S SUPERIOR.—This berry, although beautiful when in perfection, is worthless for cultivation, because a pistillate variety which it is exceedingly difficult to fertilize. It ought to be discarded.

HOVEY'S SEEDLING.—As usual, very large, very handsome, moderately productive, but not first-rate quality. A pistillate sort.

HOOKE.—This is our pet, and, perhaps, we do not judge it fairly, but we have found it, of all our sorts, the most satisfactory. It is vigorous and productive, berries very large and of the finest quality, the flowers are perfect, and, in a word, it is adapted to all purposes, both for the amateur, and the gardener who wishes to sell fruit of good quality as well as good appearance.

TRIOMPHE DE GAND.—A most magnificent berry, when well grown. To the amateur, who wishes to secure great size and beauty, this will probably prove an acquisition. Vigorous grower, and hardy. Has perfect blossoms, (as all the foreign sorts have,) and bears moderate crops.

TROLLOPE'S VICTORIA.—Is also very large, and of fine quality, but has not been as productive with us as the above.

LE REINE.—Bore indifferently, and was not large.

BRIGHTON PINE.—The first berries were good, and of good size, but all the rest failed. We do not see much to recommend it. Flowers perfect.

MOYAMENSING.—Bears well when fertilized, but cannot be highly recommended.

From the above varieties, a selection of five can be made which will comprehend the whole season and all the most valuable points for the amateur and gardener. For this locality, and our methods of cultivation, we prefer the following, but would also like to add one or two more, if space and convenience did not forbid. Our choice would be—

LARGE EARLY SCARLET—Earliest, and very sure bearer.

HOOKEE—Best quality, and fine bearer.

TRIOMPHE DE GAND—Handsome, and very large.

HOVEY'S SEEDLING—“ “ “ “

CRIMSON CONE—Vigorous, late, productive.

We would like to add—

BURR'S NEW PINE—For superior flavor, of peculiar character.

GENESEE—For early berry for marketing.

H. E. H.

AMMONIA IN GREEN HOUSES.—“A little dilute liquid ammonia, poured upon a hot plate in a green house, has a wonderful effect in developing flowers and leaves.”
—*Scientific American.*

May we be allowed to ask the *Scientific American*, if liquid ammonia has been actually tried, or if the statement is made on theoretical considerations? We are well aware that carbonate of ammonia has a good effect in green houses, but we have always queried whether ammonia itself would not be too caustic and scorch the leaves. Whether this is so or not, however, liquid ammonia is far too expensive to be used for this purpose. It would be far more economical to mix a little lime with sulphate or muriate of ammonia (sal. ammoniac), or still more so, with Peruvian guano. Such a mixture in a moist state, would give off large quantities of ammonia. Till the matter is settled by actual trial, however, we would advise our readers to act cautiously. The ammonia in the atmosphere is in the form of a carbonate, and if it is desirable to increase the quantity in the air of a green house, the best way is to scatter a little Peruvian guano on the floor, or to mix a little in a vessel with water. This will soon ferment and furnish a constant supply of carbonate ammonia.

HORTICULTURAL OPERATIONS FOR AUGUST.

It will be too late to expect any great results from the sowing of any very tender crop at this season of the year. But any quick-growing, moderately hardy vegetables may still be sown, such as radishes, lettuce, spinach, turnips, &c.

RADISHES.—Let the radishes be sown on light, rich soil, and, while growing, copiously watered two or three times a week, or every evening in hot weather, in order that they may grow quickly and come to maturity in as little time as possible. They will then be as delicious and tender as at any other time of the year.

LETTUCE may be sown any time during the month for a fall supply, or planted out between the rows of other vegetables that are soon to be cleared away. But lettuce is very impatient of transplantation in hot weather; therefore it will be necessary to water transplanted plants at such times. It is better to sow the seed in a bed of deep, rich soil, where it can

remain, and thin the plants out to their proper distance.

SPINACH may be sown between the rows of peas, early cabbage or dwarf beans, that are soon to be cleared away; and if the ground is not rich enough, manure can be wheeled on and spaded in between the rows after the other crops are cleared off.

TURNIPS.—The first week in August is the best time to sow rutabaga or Swede turnips for spring use. It requires a strong, moist soil to produce fine turnips. Sow in drills eighteen inches apart, and when the plants are up an inch high, thin them out to one foot apart in the row. Stir the ground frequently with the hoe.

WHITE TURNIPS.—The first week of the month is also the best time to sow seed of the white varieties for early fall use, and the last week for a late supply. Sow in light, rich soil, in drills fifteen inches apart, and thin out to a foot apart in the drill. Early White Dutch is a good variety, and will be ready for use in six or seven weeks from the time of sowing.

MELONS will now require some attention to pruning. If watermelons have three plants in a hill, two melons to a plant will be sufficient—that is, one melon upon a branch. Train them out at equal distances, diverging from the centre. Stop the branch three leaves above the fruit, and cut away all weak and useless branches which are not bearing. Muskmelons may be treated somewhat in the same way, only four plants may be left in a hill, and three melons upon a plant. Train out three main branches, and leave one melon upon each branch. Pinch the top out three leaves above the fruit, and all the small lateral branches produced upon the main branch should be kept cut back to one leaf, and all else cut away as soon as produced.

CUCUMBERS may be allowed to run, unless very fine fruit is wanted. Then the same treatment as recommended for muskmelons will answer, only that the branches will require pegging down to the ground, as they will root at every joint, and consequently produce finer fruit. They will require copious waterings every evening in hot, dry weather, but water would spoil the flavor of melons while ripening.

STRAWBERRIES.—This will be a good time to make new strawberry beds. Let the ground be trenched at least two spades deep, and the bottom of the trench loosened up with the pick-axe, and the stones thrown out. When the ground is selected, dig a trench three feet wide and two spades deep, and the whole width of the piece of ground to be planted. Let the earth be wheeled to the opposite end of the piece to fill in with at finishing. Then pick up the bottom of the trench as deep as the pick can be sent down, and put in a layer of any vegetable rubbish—as weeds, leaves, pea-straw or potato tops—and a small layer of manure. Then mark out another trench three feet wide, and throw the top spit of soil to the bottom of the open trench, then a layer of manure and a layer of soil, and so on until the second trench is as deep as the first, and the whole piece finished. Let the stones be picked out as the work is proceeded with, and the ground raked level. Allow it to settle a day or two; then, if dry weather, stretch a line the whole length of the piece, and draw a drill with a hoe, and give a good soaking of water in the drill. Make the next drill two feet from this, and water in the same way. When all is ready, take plants of this year's runners—the best that can

be had—and plant them a foot apart in the drill, and give another good watering, to settle the earth about their roots. Water a little every day in hot weather, until the plants have become well established. If this is well done, with good plants, and the beds protected in winter, a moderately good crop of fruit may be had the following season.

Varieties.—Large Early Scarlet, Hooker, Burr's New Pine, Hovey's Seedling, and Triomphe de Gand, are of the best varieties. The latter is a foreign variety, of excellent flavor, and produces the largest fruit we have ever seen. It is said to be very productive and perfectly hardy—but it requires further trial. Some splendid fruit of this variety was exhibited by Messrs. ELLWANGER & BARRY, at the Summer Exhibition of the Genesee Valley Horticultural Society.

JOSIAH SALTER.

IN "MY NEW GARDEN."—No. 2.

THAT this is "a growing time" you may see, Mr. Editor, if you will walk again with me in my new garden. We have had frequent showers—both weeds and garden plants witness to that—but this stony, gravelly soil soon dries off, and yet retains a due share of moisture. Look first at these

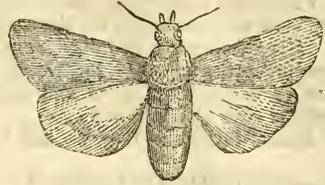
ROUND PARSNEPS.—Of which a square rod was planted May 9th. These were grown from plants, raised from seed imported from France, and distributed by the Patent Office. My first trial of them resulted favorably, except that they were grown too thick. I now have the rows eighteen inches apart, and shall thin to from four to eight inches in the row. I try them now, more for stock-feeding than for my own use; for a half-bushel of parsneps would be ample allowance in my family for a year. I hope to give you a taste of them next spring.

CABBAGES.—These are but just transplanted—some are yet very small—the large "late Dutch cabbage" seed, I got from you, started very slowly. Some other kinds are larger, and all are doing "as well as can be expected." Cabbages, like corn, "grow by hoeing and not without." So every day or two, I stir the soil thoroughly around among them, as also among the

CAULIFLOWERS.—The "Early Paris—only good one for this climate"—you sent me, grows finely. Though planted May 9th, they have made double the growth of the cabbage plants, and bear transplanting, with less check of growth. But here let me tell you about that pest of cabbage, cauliflower, onion and potatoe,

CUT WORMS.—I never knew them so thick, as they are this season. I believe they have destroyed one-fifth of my cabbage plants, already, though I have carefully raked and dug the ground several times over and killed a great many of them. A couple of big toads are helping me, but they find too many worms to be very good hunters, I fancy. It may not generally be known that the insect parent is a moth, and there are several species varying slightly in size and character, but in the caterpillar or grub state, alike destructive to many plants. The wings of the moth lay horizontal when closed. They appear in July and August, in large numbers and deposit their eggs in the earth. These generally hatch in the fall, and descend into the ground, to pass the winter, and are ready in spring to commence their destructive work. Salt, it is said, will kill them, so

it will the plants upon which they feed. We hunt them out and crush them; it is a certain preventive from further ravages. But it is decidedly unpleasant



MOTH OF THE CUT WORM.

to find your handsomest cauliflowers cut down, or your finest cabbage plant with its heart eat out, so that you must commence anew again.

CCELERIAC.—Is not yet large enough to transplant. I hope to give you a good account of it in the fall.

RADISHES.—How long will radish seed retain its vegetative power? My first sowing all failed to grow, and a part of my second—the seed was old, however, having probably been "imported" a dozen years ago. I think the scarlet turnip radish, one of the best kinds, and find no trouble in growing fine ones on my new soil—when they grow at all.

LETTUCE.—"Blessed be the man who invented" Lettuce, I say, for I hold it a good thing, especially when other "greens" are not to be had. There is a great difference in varieties—that brown kind was sown last, but is double the size of the light green kind, sown a week earlier. It likes a rich soil, and to make such, I think one good thing is

HEN MANURE.—I mix this with ashes and fine, dry chip dust from the wood shed, and reduce it to powder. It is capital for starting ahead cabbages, onions, peas, etc., and potatoes and corn immediately acknowledge its influence. Perhaps it will help them out of the way of their insect enemies, if it does not repel the same. But I must not lead you by too long a route through the New Garden of

A COUNTRY INVALID.

Maple Hill, June 23, 1857.

SHADE TREES.

MESSRS. EDITORS:—The July number of the *Farmer* contains a short article on "Six good Shade Trees," which suggests a few remarks upon the subject of planting ornamental trees and the care of them, which, I have thought, might be worth recording for the benefit of your readers.

Your remark that "it is difficult to answer the inquiry with any degree of satisfaction," is emphatically true: for we find upon going the rounds of our hardy forest trees, that there is not one of them but under some circumstances will fill a niche in the great field of planting, better than any other individual. The various peculiarities of different trees adapt themselves to the varying situations and surroundings of the place where it is desirable to locate them; and the very air and manner of one quite unfits it for planting where another will answer admirably.

The graceful and sweeping forms of elms and birches, are beautiful in spacious and elegant lawns, or ample pastures, whilst confined upon a seven by nine front of a city lot, where nothing larger than a shrubby grower should be tolerated, their lean and leggy appearance soon justifies their removal in disgust. Soil and exposure, have also a very great in-

fluence upon the beautiful development of forest trees, and care must be taken to plant only upon soils adapted to the tree planted. Deep alluvial soils develop the elm to its greatest perfection, while the hard maple will crown the rough hillside with sweet and dense shade.

Some varieties of the oak, enjoy a sandy and exposed situation, while other species are not to be persuaded to grow there, but will flourish with great beauty upon a moist bottom. These peculiarities of species and varieties, have been very little dwelt upon by writers, and, in fact, are scarcely known well enough by any person to justify a very extended list of sorts adapted to peculiar localities; but I am persuaded that attention to the subject by planters, will develop important facts; and a careful exercise of taste in the selection of trees well adapted to the place they occupy, will make a great difference in the appearance of our grounds, and in the satisfaction with which the planter views his work of ten years ago.

The difficulty of removing some trees with success, is greatly felt by some, and few men can be found who can say that they have successfully transplanted the oak, the walnut and the chestnut, from their native woods. This difficulty is partially overcome by the nurserymen, who remove them when very young, and sell small trees which can be removed safely. But in spite of these improvements, the above mentioned trees will always be discarded by many planters, because they cannot readily be transplanted.

The man who plants trees for ornament, should carefully study not only the peculiarities of the species, and the variety he is to plant, but also the peculiarities of the *individual* tree.

It is well known to about all persons, that the trees they plant are raised from a seed. Now the seedling trees, although alike in their family appearance, differ greatly in size, thriftiness, size of foliage, form and arrangement of branches, density or openness of the head, &c. Some are upright, some spreading, others drooping, and all coming under the head of elm, or maple, or ash, &c. It is not enough to secure the variety; you must get a handsome tree of the kind, to have the best success.

The above remarks apply with equal and even greater force to evergreens, which vary so much in form and color, as to pass all the way from extreme beauty to utter deformity, in the same patch of seedling trees of one species and variety.

Ornamental trees are not many of them budded or grafted in the nurseries, except to perpetuate some very desirable and peculiar individual, as, for instance, the weeping ash, weeping mountain ash, &c., therefore, care should be exercised to select maples, elms, &c., with reference to their appearance. Lindens are uniform in appearance, because raised from layers, and the horsechestnut, although raised from seed, seldom departs widely from a dense and globular form.

There is a great evil under the sun in the *care* of ornamental trees, which I must notice.

Trees are planted and grow; at first the desire to secure shade and relieve the bare appearance of his grounds, induces the owner to plant thickly; by degrees the trees become larger, and, perhaps, encroach upon each other slightly, but the possessor of the shade, walks beneath, and congratulates himself. If any branches are in the way, he trims them off, the

lower branches become feeble, by reason of shade and die off; these are removed successively, until at last the man wakes up to the fact that he has a good many trees on a small lot, but not a good looking one amongst them. The real object in planting, namely, satisfaction in the beauty and usefulness of the tree, is entirely lost. Nothing but timely thinning out of ornamental trees, so that they each shall have full room to develop their forms upon all sides, will secure the plantation from ruin.

How often do we see this lamentable lack of taste and judgment, in our streets and front lots of good dwellings. There is not this day one tree in twenty, upon our best avenues, and in what are esteemed fine places, but is injured before it has ten years growth, by crowding upon some other tree or building. In this city, so famed for rural improvements and shady streets, what we need most, is a judicious *cutting down* of shade trees far more than further planting. If some man, with the pen of a Downing, would write *down* a multitude of trees which writers have succeeded in getting planted, the benefit to taste and comfort would be immense. Shade is good to a certain extent, but the damp, dark and mouldy precincts of some of our rural residences, are an offence to good taste, good health, and the spirit of improvement which ornamental planting should always promote.

H. E. H.

SUMMER AND AUTUMN PLANTING.

MESRS. EDITORS:—The months of August and September are the preferable periods in the State of New York, and in the States to the north of it, for transplanting the following articles, and the months of September and October for the States adjoining on the south, as far as the Potomac, and the months of October and November for the more southern States.

STRAWBERRIES.—These, if planted at periods above stated, will produce a fair crop the ensuing summer. They should be planted in beds of three feet wide, with four rows of plants lengthwise, and at a foot each way. This width will admit of all the fruit being gathered from the sides. A path of about fifteen inches wide should be left between the beds.

RHUBARB, ASPARAGUS, HORSE-RADISH, SEA KALE, GLOBE ARTICHOKE, AND PATIENCE DOCK, the latter the best of early greens, and very hardy and permanent. All these will, when planted thus early, become well rooted and established before winter. They should have frequent waterings during the first two weeks after planting.

BULBOUS AND TUBEROUS FLOWERS of all the hardy species, such as the different varieties of Hyacinths, Tulips, Lilies of all kinds, except the *Speciosum* varieties, Crown Imperials, Fritillaries, Crocus, Single and Double Narcissus, Polyanthus Narcissus, Jonquils, Gladiolus Communis, and other hardy varieties, Snowdrop, Snowflake, Ornithogalum, Colchicum, Squills, Bulbous Iris, of different kinds, Allium, *Amaryllis aurea*, Arum, *Dens Canis*, Calochortus, Ranunculus, Anemone, *Bulbocodium vernum*, Convallaria, Trillium, Uvularia, Cypripedium, Yellow Aconite, and many other species, and all the magnificent varieties of Herbaceous and Shrubbery Pæonies. All these splendid Flowering plants, when planted thus early, will become more vigorous, increase more freely, and bloom with much greater vigor. It is to be understood, that before planting

any of the preceding, the ground should be well plowed or dug, and plentifully manured for the Herbaceous, and moderately so for the Bulbous Flowers.

FRUIT AND ORNAMENTAL TREES, SHRUBBERY AND ROSES cannot be safely transplanted in this latitude until the 1st of October, and those intended for the South should not be forwarded until the 1st of November, at which time vegetation will have become sufficiently dormant for their safe removal. To the Western States inland, they may be safely forwarded the beginning of October.

Wm. R. PRINCE.
Flushing, N. Y.

CELERIAC OR TURNIP-ROOTED. CELERY.

SEENING this garden vegetable advertised as "unique and fine," in the *Farmer*, I procured a package of seed, and am now growing the same. Perhaps some directions for its culture may be of service to your readers—it was some time before I found any thing relative to its growth and uses. From the *Gardner's Text-Book*, I compile the following:

CELERIAC—*Apium rapaceum*.—Sow in drills at different times during the spring months, so as to obtain a succession of crops. Water in dry weather, as the seed germinates slowly. Keep the soil clean and mellow—when the plants are six inches high, remove to their final quarters. This should be a mellow, rich soil, where they may be planted sixteen inches apart, each way. Water freely in dry weather, increasing the quantity with the growth of the roots. When nearly full grown, earth up the bulbs four or five inches—in about a month they will be sufficiently blanched for use. The roots can be preserved in sand during the winter.

FOR USE.—The following are the modes of preparation:—Boil until tender, cut in thin slices, and put in soup, or meat pies. Or after being scraped and sliced, they may be boiled very tender and then stewed five minutes in just milk enough to cover them; after which butter and salt to the taste.

Five weeks since my seed were sown—cauliflowers are large enough to transplant, the celeriac is just getting the third leaf, and is half an inch high. When will they be fit for transplanting? B. F.

CULTIVATING THE EGG PLANT.

MESSRS. EDITORS:—In answer to D. L., of California, N. Y., on the cultivation and preparation of the egg plant, I have cultivated it for a number of years successfully. I sow the seed in a hot-bed, about the first of March, and as soon as the second leaves appear, I pot them off into half-pint pots, putting three plants in a pot, and plunge the pots in a good hot-bed, up to the rim, and let them remain till the plants are four or five inches high. I then put them in pint pots, putting one plant in each pot and plunge them in the hot-bed, and let them remain to the middle of May, giving them plenty of air in fine weather; and from that to the first of June, I keep hardening them by keeping the glasses off night and day, in fine weather. About the first of June, I make holes two and one half feet apart, and put a good shovel full of well rotted manure in each hole, mixing it well with the earth taken out, and put the plants into it, giving them a little water before filling in the earth. If the weather continues dry, I water them; and about three weeks after planting out, I

remove the earth round them (but not so as to expose the roots), and sprinkle a little guano round them, and give them a good watering, and draw the earth round them. They require little more, except to keep clean and water occasionally.

There are several ways of cooking the eggs. The best method I know of is, to slice them about a quarter of an inch, or three eighths thick; peel off the rind; shake a little fine salt over them, and edge them up half an hour to drain off. Dredge them with fine flour, and fry in butter or lard to brown, and eat while warm.

JOSEPH CALDWELL.

Troy, N. Y., June 1857.

THE CULTIVATION OF FLOWERS.

MESSRS. EDITORS:—Among men we find a great diversity of opinion respecting the beauties of nature, and consequently we see a great diversity in their feelings and practice. By some, they are admired; by others, despised. The man who makes gold his idol, esteems of little worth everything that does not contribute to its acquisition. A beautiful landscape awakens no emotion in his bosom. The tasteful cottage, ornamented with walks, and flowers, and shrubbery, hardly secures a passing glance; if noticed, it is only to condemn the practice. He considers the cultivation of flowers beneath his dignity, and the time thus spent worse than wasted.

But such an individual sadly misjudges in relation to the subject. The taste that leads a person to admire flowers, and to delight in their cultivation—that leads him in this way to adorn his home, and render it pleasant—is fraught with good rather than evil. It gives rise to actions and states of mind that not only serve to mould his present and future condition, but that silently tell on the welfare of community. As the mind acts on everything around it, so a reflex influence is exerted upon it from objects with which it is familiar; and these objects tend to bring it into sympathy with themselves—they leave upon it their own impress.

Where all is deformity and disorder within and without a dwelling, no wonder if we see character and actions corresponding—no wonder if we hear the profane oath, the vulgar jeer, and witness manners that are coarse and rude. In the absence of all that is chaste and beautiful, we must expect this. But where taste and beauty are manifest—where the honeysuckle, the climbing rose and the jessamine are gracefully trained over the cottage, and the walks are adorned with flowers of varied hue—we may look for the opposite. The beautiful will impart its impress, as well as the rude; and under its mild influence, what is coarse and vulgar will be held in check, and the delicate and refined be invigorated. You may augur the character of the inmates of a house by the scenery around. Where neatness, order and taste reign without, you may expect refinement and intelligence within; even the child that meets you will exhibit a character moulded by the influences around him; and the stranger may expect civility and a hospitable welcome. Place the child unaccustomed to admire the beauties of nature, but rather to despise them, in the family where intelligence is cultivated, and each one is taught to admire what is lovely and beautiful, and what restraint does he feel, what a restlessness does he exhibit. Gladly he breaks away from the influence, to associate with the vulgar

and rude, and to engage in pursuits and pleasures fit only for the brute. While one accustomed to the opposite course, moves with ease surrounded by such objects; the relish of his soul has been formed to find enjoyment there; and he exhibits a sensibility, a refinement of manner, not found in those of an opposite character. And the mind thus conversant with the beauties of nature, will be better prepared to relish moral beauty. While it looks through nature up to nature's God, conscience will recognise in virtue that which should command esteem. And the mind will be better prepared to derive enjoyment from all the works of God.

The worldling may complain that the time spent in cultivating flowers is wasted, and that it fosters idleness, and leads to the neglect of more important business. But this is false; a cultivated taste is more generally the ally of industry. Seldom do you find the tenants of a cottage tastefully adorned with shades, and flowers, and evergreens, among the idle, lounging around taverns or gambling saloons, or the inmates of the poor-house. The man of taste employs his leisure moments in these pursuits; while the fault-finder spends his in sleep, in idleness, or in slandering his neighbor. And thus, while his business thrives, his cottage and garden assume an air of neatness and comfort; and his children, instead of being left to patrol the streets in search of company or mischief, are taught to find enjoyment amid the beauties with which they are surrounded, and to engage in the active labor of adorning their homes. The trees and flowers cultivated with their hands, become, as it were, the companions of their childhood; and an attachment is thus formed for home, that holds in check the restless, roving disposition often manifest in those brought up without such influences or restraints. Habits of industry are thus cultivated, that are the precursors of success in future. And the influence thus exerted will spread, and become, as it were, contagious. As inanimate objects act upon the mind, so one mind will act upon another. The influence will extend from one cottage to another, and each will vie with others in their efforts to remove deformities and cultivate the beautiful. And who will say that society will not be rendered happier?

Children are generally fond of flowers, and in the forming period of life it needs but little effort to give a right direction, in this respect, to their feelings. The exertions of the parent seem only seconding nature in her struggles for development. But, alas! how many opening germs are crushed by the thoughtless and unfeeling parent! The love of gain having effaced from his mind the love of the beautiful, and blunted the finer feelings of his soul, he would fain destroy the same in his offspring. He thus not only robs them of their inherent right—a love for the beauties of nature—but he robs society of the influence they might exert in cultivating what is attractive and beautiful. Instead of training them up to become the benefactors of mankind, he would fain wrap them up in selfishness, and inculcate the feeling that the acquisition of wealth is the great end of man's existence. But such is not the part of wisdom. Among other preventives of idleness, vice, and profligate manners, let the parent instil into the mind of his child a love of the beautiful and sublime. While he trains him up to industrious habits, let him teach him, both by precept and example, to cultivate those little adornments that render home attractive. Flowers

are the alphabet of nature; from them we may read the glory of the Creator of all things—the wisdom that planned and formed the universe. While their influence tends to soften and refine the feelings, they point us upward to their great original. Who, then, will not love flowers, and learn to admire their beauty? Who will not adorn his cottage, his garden, and his yard with these gems, and thus set an example for others to imitate? HUBERT.

APPLE TREE CATERPILLARS.

MESSRS. EDITORS:—I have noticed the apple tree worm as being vastly more numerous this season than usual, in this vicinity; and I also notice, at this time, there are hundreds of them attached to the underside of rails on the fences near the orchards; they being dead, hanging about half the length loosely, while the other half (the posterior half,) are clinging with considerable tenacity. They are full grown, and their skin is apparently empty, or nearly so. I call your attention to this phenomenon for the purpose of making the inquiry, is it generally so, and what is the cause? Has this circumstance been noticed previous to this year, or is it confined wholly to this immediate vicinity? D.

Gates, N. N.

GARDENING AT THE NORTH POLE.

WHEN the late Sir E. PARRY was wintering in the Arctic circle during 1821, scurvy, the great enemy of the polar voyager, was kept at a distance by the use of antiscorbutics, liberally supplied to the expedition. To these was added a regular growth of mustard and cress, in boxes filled with mould, which, owing to the superior warmth of the ships, was now carried on a larger scale than before. An amusing incident is connected with the preservation, during the voyage out, of the mould in which these vegetables were grown. While the ships were detained at Kirkwall, a boat came off to the "Fury" with some sackfuls of earth, which the ship's carpenter (an Aberdeen man, who had formerly belonged to the merchant service) was ordered to stow away below. At this he ventured somewhat to grumble, and to question the utility of the article in question. "Never mind!" says his mate, JOMY P——, from whom the account comes, "never mind! Depend on it the Captain has something in his head, and it'll be all right!" The obnoxious sacks were, accordingly, stowed away, but, during the voyage across the Atlantic, they proved too much for the carpenter's patience, and, at length, he ordered P—— to throw the lumber overboard, as a mere fancy on the part of the Captain, no longer remembered. P—— shook his head, but his superior was determined, and away went the bags—not, however, into the sea, but, at all events, out of sight. Days and months passed, and the affair was forgotten. Winter Island was reached, and the ships were frozen in. One day an order was given to the carpenter to provide some long, shallow boxes. This done,—"Now, then, my man," says the Captain, "for those sacks of earth!" Down comes the unfortunate carpenter to his mate, in a state of ludicrous perplexity. "Eh! P——, but what will we do, man? here's the skipper singing out for the sacks we heaved overboard!" "We, indeed!" says P——, "but never mind, it's all right; they never went overboard at all!" and, doubtless, many of his messmates had cause, at Winter Island, to be grateful to him that it was all right.—*Memoirs of Sir W. E. Parry.*

Ladies' Department.

LADIES SHOULD DO THEIR OWN GARDENING.

MESSEURS. EDITORS:—I hold that all amateur florists should be their own gardeners, unless they are able to keep a professional man constantly in their employ; for what is the use of having help to do that which we can do ourselves. I cannot send any one into my yard to work in the spring, unless I am with him to keep his spade or fork out of the bulbs or perennials that have not appeared above ground; and while I am watching him, I might do the work myself. "What!" says one, "do you spade?" I certainly do, and, moreover, I think I can do the work to suit myself quite as well as Pat or Jimmy, and am not ashamed to be caught in the act by any one. I have watched some men when they were spading, who were so afraid of their strength, that, with one foot on the spade and the other on the ground, they would bob about something as a frog might be expected to do under like circumstances.

Here something must be said relative to the outfit for gardening. Mrs. Loudon says "a lady should provide herself with clogs, or a tramp," which is described as a plate of iron, fastened under the right foot by means of a strap. All the clogs I find necessary, is a pair of stout, thick-soled laced boots, (and if the ground is wet a pair of rubbers over them,) a pair of thick gloves, and the other dress according to the weather. A few tools will be wanted, such as a trowel, a small garden rake, a pair of garden shears, different kinds of hoes, and a hand syringe, for the insects.

Trusting others to work among your flowers, reminds me of an incident related to me by an amateur friend a few years since. She was unwell, and thought it not prudent to go out, and it became necessary that the gladiolus bulbs should be planted; so she described the place where they must be planted to her husband, and he performed the work as well as she could have done it herself, and was highly gratified with his success. Shortly after, there was another kind that had sprouted in the house, which required planting out. She told him to plant them in any spot where there was nothing growing. It so happened that the first bulbs planted had not shown themselves, and, forgetting his first efforts, he planted the others above them! The mistake was not discovered in time to remove them, and they presented a beautiful illustration of the "mixed system" of growing flowers.

AMATEUR.

A RESIDENCE IN THE COUNTRY OR CITY.

"Is a residence in the country or city most conducive to high mental culture, beauty of person, health, happiness and usefulness?"

In the economy of the human system, certain conditions are requisite to the proper exercise and development of each and every power of the body or the mind. A chief condition, is health. Racked with disease and emaciated in frame, humanity loses much of its beauty of person, and, instead of being useful, man becomes a burden to himself and to those around him. His happiness is gone, and the vigor of his mind decays, or, at least, his languid frame will not sustain him in the acquisition of high men-

tal culture. If these assumptions be admitted, the question resolves itself into the habitation most conducive to health. Our health depends upon a variety of circumstances, among which are pure air, proper exercise, proper food, cleanliness of person, and a happy, pleasant frame of mind—all of which are more easily and naturally attainable in a country than in a city life: air, unmixed with the effluvia of a dense population—exercise, in which every muscle is brought into requisition—food, fresh and untainted, from the virgin earth—the rippling brook inviting to cleanliness, and the natural scenery wooing us to cheerfulness and happiness. In our country home, the ever-varying scene is suggestive of thought—monotony is forever excluded. "The rolling year" brings with it one long, unbroken spell of enchantment. The icy crystals, wrought into mosaics in the leafless tree, reflecting in the sun a thousand rays—the joyous notes of spring—the waving grain—the ripening fruits—the "sear and yellow leaf"—each and all impart a charm, healthful and invigorating, to our moral, intellectual and physical nature. The poetry of nature is written on every flower, and every grove is vocal with its melody. The crystal spring, the murmuring insect, the chirping bird, and the air fragrant with the odor of flowers, all contribute to make a country residence the home of health, happiness, contentment and peace.

S. A. W.

Meadville, Pa.

THE FARM HOUSE.

Who does not love the farm house? I do not mean its shadow, but the real farm house, with long dairy, filled with delicious butter and cheese; its large kitchen, where, over the "great cook-stove," the rosy-checked lasses are at work, and passing to and from this to the great dining-table, upon which is spread all that heart could wish, selected from the produce of the farm; and beyond this, the spacious "sitting-room," (leaving out the dainty parlor,) where the family so often assemble, and the children listen to words of instruction from the lips of their revered parents. Here is the cradle of Liberty and Independence. Here are hearts that breathe free air, and will make brave patriots in the struggle for their entire Freedom. It is true, they must be educated; but who is better prepared to do it than the farmer? Who more independent? All that he desires, he can obtain directly, or indirectly, from his farm.

Ye daughters, nursed within the walls of the farm house, envy not the city belle. God has blessed you with privileges which she can never enjoy. Look well to your duties; make the farm house a pleasant home for all those connected with it.

A. E. F.

Girard, Pa.

AN EXCELLENT WAY TO PREPARE GREEN CORN FOR WINTER USE.

When the corn is sufficiently advanced for cooking, boil on the cob, in the same manner as it is generally prepared for table use. When it is done, cut it from the cob carefully, spread it on a cloth, and put it in the sun to dry. When it is wanted for use, wash it, and put it in sufficient water, slightly salted, to boil for an hour. Then add a little new milk and butter, and it is ready for the table. It can also be cooked with beans.

O. L. BAER.

Milford, Ind.

ORIGINAL DOMESTIC RECEIPTS.

TO PRESERVE LARGE CUCUMBERS.—Take large and freshly-gathered cucumbers. Split them down, and take out all the seeds. Lay them in salt and water that will bear an egg, three days. Set them on a fire with cold water, and a small lump of alum, and boil them a few minutes, or till tender. Drain them, and pour on them a thin syrup. Let them lie two days. Boil the syrup again, and put it over the cucumbers; repeat it twice more. Then have ready some fresh clarified sugar, boiled to a blow. Put in the cucumbers, simmer it five minutes, and set it by till next day. Then boil the syrup and cucumbers again, and set them in glasses for use.

TO PRESERVE SMALL CUCUMBERS.—Weigh equal portions of small green cucumbers and of fine loaf sugar. Rub the cucumbers with a cloth, scald them in hot water, and put them into the syrup, with some white ginger and the peel of a lemon. Boil them gently for ten minutes. The following day just let them boil, and repeat this three time, and the last, boil them till tender and clear.

TO PRESERVE DAMSONS.—To every pound of plums, allow three-quarters of a pound of pounded loaf sugar. Put into jars, alternately, a layer of damsons and one of sugar. Tie them over with bladder or strong paper, and put them into an oven after the bread is withdrawn, and let them remain till the oven is cold. The following day strain off the syrup, and boil it till thick. When cold, put the damsons, one by one, into small jars, and pour over them the syrup, which must cover them. Tie them over with wet bladder.

TO PRESERVE DAMSONS—Another Way.—Prick them with a needle, and boil them with sugar, the same proportion as in the above receipt, till the syrup will jelly. Carefully take off all the scum.

TO PRESERVE GREEN GAGES.—Put the plums into boiling water, pare off the skin, and divide them. Take an equal quantity of pounded loaf sugar, and strew half of it over the fruit. Let it remain some hours, and, with the remainder of the sugar, put it into a preserving pan. Boil till the plums look quite clear, take off the scum as it rises, and, a few minutes before taking them off the fire, add the kernels.

TO PRESERVE APPLES.—Pare, core and quarter six pounds of good, hard baking apples. Finely pound four pounds of loaf sugar, and put a layer of each, alternately, with half a pound of the best white ginger, into a jar. Infuse, for half that time, in a little boiling water, half a pound of bruised white ginger. Strain, and boil the liquor with the apples till they look clear, and the syrup rich and thick, which may be in about an hour. Take off the scum as it rises. When to be eaten, pick out the whole ginger.

TO PRESERVE APPLES—Another Way.—Weigh equal quantities of good brown sugar and of apples. Peel, core, and mince them small. Boil the sugar, allowing to every three pounds a pint of water. Skim it well, and boil it pretty thick. Then add the apples, the grated peel of one or two lemons, and two or three pieces of white ginger. Boil till the apples fall, and look clear and yellow. Apples preserved in this way will keep for years.

TO PRESERVE PEARS.—Pare the fruit, and put it into a kettle with a little water, and boil. When quite soft, take the same quantity of loaf sugar and melt it into a syrup, taking care not to have it boil. Put the fruit into the syrup, and set away in jars. When preserved in this way, they retain their natural flavor and color.

PUMPKIN BATTER.—Wash the pumpkins clean, take out the seeds, and scrape the inside out with a strong iron spoon. Boil till soft, and rub it through a coarse sieve. When strained, put into a kettle and boil slowly all day, stirring it often. Put in a large handful of salt. When nearly done, add a pint of molasses, or a pound of brown sugar, to each gallon of pumpkin. Before it is quite done, add allspice, cinnamon, ginger and nutmeg, one or all, as you may fancy. Put it into jars, when done—large ones are best. Tie it up tight, and it will keep until April or May, in a cold place, if you scald it when spring comes on. It is a good sauce for table use, and is always ready for pies, with the usual addition of eggs and milk. It is much less trouble, and far better, than "dried pumpkin."

TO BAKE APPLES.—Gouge out the eyes, and fill them with sugar. Set the apples in a pie plate, pour in a tea-cupful of water, and bake. Eat with cream, and the juice found in the dish when done.

TO REMOVE NEW FRUIT STAINS.—Hold the cloth tightly over some vessel, and pour boiling water through it, and they will soon disappear.

DELICATE CAKE.—Add to the whites of sixteen eggs, beaten to a stiff froth, three-fourths of a pound of flour, one pound sugar, ten ounces butter. Flavor with lemon or rosewater.

GINGER COOKIES.—One cup sugar, one of butter, one of molasses, one table-spoonful ginger, one of cinnamon, and two tea-spoonfuls of saleratus dissolved in three table-spoonful of hot water. Bake quickly.

RYE DROP CAKES.—One pint milk, three eggs, one table-spoonful sugar, a little salt. Stir in rye flour till about the consistency of pancakes. Bake in buttered cups or saucers, half an hour.

HONEY CAKE.—One cup nice sugar, one cup rich sour cream, one egg, half a tea-spoonful of soda, two cups flour. Flavor to the taste. Bake half an hour. To be eaten while warm.

COMMON SOFT GINGER BREAD.—One cup molasses, one cup sour cream, one and a half tea-spoonful ginger, one heaping tea-spoonful saleratus, three cups flour, a little salt. Bake in a moderately heated oven.

PLAIN RICE PUDDING.—Swell a tea-cupful of rice in a quart of boiling water; add a cup of sugar, three quarts of milk, and a little salt. Bake three hours.

TO TAKE WAGON GREASE FROM CLOTHES.—Lay the article on a linen towel, pour a little spirits of turpentine on a cloth, and rub it until quite dry. This will not injure the most delicate colors.

TO CLEAN FLOORS AND ERASE GREASE SPOTS.—To a pailful of hot soap-suds, take three table-spoonful of spirits of turpentine, and you will have a clean floor.

Editor's Table.

New Advertisements this Month.

Pratt's Automaton Apple Slicer.—A. M. Collins & Co., Philadelphia.

Auction Sale of Imported Stock.—W. S. G. Knowles, Guelph, C. W. Clover Hulling and Cleaning Machines.—Mansfield & Whiting, Ashland, Ohio.

Agents Wanted.—Robert Sears, New York.

First-class Family Journals.—Fowler & Wells, New York.

To Lyceums, Literary and Agricultural Societies.—J. O. Miller, Jr., Montgomery, N. Y.

New Work on the Chinese Sugar Cane.—C. M. Saxton & Co., N. Y.

New Rochelle Blackberry.—C. P. Bissell, Rochester, N. Y.

Virginia Lands for Sale.—B. H. Robinson, Lancaster C. H., Va.

State Fairs for 1857.

Ohio,	Cincinnati,	September 15—18.
Canada East,	Montreal,	September 16—18.
Illinois,	Peoria,	September 21—26.
Pennsylvania, .....	.....	Sept. 29 to Oct. 2.
Wisconsin,	Janesville,	Sept. 29 to Oct. 2.
New Jersey,	New Brunswick,	Sept. 29 to Oct. 2.
Canada West,	Brantford,	Sept. 29 to Oct. 2.
Vermont,	Montpelier,	Sept. 30 to Oct. 2.
United States,	Louisville, Ky.,	October 1—6.
Indiana,	Indianapolis,	October 4—10.
New York,	Buffalo,	October 6—9.
Iowa,	Muscatine,	October 6—9.
Michigan,	Detroit, .....	.....
New Hampshire,	Concord,	October 7—9.
Kentucky,	Henderson,	October 12—16.
Connecticut,	Bridgeport,	October 13—16.
East Tennessee,	Knoxville,	October 20—23.
Massachusetts,	Boston,	October 20—24.
Maryland,	Baltimore,	October 21—25.
West Tennessee,	Jackson,	October 27—30.
Alabama,	Montgomery,	October 27—30.
Virginia, .....	.....	October 28—31.

THE RURAL NEW YORKER—ONCE MORE.—After our July number was issued, the *Rural New Yorker* attempted to reply to the serious accusations we were compelled to make against it in the June number of the *Genesee Farmer*. It will be recollected that our charges were distinct and definite, as follows:

1. That the *Rural* had clandestinely obtained possession of three of our latest and best cuts, and had, without our knowledge or consent, inserted them in its columns. To this grave charge, the *Rural* attempts no reply whatever!

2. That the assertion that the cuts in a certain number of the *Rural* cost nearly \$50 was untrue—that they did not cost \$5. To this charge, also, the *Rural* makes no reply.

3. That the greater proportion of the engravings with which the *Rural* man had been embellishing his paper for the past few months, were old cast-off cuts of the *Genesee Farmer*. To this the *Rural* replies as follows:

"Now, the simple but stubborn facts are, that of the fourteen engravings named, twelve were got up by the conductor of the Horticultural Department of this journal."

If we are to infer from this that they were "got up" for the *Rural New Yorker*—as is the evident intention—the assertion is utterly untrue. They were engraved for the *Genesee Farmer* and *Rural Annual*, and, as can be easily proved, were given in our volumes for 1852, '3, '4, '5 and '6, on the several pages named in our June number. We did not wish to do the *Rural* injustice, and distinctly stated that "we do not say that the *Rural* did not come

honestly by these engravings. As cast-off cuts, it may have paid a small sum for them," &c. The *Rural* seems to suppose that we intended to accuse it of stealing these old cuts. We did not intend to convey any such idea, as the language above quoted shows. It was the cuts of the Dwarf Pear Tree, the American Arbor Vitæ and the Sweet William that we accused it of appropriating without our knowledge or consent. The others it may have purchased from some of the former publishers of the *Farmer*. Our object in alluding to them, was merely to show that it was "a new development of the law of 'Progress and Improvement'—of which the *Rural* boasts so much—to give these cuts as though they were original." The *Rural* man cannot deny the fact that he has taken three of our newest and most valuable cuts that he has not the shadow of a right to, and has also given some fifteen or sixteen of our old, cast-off cuts in the *Rural* of the present year. If we should take twenty-five dollars' worth of his property, we think he would deem it an injury, and could hardly be blamed for asking his readers and contemporaries if such conduct was "reputable and honest." And yet he seems surprised that we have felt aggrieved at similar conduct in him!

4. We incidentally alluded to the fact that the *Rural* had charged eight dollars for inserting, in its editorial columns, a cut of "HALLOCK'S Cross-cut and Circular Saw Mill." This the *Rural* denies, and says: "It is a foolish fib, as we [the *Rural*] neither charged nor were ever paid a farthing therefor." Now, our information was derived from Mr. HALLOCK himself. He agreed to pay this sum; and if it was not charged in the bill, he has to thank the timely *expose* of the *Genesee Farmer*. It is very "foolish" in the *Rural* to accuse us of fibbing, as, from fifteen months' editorial connection with the *Rural*, we are too well acquainted with its practices to be thus silenced. When the writer was the agricultural editor of the *Rural*, we know that its publisher and pseudo-editor did not scruple to take money for the insertion of cuts and descriptions of patent machines, &c., in its leading editorial columns. That he has not abandoned this practice, we have abundant and unquestionable evidence. For instance: In the *Rural New Yorker* of January 31, 1857, there is, on the first page, in the leading editorial columns, a drawing and description of "BURNETT'S Improved Portable Field Fence," for the insertion of which we have, now lying before us, the written authority of Mr. BURNETT himself for saying that the *Rural* charged and was paid fifty-two dollars and fifty cents.

In the *Rural* of March 14, 1857, a cut and description of the same fence is again given in the leading editorial columns, for which Mr. B. obligingly informs us, in the same letter, he paid the *Rural* man sixty-six dollars and twenty-five cents.

In the *Rural* of May 23, 1857, there is, on the first page, in the leading editorial columns, a cut and description of "HILDRETH'S Iron Gang Plow," for which the manufacturers, Messrs. HILDRETH & CHARLES, of Lockport, N. Y., paid the *Rural*, as they themselves state, in a letter now before us, thirty-three dollars.

In the *Rural* of June 20, 1857, there is, in the editorial columns, a cut and description of "VANDEMARE'S Self-fastening Portable or Field Fence," for which the *Rural*

was paid, as Mr. V. himself informs us, *sixty-two dollars and fifty cents.*

We could name many other parties who have paid the *Rural* man large sums for the insertion of cuts and descriptions of patent machines in his editorial columns, but the above will suffice to show that it was "a foolish fib" in the *Rural* to have having been "ever paid a farthing" for the insertion of cuts and articles in its editorial columns.

We sincerely hope that we shall not be under the necessity of again calling our readers' attention to this subject. If the *Rural* man will not *take* our cuts, we will let him have them for nothing. We desire to live at peace with him, and with all men, and will, for the future, neither allude to his practices nor pretensions. Indeed, we should not have made the above *expose*, had he not accused us of falsehood.

WORKING LAND IN THE FALL.—A "Practical Farmer," in the *Mark Lane Express*, gives, among others, the following novel reason for working land in the autumn. Speaking of the preparation of fallows for the turnip crop, he says: "The first process should commence in the autumn, as early as possible after the removal of the crop, and should consist in breaking up the soil at a slight depth, just sufficiently deep as to procure a mould, on working it, to cause the vegetation of all the seeds of weeds, and insure the uprooting of all the roots, both of weeds and crop, growing near the surface. The subsequent scarifying and harrowings should suffice to reduce the whole to a fine tilth, and to shake out and bring to the surface all the rubbish, which should immediately be collected, either to be burnt, or carried into the fold-yard for conversion into manure. The advantage gained by this autumn process in culture, is the destruction of the seeds of annuals and other weeds common to the soil, the removal of all the refuse of the last crop, so that the land is cleaned from surface weeds, that no obstruction occurs in the future management; to which must be added the very valuable aeration of the soil which takes place from this repeated working at this precise season of the year, when the atmosphere is more fully charged with the effluvia arising from so much decayed and decaying vegetation, arising from the ripening and decay of all the straw crops, the stubbles, the falling leaves, the ditch roadings, the numerous grasses and the like, at this season; which effluvia, it may reasonably be supposed, are deposited in the soil thus prepared, and there retained for future service; but if this process is neglected, and the soil remains unbroken, the morning's sun speedily dissipates the nightly deposits, and no benefit is derived."

WAX.—On the exterior parts of many plants we find several kinds of wax. It constitutes the purple bloom of grapes and plums. It may be abundantly procured from the skin of apples. Straw contains a crystallisable kind of wax; and a crystalline wax may be abundantly collected from the surface of the sugar cane. But it is noticed that cane which contains most wax contains least sugar, and *vice versa*. This would indicate that wax is formed from sugar, or sugar from wax.

THE vine crop of Europe promises to be unusually abundant this year.

AMERICAN HORSE POWERS IN ENGLAND.—The American Endless-chain Horse Power has at length been introduced into England, and is attracting much attention. The last number of the *Agricultural Gazette* (June 27th) contains a cut of one; and Mr. CHADWICK, in his lecture on "Small and Neglected Mechanical Powers," delivered before the Royal Agricultural Society, speaks of them in the highest terms. "Our brethren in America," he says, "have struggled with difficulties of scarce and dear labor, and high-priced money. My friend, Mr. WHITWORTH, our Commissioner appointed to examine machinery at the Great Exposition in New York, has expressed his general admiration of the cheapness, simplicity and efficiency of the mechanical contrivances with which they have met these difficulties. To one of these contrivances, a horse power machine, he has directed my attention, and it certainly appears to me to be commended as of extensive application. The machine consists of a moveable inclined platform for one or two horses, on which the farmer may put his horses, and get a direct action to work any machinery for one, two or three hours. It has the advantage over the gin, as being cheaper of construction, and in being more compact, and in requiring less space; in being easily removed from place to place; in having, for the time of its work, greater power than any other in bringing to bear the weight of the horse in combination with its direct action."

Mr. C. also alludes to our "dog powers," and says, in America, "where the lowest farm helps cost a dollar a day—and I could wish that, for the sake of extension of machinery into agriculture, as well as the working classes, it cost almost as much here—they will not allow the dogs to eat the meat of idleness. They consequently set Cæsar or Pompey, the house dog, to churn or to washing. * * Mr. WHITWORTH was informed that, after these dog powers were introduced, the Yankee dogs, not relishing the work, disappeared early on the churning days, and were shouted for but made no manner of response, and only re-appeared after some biped or other had been obliged to perform the labor."

We have for several years urged some of our manufacturers to make powers on this principle for the English market, to be worked by donkies! "Neddy" can work, but does not relish it; and if he was placed on one of these machines, he would be as unable to shirk as felons on the old-fashioned English tread-mills. Donkies can be bought in England for \$5 a piece, and are as plentiful as blackberries. By means of these machines, they might be made useful in pumping water for irrigating purposes, cutting hay and straw, grinding grain, &c.

THE RURAL ANNUAL FOR 1857.—Our esteemed correspondent, W. LIVINGSTON, Esq., of Laurenceburg, Pa., writes: "Have received the *Rural Annual* for 1857. I am exceedingly pleased with it. It far surpasses my expectations. I first had an idea that it was about the same as the one for 1856, and hence, as I had that, it would not be of any benefit to me. But I find it entirely different, and superior to the one for '56. Indeed, I consider the *Rural Annual* for '57 as good—containing as much information—as '*Pardees on the Grapes*,' the price of which is 60 cents. Every cultivator of a foot of land should have it."

EGYPTIAN WHEAT.—The *Scotsman* says that "some stalks of wheat were laid before the Paris Academy of Sciences on the 2d of March, derived from five grains found in an Egyptian tomb by a Monsieur DROUILAND, (since deceased,) sown in 1849, and which yielded a return of 1,200 for 1. Since 1853, grains of this wheat have been pretty widely disseminated; and the results of various experiments upon it, made under the direction of the local authorities, and of certain members of the Agricultural Society of Morlaix, nominated by the Sub-Prefect to inquire into the subject, were submitted to the Academy. They were in substance as follows: Sown broadcast on one-half of a piece of land, of which the other half was sown with the common wheat of the country, the return was 60 for 1, while that of the latter was 15 for 1; and the mean return in France is 7 or 8 for 1. The same Egyptian wheat, sown grain by grain in a line, gave a return of 556 for 1. The wheat, since its fecundity became known, has been much in request, and is sold at four or five times the price of common wheat. The stalks submitted to the Academy were more than two metres (six and a half feet) in length, and each carried from twenty to forty fine ears."

MR. TITUS SALT, an eminent English manufacturer, has succeeded in introducing the Alpaca sheep and the Angora goat into the mountainous region of South Australia. Mr. S. was the first to demonstrate that the wool of the Alpaca could be worked up into a woven fabric, and it is now in considerable demand. The weight of fleece is said to be about ten pounds, and it brings about sixty cents per pound in the raw state. The wool of the Angora goat is worth about seventy cents per pound. The animals were obtained with considerable difficulty, on account of the jealousy of the Peruvian government, in whose country the Alpaca is only found. They were taken to England and kept for some time on a farm, prior to being shipped to Australia.

THE WHEAT CROP IN INDIANA.—Our esteemed correspondent, ELIJAH THOMAS, of Independence, Warren Co., Ind., writes that "the wheat crop looks very well; like other crops, it is backward, and we have not yet commenced harvesting, but, if nothing befalls it, there will be more wheat raised in this portion of Indiana than has ever been grown in one year heretofore. The prospect for oats and grass has never been better."

QUALITY OF BEEF.—At the International Fat Cattle Show, at Paris, the beef of the prize animals was brought to the table roasted. The Judges awarded as to quality: West Highland ox, Scotch, first; Devon ox, second; French ox, third; Short-horn and Angus, Scotch cross, fourth; Angus, Scotch, fifth; French ox, sixth; Short-horn, English, seventh; French, eighth. For soup and boiled beef, the English Short-horn English ox, first.

POOR BUTTER.—The Committee on Dairy Products, at the Worcester Co. (Mass.) Agricultural Society, say in their Report: "PHARAOH, with all his ingenuity, never invented for the Children of Israel a more intolerable infiction than he could have done if he had imposed upon them the penalty of being obliged to eat poor butter."

PROLIFIC LAWTON BLACKBERRIES.—We had the pleasure of seeing, a few days since, a fine plantation of New Rochelle blackberries, on the grounds of Mr. C. P. BRISSELL, of this city. On one stalk, by actual count, there were three hundred and sixty-two perfect berries, and there were other stalks in the same hill covered with fruit. The bearing plants were set out last year.

THE GREAT NATIONAL TRIAL OF REAPERS AND MOWERS AT SYRACUSE is in progress at the time we go to press (July 21). Though fewer machines were entered than was expected, the trial has been one of great interest. We understand that the awards will not be made till the meeting of the United States Agricultural Society, to be held at Louisville, Ky., October 1-6.

JAPAN PEAS.—The editor of the *North Western Farmer* an excellent monthly published at Dubuque, Iowa, has tried to raise Japan peas for three years in succession; but though he got plenty of vines, he obtained only a few half grown peas. They will ripen in this section under very favorable circumstances, but must be regarded as very uncertain.

"CHARCOAL A CURE FOR THE STRIPED BUG.—It may be implicitly depended upon. Dust it on from a sieve or coal-sifter. If the rains wash it off, put it on again. We have used soot with good effect, but recommend charcoal-dust on the strength of the most reliable personal testimony—there is no humbug in it." So says the *Homesead.*

TURNIPS may be sown to good advantage on places where early vegetables have ripened in the garden; and by doing so, we may have a good many excellent dinners some of the cold days that we expect during the winter.

Gates, N. Y.

D.

RECEIPTS FOR PRESERVING FRUITS, &c.—We should feel greatly obliged to any of our lady readers for seasonable receipts for preserving fruits, vegetables, &c.

EDWARD EVEHETT will deliver the address at the New York State Fair, to be held at Buffalo, October 6th to 9th.

Inquiries and Answers.

(JOHN LOWE, Fayetteville.) In this section, the British Queen strawberry is not worth cultivating. In the Southern States, it is said to do better. When well grown, it is considerably larger than Hovey's Seedling.

The Boston Pine will fertilize Hovey's Seedling equally as well as the Early Scarlet.

The Hooker is one of the largest and best staminate we are acquainted with. It may not do as well with you as with us, but it is eminently worthy a trial.

(M. A. RICHARDSON, Sherman, N. Y.) The cheapest way of deodorizing night-soil is to mix it with dry manure. We know of no chemical process that can be profitably applied.

(S. L. Windsor.) The best way to destroy rose-bugs, is to syringe the under side of the leaves with tobacco water. See Mr. SALTER'S article in last number, page 223.

(J. R., Michigan.) **GAS LIME.**—You are mistaken in supposing that gas lime contains a large quantity of ammonia. We are aware that some writers have made such a statement, but it is certainly without foundation. Chemical analysis indicates—or we would rather say *demonstrates*—that gas lime is of less value than common lime. Practical experience confirms this. In England, where many experiments have been made with it, gas lime sells for less than fresh lime from the kiln.

(H. R. DENROCHE, Phelpsville.) Hemlock tan-bark is an excellent mulch for strawberries; we do not think it has much fertilizing value. Some "special manure" writers have argued that its tannic acid is very valuable for strawberries. Of this, however, there is no evidence. You had better get the tan-bark now, and put it in a heap where it will dry. If turned over occasionally and exposed to the air, so much the better. We regard tan-bark as the best of all waste substances to mulch with.

(R. G.) **TURNIP FLY.**—As soon as the turnip plants appear, dust them with a little air-slacked lime. A quart of *slacked* lime to the square rod, or five bushels per acre, is about the proper quantity. This remedy has proved very generally effectual. If you try it, please report the result.

(B. R., C. W.) You can obtain the New Rochelle or Lawton Blackberry at most of the leading nurseries. Mr. C. P. BISSELL, of this city, who is making the cultivation of this fruit somewhat of a speciality, will undoubtedly be able to satisfactorily fill your order this fall.

(C. E. HILDRETH.) The oat crop is one of the worst that can be sown in an orchard. If you must sow some crop, let it be beans, potatoes, corn, or some other crop that can be horse-hoed.

BEST TIME TO CUT CHESTNUT TIMBER FOR RAILS AND POSTS.—In reply to the inquiry of Mr. HARRIS, an experienced correspondent says: "The best time to cut chestnut timber for rails and posts, is—when the farmer seldom has time to do it—in July and August, when the bark peels; and if he will fall a few trees then, and take particular notice, he will find that all the little limbs will season hard, and remain sound longer than those cut in the following spring."

GARGET.—In reply to the inquiry in your paper, I would state that I have, on two occasions, inserted a piece of garget root in the dewlap, and it effected a perfect cure. S. K. GIVEN.—*Sheepsfoot Bridge, Me.*

The weather is such that it is an excuse for not working out of doors; so I have concluded to write a few lines to you, for the purpose of obtaining a little information. The weather here has been exceedingly wet, and vegetation came forward very late and backward; for example, apple trees have but just shed their blossoms. Many people have not planted their potatoes; some are but just done sowing oats, and several have not sown all they wanted. The reason of their being so late is—first, the lateness of the spring, when they could commence their spring's work; and second, the uncommon quantity of rain, and wetness of the ground. There has been but a small part of the time that the ground has been dry enough to work. Now, what can we do to forward our work, such cold, wet and

backward springs? I would suggest that we do most of our plowing in the fall, so that, when the ground is dry enough, we will lose no time in putting in our crops. You may say, underdrain it; but will it pay on our hilly, hard-pan land, where the hard-pan is from six to twenty inches under the surface, and not much of it over one foot, and farms sell at from fifteen to twenty dollars per acre, and no drain tile to be had? Now, Messrs. Editors, you may suggest something that might benefit us. By the way, would you recommend the use of the subsoil plow on the above described land? I. RANDALL.—*Masonville, Delaware Co., N. Y., June 15.*

We hope some of our correspondents will discuss this subject.

CULTURE OF GRAPES.—I would like to see an article in the *Farmer* on the cultivation of the grape, commencing in the spring when the cutting is planted, and then give the work of each year distinct until after the vine has commenced to bear fruit; and to designate the sort of grape whose cultivation they are describing, as there is a difference in pruning best suited to different varieties. Dr. WARDER, in the *Rural Annual* for 1856, wrote well on grape culture, but his remarks are mainly in reference to the Catawba, and I think on that he might have been more definite. All that I have seen written on the grape, appears better suited for the instruction of those who have had some experience, rather than for the new beginner. W. LIVINGSTON.—*Lawrenceburg, Pa.*

Will some of our readers give us an article on the culture of the grape?

I WOULD inquire through your columns for the best and cheapest method of improving my land. The soil is a gravelly, sandy loam, intermixed with slate. Timber—oak, chestnut, sugar, and some hickory, with a little birch, beech and ash. Subsoil well mixed with sand and gravel. Would it be well to plow deep? The soil is only about four inches thick. Lime and plaster have been applied with very little success. Lime has, in some cases, helped a little. Manure will not last long. Would buckwheat and clover be beneficial as a manuring crop, to be plowed under? Sorrel prevails to some extent. If lime should be applied, please state the number of bushel per acre. HENRY ALLFATHER.—*Berlin, Somerset Co., Pa.*

Will some of our experienced correspondents answer the above?

I WISH to inquire through the *Genesee Farmer* if it is necessary to underdrain land consisting of alluvial, loamy soil, two feet deep, resting on a layer of loam and gravel, quite compact, of about a foot in depth, then loose gravel, the depth of which is not known. We have dug thirty feet, and gravel continued. Water does not usually remain on the surface, even after heavy showers. Would a garden be materially benefited by underdraining on such land? Our garden is on such land, and it sometimes bakes pretty hard. How can that be prevented? or, what is the cause? for it did not formerly bake at all. There are thousands of angle-worms, sometimes called "crawlers;" do they do any mischief? D. EDWARDS.—*Little Genesee, N. Y.*

The grading of our street has removed all the surface soil, and left me nothing but a miserably poor, compact slate, in which to plant street trees. How shall I do? And what trees will do best in such a locality? Your item in regard to "Six Good Shade Trees," in the *July Farmer*, leaves me in the dark as to which of the varieties is best adapted to my slate, and my hard, tough clay. Will the sugar maple do well? And does the American elm bear clipping well? I. P. I.—*Holidaysburg, Pa.*

WOULD it not be good policy to build dams across shower brooks, and other small streams, to stop leaves and other substances that are carried down and lost to the farmer? Perhaps some of your correspondents can tell whether it would pay to dam such streams for the manure. C. E. HILDRETH.

NO DOUBT many of the very numerous readers of the *Genesee Farmer* know something about the cause and treatment of horses that are stove in the shoulder. I would like very much to ask, through its columns, for some information about it, as I have a valuable horse quite lame in the fore feet, and I am told that this is the cause. The lameness is scarcely perceptible when he is in motion; but let him stand still for some time, and he moves off quite lame. By inserting this, and drawing out the opinions of some of your many intelligent readers, you will much oblige a subscriber. J. A. GAVIN.—*Bluffton, Ind.*

CAN you inform me of a remedy for small red ants in fruit and vegetable gardens, and also how I can raise good radishes? I cannot get any free from grubs. A small white grub makes them good for nothing; and the ants are very injurious. JOHN PARRY.—*Fort Edward, N. Y.*

GRASS FOR LOW LANDS.—I have heard it said that Ribbon grass (I do not know the scientific name) will grow well on marshy grounds, and form a smooth, tough turf, that will bear up a team, and makes good hay or pasture. Have your readers had any experience with it? H.

I HAVE an excellent cow, that loses a large portion of her milk by leakage. If you, or any of your thousands of readers, can give a remedy, through your journal, by which I can secure the milk, they will confer a favor on more than one individual. D.—*Gates, N. Y.*

MUSHROOMS.—Will some of your correspondents inform me where mushroom spawn can be obtained, and at what price, together with some hints in regard to the cultivation of this delicious fungus? CONSALINO.—*Nassauguaga, C. W.*

ADVERTISEMENTS,

To secure insertion in the *FARMER*, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. TERMS—Two Dollars for every hundred words, each insertion, PAID IN ADVANCE.

TO LYCEUMS, LITERARY AND AGRICULTURAL SOCIETIES.

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August 1.—It.*

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THE undersigned, acting as Agent, has a large number of FARMS FOR SALE, of all sizes, many of them on the RAPPAHANNOCK, PIANKITANK and POTOMAC RIVERS. I will enumerate a few: There is one, containing about 400 acres, lying immediately on the Rappahannock, about eight or ten miles from its mouth, level as a floor, and in good condition; one on the Plankitank, about fifteen miles from its mouth, containing about 1,700 acres, on which is a considerable quantity of Cord Wood, where vessels of the largest class can load with the greatest ease—there is on this Farm a great abundance of the finest Marl; and one on the Potomac, a beautiful residence, where Fish, Oysters and Wild Fowl abound in their seasons.

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August 1.—It.

B. H. ROBINSON.

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Cotswold and South-down Rams, Berkshire and Yorkshire Pigs.

MR. W. S. G. KNOWLES has received instructions from FREDERICK WM. STONE, Esq., to sell by AUCTION, at MORETON LODGE, on WEDNESDAY, THE SIXTEENTH DAY OF SEPTEMBER NEXT, upwards of 50 head of Imported and Pure-bred Short-horned Cattle, comprising Bulls, Cows and Heifers, of different ages. Also, 15 Imported and Pure-bred Cotswold Rams; 1 Ram and 10 Imported South-down Ewes, and 10 Ram Lambs; 3 Imported Berkshire Boars, and a number of Berkshire

and Yorkshire Pigs, of the Small Breed, from stock imported in 1856.

The greater portion of the stock at Moreton Lodge are imported animals from the Herds of Sir Charles Knightly, Col. Kingscote, Capt. Gunter, Messrs. Tanqueray, Bowly, Jonas Webb, Bolden, Sandy, Mortons, and Henry Ambler, selected by James Knowles, Esq., whose judgment in the selection and management of the celebrated Tortworth Herd (late Lord Ducie's) is a guarantee of the Moreton Lodge Herd, as respects first class blood, fine quality, good symmetry, and milking qualities.

This sale offers to the Breeders of North America the rare opportunity of obtaining FIRST CLASS STOCK, without the risk of a sea voyage, and great expense connected therewith; and offers to our American friends a selection from many of the First Herds of England, at a small cost of time and money to obtain them. The Cotswold Sheep are from the Flocks of Messrs. Slatter, Ruck and Beale Brown; the South-downs from Sir R. Thockmorton's Flock, and from the same stock as the Prize Wethers for several years successful winners at the Birmingham and Smithfield Shows; the Pigs from Sir R. Thockmorton's and Capt. Gunter's stock.

Parties from Lower Canada and the Eastern States, reaching Toronto on the 15th, can leave at 8 A. M. on the 16th by the Grand Trunk Railroad and arrive at Guelph at 10 A. M.; and from the Western States, via the Great Western Railroad, leaving Windsor in the early morning train on the 15th, reach Guelph the same afternoon.

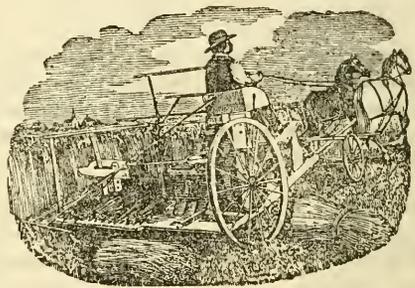
TERMS.—Under \$200, cash; \$200 to \$500, four months; over \$500, six months, on approved endorsed notes, with interest, or a discount of 10 per cent. for cash.

Refreshments at eleven; sale to commence punctually at twelve o'clock.

Catalogues are in preparation, with Pedigrees, &c., and will be ready for delivery by the 15th of August.

Morton Lodge, Guelph, C. W., Aug. 1, 1857.—21*

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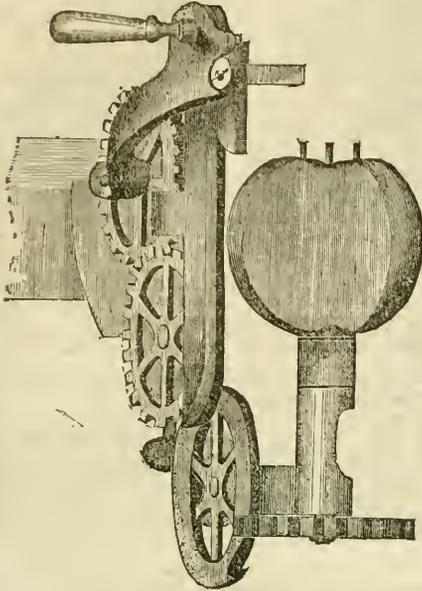
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H. P. HAPGOOD, of Rochester, N. Y., is the General Agent for the above Machine in New York, to whom all letters relative to sales, &c., in this State should be addressed. Traveling and Local Agents wanted. June 1.—3t.

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 May 1, 1857.—1y.

Prices of Agricultural Products at the Principal Markets in the United States, Canada and England.

	NEW YORK, July 20th.	PHILADELPIA, July 18th.	ROCHESTER, July 20th.	CHICAGO, July 18th.	TORONTO, July 18th.	LONDON, ENG., July 6th.
Beef, per 100 lbs.	\$10.00 @ \$12.00	\$11.50 @ \$12.50	\$5.75 @ \$6.00	\$7.00 @ \$8.00	\$7.00 @ \$7.50	\$3.25 @ \$3.00
do mess, per bbl.	28.00 31.00					10 50 15.00
Pork, per 100 lbs.	7.75 8.25		8.00 9.00			
do mess, per bbl.	19.25 19.50	19.00 23.50	24.00			
Lard, per lb. ....	.14½ .15	.15 .16	.14½ .15			.13 .17
Butter, do ....	.15 .24	.14 .19	.12 .16		.25 .30	.18 .21
Cheese, do ....	.05 .09		.08 .10	.06 .07	.10 .12½	.13 .18
Flour, per bbl.	6.25 10.50	7.00 9.50	7.00 8.75	5.75 6.00	6.25 8.00	7.92 8.64
Wheat, per bush.	1.50 1.95	1.85 1.93	1.85 1.90	1.21 1.75	1.61 1.85	1.62 2.19
Coru, shelled, per bu. ....	.83 .85	.85 .87	.88	.68 .71	.95 1.00	1.03 1.17
Eye, do	1.15 1.16	1.05 1.10			1.00 .90	1.00 1.00
Oats, do ....	.58 .65	.55 .58	.50 .56	.54 .54	.70 .75	.57 .99
Barley, do			1.00	.75 .80	1.00	1.11 1.32
Clover Seed, do		7.00 7.50		6.50 7.00		
Timothy Seed, do		4.00 4.50		2.63 2.75		
Flax Seed, do		1.95				2.04 2.16
Hay, per ton.			8.00 13.00	20.00 25.00	16.00 20.00	
Wool, per lb. ....	.36 .42	.35 .62½	.36 .40	.25 .40	.30 .31	
Wood, hard, per cord.			4.50 5.00			

Contents of this Number.

Cultivation of Wheat,	238
Premium Crop of Carrots,	235
The Horse Charm,	235
How Nature Imparts Fertility to Land,	236
Items Suggested by the July Number,	238
Notes for the Month, by S. W.,	238
The May Beetle,	239
A Glance at Virginia Agriculture,	241
Objects of Hoeing,	242
Applying and Leaving Manures upon the Surface,	243
Cultivation of Winter Wheat,	243
Keeping Sheep on Good Land,	244
Cattle Disease in Ohio,	245
Sound Corn,	245
A Farmer's Opinion of "Agricultural Quackery,"	245
Reasons why our Agricultural Societies should and should not offer Premiums for a Public Exhibition of Lady Equestrianism,	246
Teaching Animals,	247
Clean Meadows,	247
To Clean Cockle out of Wheat,	247
Design for a Brick Farm House,	248
What shall we Raise in place of Wheat?	249
How to Bind the Wildest Horse for Shoeing, and the Wildest Cow for Milking,	249
HORTICULTURAL DEPARTMENT.	
Annual Notes on Strawberries,	250
Ammonia in Green Houses,	251
Horticultural Operations for August,	251
In "My New Garden"—No. 2,	252
Shade Trees,	252
Summer and Autumn Planting,	253
Celery, or Turnip-rooted Celery,	254
Cultivating the Egg Plant,	254
The Cultivation of Flowers,	254
Apple Tree Caterpillars,	255
Gardening at the North Pole,	255
LADIES' DEPARTMENT.	
Ladies should do their own Gardening,	256
A Residence in the Country or City,	256
The Farm House,	256
An Excellent Way to prepare Green Corn for Winter Use,	256
Original Domestic Receipts,	257
EDITOR'S TABLE.	
State Fairs for 1857,	258
The Rural New Yorker—Once More,	258
Working Land in the Fall,	259
Wax,	259
American Horse Powers in England,	259
The Rural Annual for 1857,	259
Egyptian Wheat,	260
Introduction of the Alpaca Sheep and Angora Goat into Australia,	260

The Wheat Crop in Indiana,	260
Quality of Beef,	260
Poor Butter,	260
Prolific Lawton Blackberries,	260
National Trial of Reapers and Mowers at Syracuse,	260
Japan Peas,	263
Charcoal a Cure for the Striped Bag,	260
Receipts for Preserving Fruits, &c.,	260
Inquiries and Answers,	260

ILLUSTRATIONS.

Six Figures, representing different varieties of Wheat,	253
Brick Farm House,	248
Moth of the Cut Worm,	232

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JOSEPH HARRIS,

June, 1857.

Rochester, New York.



THE PRACTICAL UTILITY OF SOIL ANALYSES.

FRIEND HARRIS:—I have just read your leading editorial in the July number of the FARMER on "Agricultural Quackery;" and while agreeing with you in feeling and sentiment on the principal points discussed, it strikes me that you have been less guarded in your remarks in reference to the value of soil analyses than the importance of the subject demanded. Still taking an interest in the reputation of the GENESSEE FARMER for the extent and accuracy of its information, as well in the science as in the practice of agriculture, I shall regret to see it undervalue analytical chemistry as applied either to the investigation of manures, or the composition of vegetable and animal products, or of the soils from which these products are necessarily derived. You justly commend the analysis of Gould's Muriate of Lime made by Prof. JOHNSON, and confidently appeal to forty-two analyses of barley and wheat by "reliable chemists," to show that the former takes more of phosphates than the latter from the soil; and at the same time you tell your readers, in positive terms, that "no chemist in the world, by the most rigid analysis of the soil, can determine the point whether water ascending into a soil in dry weather, by capillary attraction, brings with it salts of soda, potash, lime and magnesia, &c., or not," as stated by Mr. PELL.

In many cases, the difference in the amount of soluble salts in the earth, at and near its surface, in dry and wet weather, may be inappreciable; but that such is *always* the case, there is no good reason for saying or believing. On the contrary, the subject deserves a more thorough investigation than it has yet received in any country. If true, the fact would be extraordinary, that a chemist of the experience and attainments of Prof. JOHNSON should be able to determine the value, as plant-food, of an earthly "stuff inferior to leached ashes," consisting, like soils, of six or seven per cent. of "organic matter," of "sand, soluble silica, alumina, iron, lime, potash, soda, magnesia, chlorine, sulphuric and carbonic acids, and water," and not be able to give any useful information in reference to the presence or absence, scarcity or abundance, of any of these constituents of crops in cultivated land. Destroy the value of chemistry in its application to the organic and inorganic food of agricultural plants in the soil, and you virtually damage it to an equal extent in its application to these substances when organized in the bodies of all living beings, although life may be extinct. Certainly, you did not contemplate any such injury to agricultural

chemistry, but only wished to shield it from the abuse of quacks and quackery, and protect unscientific readers from imposition. All upright men will appreciate and applaud this purpose; and at the same time, they would wish you not to intimate that all knowledge derived from the analyses of soils is a humbug, unless you have good proof that such is the fact. Even in that case, the proof should follow closely the mere assertion of what chemistry can or cannot do in all questions of doubt and controversy.

Athens, Ga.

D. LEE.

REMARKS.—We thank Prof. LEE for his friendly criticism. His views on this important subject are worthy of respectful consideration, and we cheerfully accord his letter a prominent place in our columns. We do not "undervalue analytical chemistry as applied either to the investigation of manures or the composition of vegetable and animal products." We believe that correct chemical analyses afford a true criterion of the value of manures, and furnish important and satisfactory information in regard to the amount of plant-food which the various crops remove from the soil. On these points Dr. LEE and ourselves are perfectly agreed. It is only in regard to the practical utility of soil analyses that we differ.

Here is a soil too poor for profitable cultivation. Ten acres of it do not produce grass enough to keep a cow, and the last time it was sown to wheat, it yielded only four bushels per acre. "Now, Mr. CHEMIST, I want you to analyze this soil, and tell me what it lacks to make it produce good crops. Can you afford me the desired information?" Such inquiries are frequently addressed to us. We always reply: "We can make an analysis of your soil, but, to be candid, we think it will be of no use to you. *It will not show you what your soil needs to make it productive.* The analysis may afford some interesting information—it may point out the presence of some deleterious substance—but it will not furnish you the information you desire." Our reasons for this advice we will briefly state.

In addition to the four organic elements, oxygen, hydrogen, nitrogen, and carbon—and of which the atmosphere is the original source—all our commonly cultivated plants contain potash, soda, lime, magnesia, phosphoric and sulphuric acids, silica, and chlorine. When a plant is burned in the open air, the four former are dissipated in the form of carbonic acid, ammonia and water; the eight latter substances are found in the ashes. They are usually termed "inorganic elements," or soil constituents. Plants can ob-

tain them only through their roots, from the soil. If a soil is destitute of even one of these eight substances, no agricultural plant will grow on it. *All cultivated soils, therefore, contain every one of these inorganic substances.* If they did not, no plant would grow upon them. All naturally fertile soils contain a full supply of these substances in an available condition, or in such a state that they are rendered available by the ordinary processes of tillage. Poor soils may be unproductive, and even incapable of profitable cultivation, from a deficiency of some one or more of these substances—but they are not *entirely destitute* of any one of them, if capable of producing a blade of grass or a Canada thistle.

It is unnecessary, therefore, to resort to chemical analysis to ascertain the presence or absence of any of the inorganic element of plants. Messrs. BRAMBLE, THISTLE & Co. assure us that they are all present in the soil, and their authority on this point cannot be questioned.

If an analysis of a soil, therefore, is of any practical value, it must be in determining not the presence or absence of this or that particular substance, but whether it exists in sufficient quantity for the growth of maximum crops. *We think that the most thorough chemical analysis cannot determine this point.* For instance, we have seen, growing side by side, two crops of turnips. One crop yielded less than *seven hundred pounds* of bulbs per acre, while the other yielded *over ten tons* of bulbs per acre. One soil was evidently too poor to grow turnips, while the other gave a fair crop. Now, what was the difference between these two soils? Simply this: the one had been manured with superphosphate of lime and the other had not. In all other respects these soils were alike. *One acre contained fifty pounds more of phosphoric acid than the other.* Could any chemist in the world have determined by the most rigid analysis which soil contained the extra fifty pounds of phosphoric acid? Let us see. An acre of soil seven inches deep, weighs at least two million pounds. Fifty pounds of phosphoric acid mixed with it would be one part in forty thousand. Such a minute quantity is far beyond the range of quantitative analysis. The determination of phosphoric acid in a soil is so difficult that a chemist congratulates himself when duplicate analyses of the same soil agree within one part in a thousand. If our friend Dr. LEE should make two analyses of the same soil, and one analysis gave the percentage of phosphoric acid as 0.1 and the other as 0.2, he would consider the analysis a good one, and, taking the mean—say the soil contained 0.15 per cent. of phosphoric acid. This, at least, is the usual way. Now, according to one of these analyses, an acre of the soil, seven inches deep, contains 2,000 pounds of phosphoric acid, and according to the other 4,000 pounds. The actual quantity present in the soil probably lies between these figures, but the exact amount it is impossible to tell, and there is no certainty whether it is nearest to *two thousand or four thousand pounds per acre.* How utterly impossible is it, therefore, to determine the difference between two soils, one of which contains fifty pounds more phosphoric acid than the other, and yet one is poor and the other productive. Admitting that it is sometimes possible to get duplicate analyses to agree within one ten-thousandth, the chemist would be still utterly incapable of telling the difference between these two soils.

These same remarks will apply to ammonia. We have seen, growing side by side, two crops of wheat, one yielding thirty-five bushels per acre and the other fifteen bushels. The only difference between the two soils being that one contained one hundred pounds of ammonia per acre more than the other, which had been applied in the form of sulphate and muriate of ammonia. This one hundred pounds of ammonia mixed with an acre of soil seven inches deep, would be one part in twenty thousand. We hazard nothing in saying that no chemist could determine so minute a quantity. It is far less difficult to determine the amount of ammonia in a soil than phosphoric acid, but if duplicate analyses agree within one-tenth of one per cent, (0.1) it is considered good work.* In other words, if one analysis showed a soil, when calculated to the acre, to contain 2,000 pounds of ammonia, and the other 4,000 pounds, the chemist would think this a very accurate analysis, and, taking the mean, put it down at 3,000 pounds. It is evident, therefore, that the one hundred pounds of ammonia, which changed the comparatively poor soil into an unusually fertile one, could not be detected by the analyst.

Chemists who undertake to prescribe for a sick soil, frequently say: "Your soil, according to analysis, is deficient in potash and soda, and phosphates and ammonia; you should, therefore, apply twenty bushels of unleached wood ashes, a bushel of salt, four hundred pounds of the improved superphosphate of lime, and two hundred pounds of the best Peruvian guano. These will furnish what your soil lacks, &c." Now, no honest chemist will claim that he could tell, by analysis, which part of the field had been so treated and which had not. The facts which we have mentioned above show that it is *utterly impossible* for the most rigid analysis to determine the least difference.

These considerations lead us to the conclusion not only that five dollar soil analyses are a great humbug, but that the best soil analyses that can be made are, in the language of BOUSSINGAULT, "more curious than useful."

Dr. LEE thinks it strange that we should admit that a chemist can give us reliable and useful information in regard to the composition and value of manures, and deny his ability to "give useful information in reference to the presence or absence, scarcity or abundance," of the same ingredients "in cultivated land." The cases are very different. The quantity of ammonia, phosphates, potash, &c., in a manure, can be determined with sufficient accuracy for practical purposes, but such is not the case in regard to the soil. For instance; here are two samples of guano. Their value is in proportion to the amount of ammonia and

* Some years ago, an English gentleman employed a London chemist to determine the nitrogen (ammonia) in a number of samples of turnips grown under different manural conditions. He agreed to pay ten dollars a piece for them, provided duplicate analyses of the same turnip agreed within one tenth of one per cent. Duplicate samples of the turnips were furnished, marked Nos. 1, 2, 3, 4, &c., the chemist not knowing which were the duplicate samples. In due time the analyses were completed, and the results furnished; but on comparing the analyses of Nos. 1 and 2, which were samples of the same turnip, it was found that they differed considerably more than one-tenth of one per cent, and others differed as much as 0.2 and 0.3 per cent. Such analyses were of no value to the gentleman, and he refused to pay for them. The matter was referred by the consent of both parties, to Professor GRAHAM, and he decided that the analyses were as accurate as they could be made; that the variation was within the usual range; and that the money ought to be paid. The money was paid, (\$500), but the analyses were never used.

phosphates which they contain. One is found to contain 18 per cent. of ammonia and 20 per cent. of phosphates, while the other contains 9 per cent. of ammonia and 10 per cent. of phosphates. We say one is worth as much again as the other. Now, the fact that a chemist cannot determine the amount of ammonia and phosphates with any degree of certainty nearer than 0.1 per cent., does not affect the value of the analysis at all. If it can be determined within 0.5 per cent, or even within 1 per cent., the analysis still indicates the value of the manure with sufficient accuracy for practical purposes. But in soil analyses, if there is the slight variation of 0.1 per cent., the analysis is utterly valueless; for when calculated to the acre, it causes a variation of 2,000 pounds—a quantity of ammonia that it would take six tons of guano, or two hundred tons of barn-yard manure to furnish. The same is true of phosphoric acid, potash, and other constituents of manures and soils.

Dr. LEE is surprised that we doubt the ability of a chemist to "determine the point whether water ascending into a soil in dry weather, by capillary attraction, brings with it salts of soda, potash, lime, and magnesia, &c." It will not be claimed that the water which ascends during the drouth of a single summer, brings to the surface more plant-food than is required by a large crop. If it did, where would be the necessity of manuring? Supposing, then, the water ascending during the summer from the subsoil, brought to the surface enough potash (leaving out of the question other ingredients) for the growth of a crop of wheat of fifty bushels per acre, say fifty pounds, could any chemist discover that the soil contained more potash in the fall than it did in the spring? This fifty pounds of potash would be mixed with two million pounds (2,000,000) of soil, or one part in forty thousand. Now, when duplicate potash analyses agree within one thousandth part, they are considered very accurate. To determine one part in forty thousand, therefore, is utterly impossible.

Dr. LEE says: "Destroy the value of chemistry in its application to the organic and inorganic food of agricultural plants in the soil, and you virtually damage it to an equal extent in its application to these substances when organized in the bodies of all living beings, although life may be extinct." We cannot see the force of this argument. If it is true that soil analyses are of no practical utility, the fact should be known. The cause of agricultural chemistry cannot be promoted by the suppression of truth, or by unfounded pretensions. It is a good cause, and truth will not hurt it.

FAIR OF THE ROYAL AGRICULTURAL SOCIETY

THE Nineteenth Annual Fair of the Royal Agricultural Society of England was held this year at Salisbury, July 21—26, and according to our English exchanges, "is generally allowed to be the best ever known." The first prize of £30 for Short-horn bulls, over two and not exceeding four years old, was awarded to WILLIAM STERLING of Keir, Dumblaine, Perth, for "John O'Groat," which the *Mark Lane Express* says "we shall be bold enough to rank as one of the best bulls of his breed ever exhibited. He is altogether a far grander animal than the 'Master Butterfly' of last season, of quite as fair a quality, and yet more symmetrical proportions. As the Yorkshire man said of the horse he was trying to

cheapen, 'Dang him! I can't see a fault about him,' so it is, or at least very much so, with John O'Groat. He has gone on improving since he was first shown by his breeder—the well known Mr. FAWKES, of Farnley—at the Carlisle Meeting of two years since. In fact John O'Groat is a better animal than he at first promised to be—a recommendation which is not too common with high bred, over-fed cattle of any kind.

"As a class, however, as containing the greatest number of good animals, there has been nothing like that of the Short-horn cows. * * We do not know whether in these Cow and Heifer Classes the judges took the milking qualities at all into consideration. Few speeches of late, however, have had more effect than that short, pithy sentence of the American, Mr. FRENCH, at the Ipswich Meeting: "If they don't give plenty of milk, I don't care how short their horns are." Any how, it is very certain one exhibitor of Short-horns at Salisbury, brought a spare cow with him, to feed his stock from. This is the great mistake our breeders have for some time been running into, and it is one which the Society should take especial pains to correct."

"The show of Herefords," says the *Agricultural Gazette*, "was extraordinarily great in number, and good in quality." There were fifty-five animals exhibited. "As far as we may take the test of these Agricultural exhibitions," says the *Mark Lane Express*, "the taste for Herefords is rapidly reviving. During the last two or three years the entries of this breed have in every way improved. In none of the classes has it been more remarkable than where this must be most wanted—in the female animals."

The Devons were out "in greater force than for some time. * * The pure, thorough-bred home-reared Devon carried all before it at Salisbury."

The show of sheep was without a parallel. In South Downs, it will be recollected that last year, Mr. OVERMAN of Norfolk, to the surprise of every one, carried off the prizes from that world renowned breeder, JONAS WEBB. It was then said that Mr. WEBB "must show again." And this year he did show again "with a vengeance"—and carried all before him. There were between fifty and sixty yearling rams exhibited, and among the competitors were such celebrated Down men as RIGDEN, OVERMAN, ELLMAN, SAINSBURY, FARQUHARSON & HARDING, LORD WALSLINGHAM and the Duke of RICHMOND. In this class the judges selected out six sheep. After great deliberation they gave two of them the prizes (£25 and £15), they specially commended two more, and they highly commended the other two." *All six sheep turned out to be the property of Mr. Jonas Webb!*

Next to Mr. WEBB, indisputably came Mr. OVERMAN, first and second in a very good class of ewes. The Duke of RICHMOND showed by no means on fair terms, as his sheep were much injured on the train by the accidental firing of the straw on which they stood.

The show of Leicesters was good, and Mr. W. SANDAY of Holme Pierrepont, Nottingham, carried off all the prizes that were offered. The *Agricultural Gazette* says: "Mr. SANDAY's shearing rams are beautifully formed, with good backs and loins, clines full out, plaits good, and wool heavy. * * The prize rams older than one year, are very straight, broad, and with very good backs; their ears long and fine, and necks exceedingly good. * * He

quite deserves the great share of honors which have been awarded him."

The Society offered some special prizes for "short-wools other than South Downs," and there were 128 entries in this new class, principally Hampshire and Shropshire Downs. Both breeds are hardier, and somewhat larger than the true South Down, with a greater aptitude to fatten, and are rapidly gaining favor. W. HUMPHREY of Wantage, was the most successful exhibitor of the Hampshire, and GEORGE ADNEY of Harley, Salop, of the Shropshire Downs.

In Pigs the show was very large. The Classification is into Large and Small Breeds, respectively, but the smaller sorts exhibited are increasing in size from year to year so that this description will have to be abandoned. "The prevailing kinds," says the *Agricultural Gazette*, "are the Cumberland White and the Essex Black commonly known as the Fisher Hobbs breed. The prizes are awarded chiefly to the White breed, Mr. WATSON, of Wigton, Cumberland, being especially successful."

The show of horses was large but "decidedly inferior to that of last year," and somewhat to our surprise, the large, heavy horses seem to have been the favorites.

In the several classes of cattle, horses, sheep and pigs there were *twelve hundred* animals exhibited against nine hundred last year. The show of Implements was also very large but we see nothing mentioned in it that would be of much interest to American readers. Mr. CORNUCK's machine, made by BURGESS & KEY took the first premium as a Reaper, and the "American Eagle" the first prize as a Mowing Machine. The Society had offered a prize of £500 for a steam plow, but though there were several entries, none of them seem to have made good work, and it is thought the premium will not be awarded. A good steam plow has yet to be invented.

TEN ESSENTIALS TO GOOD FARMING.

ACCORDING to J. J. THOMAS' prize essay on "Farm Management," the principal essentials to good farm management are:

1. Capital enough to buy the farm and stock it well.
2. The judicious selection of a farm of a size compatible with these requisites.
3. To lay it out in the best manner.
4. To provide it well with fences, gates and buildings.
5. The selection of the best animals, and the best implements that can be procured at a reasonable price.
6. To bring the soil into good condition by draining, manuring and good culture.
7. A good rotation of crops covering every part of it.
8. A systematic arrangement of all operations, so that there shall be no clashing or confusion.
9. Diligence.
10. Good management of business affairs, buying, selling, etc.

Will some of our numerous correspondents give us a short and separate treatise on each of these essentials to successful agriculture?

BUTTER MAKING IN MASSACHUSETTS.

We have been much interested in reading the reports of Committees on Dairy Products exhibited at the various County Agricultural Societies in Massachusetts, as well as the statements of the successful exhibitors in regard to their process of manufacture. We make a few extracts from the reports on butter.

THE CREAM SHOULD BE REMOVED BEFORE THE MILK SOURS.—The Committee of the Middlesex County Society remark: "The best butter is made from cream which is taken off the milk at the end of twenty-four hours. Allow the same milk to stand twenty-four hours longer, the milk skimmed and the cream churned, and it will produce very poor butter—tasteless, and about the color of cheese-curd. (The above remarks apply to the warm season of the year.) The proportion of butter made from the two skimmings of the milk, will be the first, two thirds; the second, one-third; and by putting the two together, you would increase the quantity but diminish the quality. Butter commanding twenty-five cents per pound, by the union of the two, would readily bring thirty-seven cents per pound by leaving off the latter. Probably one of the greatest causes why there is so much poor butter brought into market, is, the cream is suffered to stand too long upon the milk before it is skimmed; and it would not be too bold to assert, that one-half of the butter that is made in the warm season of the year, is made from the cream taken from sour milk. When the good dairy-woman discovers little bunches, or blotches, arising on her cream, the sooner the cream is removed from the milk the better."

Mrs. SARAH L. RIDGEWAY, to whom the first premium was awarded at the Essex County Fair, gives the following account of her process for butter making, which she has adopted for the last twenty years: "The milk is strained into nicely scalded tin pans, and allowed to stand thirty six hours in a well ventilated cellar, when it is skimmed into tin pails, and stirred morning and evening for two or three days, as most convenient, when it is churned and well washed with cold water, and salted to taste. After standing a sufficient length of time for the salt to dissolve, it is well worked, more salt added, if needed, as some will naturally work out, and then made into balls for the market, without coloring or ornament. If the weather is quite warm, I use the ladle to work it with; if not, the hands."

A. H. FAY, who received the first premium at the Worcester West Exhibition, says: "My manner of making butter is to set the milk in tin pans, about half full, raised from the shelf on two narrow sticks, and let it stand not over four meals. The cream should be taken from the milk while sweet, and stand not over three days, and stir it every day until churned. After churning, work the butter-milk out as much as possible before salting. No washing is necessary to make the butter keep well, for it will keep better without. About one ounce of salt to a pound of butter is required to salt it. It should be worked over the second day after churning, and put down in stone jars and covered close from the air—kept above in the winter, and in a cool, dry cellar in the summer, and it will keep the year round.

Mr. WILLARD WOOD, who received the first premium at the Plymouth County Fair, says: "I set my milk in tin pans, and let it stand from twenty four to

thirty-six hours before skimming, according to the weather. My cream is churned soon after it is taken from the milk, when it is sweet. The butter, when taken from the churn, is rinsed in cold water, then salted with fine rock salt, about one ounce to the pound; it is then put in a cool place until the next day; then worked over and made into balls, and packed in a stone pot, covered closely."

GOOD BUTTER COMMANDS GOOD PRICES.—The Committee of the Worcester North Society, in their report on butter, well observe: "So important has this product of our farms become, that she who successfully vies with her sister dairy-women in producing the purest, sweetest and most palatable article, can command for it her own price, and stand forth as the undisputed sovereign of the product of her skill and industry, without a rival. Such a position of celebrity, however, is occupied by the few, while the mass plod on in the old beaten track, with but little, seemingly, to care or hope for.

"The demand for good butter, both at home and abroad, is rapidly increasing, and should stimulate our farmers, not only to increase its supply, but, so far as possible, improve its quality."

ITEMS SUGGESTED BY THE AUGUST NUMBER.

HAYING IS, or ought to be, about over, and our farmers fairly into the barley and wheat harvest. Harvest! pleasant word! used to have but one meaning for us—the time of the ingathering of the wheat crop—the great staple of Western New York. Now other crops rightly take the precedent—wheat having withdrawn from the field in a great measure, under the pressure of its tiny but powerful enemy. But it's "all right," and we shall find and acknowledge it so in the end, I dare say.

VARIETIES OF WHEAT.—Some competent man might do a good service to American Agriculture by gathering all the information available on the different varieties of wheat, and their adaptation to different soils and climates. I should like to know more about them, and not as now be in doubt whether any foreign variety I hear of, be nothing but one common to us under a different name. There may be some work containing such description, etc., but if so, I have never chanced to hear of it. Meanwhile, let us have such information through the *Farmer*; you have made a good beginning in the present number.

CARROTS—WHITE AND ORANGE.—MR. BRODIE, says "the yield of the white carrots was much greater than that of the orange." So I have found it, and I find, too, the white carrot more palatable for table use than the orange. We cooked a good many last winter and spring, the same as one would parsneps, and they were esteemed quite a luxury by all who tasted them. The cows seem to have the same opinion of them in a raw state, and "gave down" much better while they lasted.

THE MAY BEETLE.—I found large quantities of these "bugs," while working in my garden this spring, and at evening the cherry and butternut trees near, seemed all alive with them. I am glad Dr. FITCH has given us this full account of them, and hope you will secure one as particular of the cut and wire worms.

OBJECTS OF HOEING.—The "second" object—to *destroy weeds* has been one of the chief, the present rainy summer. I wish "B. F." would go into our beats awhile, and there give us an example of his prowess.

SURFACE MANURES.—Friend McVEAN, always writes to the point, and never more so than in this brief article. I hope he will favor your readers often.

SHEEP ON GOOD LAND.—A little extra attention to our flock last winter, convinces me that sheep will repay good care—that it is *most* profitable to give them such. I mean to go a little farther, next winter, and Mr. JOHNSTON's article gives me just the "information wanted" on the subject.

SOUND CORN.—The method of securing corn stalks when cut up in autumn, recommended by your Pa. correspondent, is the only safe one, and answers the best results with the least trouble in the end. The corn will be much better, and the same is true of the stalks, and we had better leave them thus stacked in the field until mid-winter, than to place in a large mow or stack to heat or mould, as is too often the case when so secured.

TEACHING ANIMALS.—Animals will acquire good habits just as easily as bad ones, and it is really worth while to teach them when young to be gentle and obedient. If well fed and comfortably cared for, they will be quiet—if starved, nature prompts them to seek food and shelter, wherever it may be found. Bro. SANFIELD, is a schoolmaster, both to the herds and flocks, and to the "young ideas" of his country, and his advice is worth listening to, and following.

CLEAN MEADOWS.—We pay too little attention to clearing our meadows of sticks and stone, and this neglect brings double the expense in injury to scythes, rakes, and mowing machines, as well as in loss of hay and temper. When I was a boy, meadows were "picked up" every spring—there was no excuse for a loose stone or a stick left upon them. Now, boys have too much play on their hands, for this, besides they "don't like to do it."

SHADE TREES.—Too many shade trees, is almost as great an evil as none at all, and one fine, full grown specimen, is worth a dozen spindle-trunked and half-headed trees, crowded into the space which the first named would fully occupy. I have a single maple near my house, which I value more highly because it does not discommode me, and is really an ornament to the grounds—a noticeable feature thereof.

ANGLE WORMS.—I never knew a soil full of angle worms which would not bake, as described by Mr. EDWARDS. They work in it when wet—making mortar wherever they go, and when it dries it becomes hard whatever the character of the drainage may be. How to get rid of them, is more than I can undertake to say. B.

Niagara Co., N. Y.

GROWTH OF THE "SORGHUM." The sugar cane is a slow grower in such cold, wet weather as has been our's the present summer. Mine looks thrifty, and now, early in August, is about three feet high, with only a small show of suckers, except in hills with but two or three stalks. B.

Niagara Co., N. Y.

NOTES FOR THE MONTH.—BY S. W.

THE SEASON FOR CORN.—This has been thus far, 12th of August, a warm and growing, but very wet summer. Indian corn would have been a good crop if this month had been as warm and dry as the preceding one; as it is, corn, even on a drained soil, ears slowly, as the heat of the sun by day hardly overcomes the effects of rain and longer and cooler nights. A good crop of well-filled ears of Indian corn must be a rare show this fall in Western New York.

SORGHUM.—The wet weather does not prevent this plant from attaining a monstrous growth on a rich, drained soil. It now stands over six feet high, suckers and all, without any appearance of preparing to seed. It is evidently more hardy than Indian corn, and of much slower growth when young.

POTATOES.—Farmers complain that early potatoes do not yield as well as last year, and there are indications of rot in some fields.

GRASS.—The hay crop has rarely been so large, and pastures continue as green as they were in June, *prima facie* evidence that it is a bad corn season.

BARLEY.—This is said to be as large, if not a larger, crop than wheat this year; but Seneca neither sows nor reaps the best varieties of wheat now. JOHN JOHNSTON and a few others still grow large crops of white wheat on their well manured, tile-drained fields, but the inferior Mediterranean wheat is generally grown now.

OHIO CORN SOWER IN DRILLS FOR FODDER.—JOSEPH WRIGHT grows many acres of corn-fodder every year. He says it must be cut after the ears are set, and the tassels begin to droop; but the best test of the right time is by tasting: when too green, the juice will be bitter or tasteless at the joints of the stalk. Wait until the whole stalk is sweet; cut and lay it down to wilt; if no rain, turn it over once; then put six bundles in a shock, and bound at the top. After a week's dry weather, make them into twelve bundle shocks, and let them stand until wanted to feed in winter. He says he has let the shocks stand in the field until March, and then found the stalks dry and sweet to the butt end. He has now one large field of corn in a very green state, over eight feet high, but it matures slowly this wet weather.

HOW TO MAKE GRASS TAKE THE PLACE OF WEEDS.—Pull up around your premises every weed before it blossoms, and you will be surprised to find how soon white or red clover, or some grass, will fill up every vacant spot, thus adding beauty to usefulness.

DRILLING IN WHEAT.—I noticed, in passing on foot over wheat fields this spring, that the wheat which had been sown broadcast was much winter-killed, while that which had been drilled, or plowed in, looked well. The editor of the *Ohio Cultivator*, after a journey of 600 miles through Ohio, says: while the wheat drilled in looked well, that sown broadcast was a general failure. When drilled in, in a dry time the seeds find moisture enough to insure vegetation, and it will not so readily freeze out as when sown broadcast.

THAT TWENTY-THREE-POUND FLEECE OF WOOL.—The fleece of a Merino Buck very full of gum, and black on the outside, with dirt, was weighed, and then carefully scoured at Waterloo Woolen Mills; when thoroughly dried, it weighed but six pounds, or a trifle under. The ordinary waste in good Merino wool in

cleansing is only 33 per cent., while this fleece lost more than 70 per cent. Let farmers beware of such dirty bucks, as such wool is unsaleable at half price.

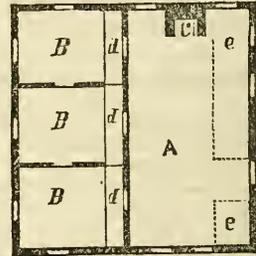
The Waterloo Woolen Mills have thus far taken in and paid for, in cash, 240,000 pounds of fine wool, a part from Upper Canada and Ohio. The average price paid thus far is 44 cents a pound, against 41 cents last year at this time.

Apples are falling from the trees stung to death. I set my wide-mouthed bottles under my Sweet Bough tree; caught flies only in June to 20th July, since which millers of every size cover the surface of each bottle daily. Plums are stung as badly as apples. S. W.

Waterloo, Aug. 12, 1857.

CONVENIENT PIG-STY.

THE annexed plan of a well arranged pig-sty, we received from a gentleman residing in Bayham, C. W. We give his description below.



DESCRIPTION.—"A is the main room, for storing roots, grain, &c. It also contains a large fire-place, where the feed can be cooked and water heated for butchering, &c. The women folks think it is a fine place to make soap, and do many odd jobs. It is 14 feet by 24. B, B, are the sties, 10 feet by 8. The floors of the sties are on an incline of two inches in ten feet, to carry off the wet to the rear, where there is an opening, 6 inches by 8, to shove out the manure. This may be closed in winter with a board, if necessary. C is the fire-place, which is provided with two cranes, hung so that two kettles may be over the fire at once, without interfering with each other. d, d, are the feeding-troughs, made in the usual manner, of two inch plank, and spiked to the floor. e, e, are bins, made for storing roots, &c. There are morticed holes in the floor and ceiling, in which false posts may be put to hang the slaughtered hogs on.

"The partition between the main room and the sties is made by spiking a plank on the posts, wide enough to come up to the top of the troughs. Then one, nine inches wide, is spiked on above this, but with a space left between, to put the feed through. Above these, nail brackets on the posts, so that boards may be slipped down, and can be easily removed when you want to butcher, as you will want to bring your hogs over in case of bad weather, which can be easily done by turning the boards around so as to form a slip, to draw them over the troughs."

The main body of the building is built with a gable roof, and is a story and a half high. The part containing the sties is built as a "lean-to," with a common shed roof.

YELLOW DOCK (*Rumex crispus*).

This species belongs to an extensive family of plants, familiarly known as sorrel, or dock, inhabiting Europe, the temperate parts of Africa, and the United States. Several plants of this genus have acid leaves, owing to the presence, mainly, of oxalic acid. Those, as a general rule, which have the most of this acid, are distinguished by the common name of sorrel, some of which are highly esteemed in many places as culinary vegetables. They are cooling, and somewhat diuretic, and are not considered injurious, unless too freely and frequently eaten. A small portion of oxalic acid is likewise found in many of those known by the common name of dock; but in these it is principally in the petioles and stalks, instead of the leaves. Tannic acid is found in the roots and seeds of many of the species, and it is to this acid that they owe their astringency.

The Yellow Dock (*Rumex crispus*) is considered by most authorities as a native of Europe, having been introduced into the United States. GRIFFITH, however, in his medical botany, says it is a native of this country. It is very common, inhabiting not only waste places, but often to the great annoyance of the farmer, taking possession of, and literally over-running, his richest fields. When it has once thoroughly obtained a foothold, it is not easy to eradicate it. It is very tenacious of life, and will often take root and grow after having been exposed for several days to the hot rays of the sun, should any of the small fibres of the root happen to be covered with the soil.

DESCRIPTION.—The stalks rise from two to three feet, and sometimes in very rich soil, to three and a half feet in height—wavy, smooth at base, but becoming straightened as you ascend. The flowers are numerous, in a large panicle of auxiliary racemes, made up of half wheels, spirally arranged. The leaves are lanceolate, acute, and slightly waved, particularly along their margins—radical ones large, having very long petioles. The leaves have a slightly pungent, bitter, astringent taste, with an odor, when bruised, of sorrel. They also contain a small amount of oxalic and tannic acid. The seeds are stringent, like the root, but less bitter, containing considerable tannic acid. Root perennial, fusiform, yellow, having from three to five rows of rootlets extending its whole length, slightly spiral in their course, covered with a loose epidermis, easily separated, and having but little taste.

In this vicinity, (Poughkeepsie,) this plant flowers in June, and the seed ripens the last of July and the first of August.

USES AND MEDICAL PROPERTIES.—The leaves are sometimes used for greens. They are somewhat laxative, and form an excellent diet in scorbutic complaints. The roots contain a yellow dye, and are said to be sometimes used in coloring. The dye, on exposure to the atmosphere for some time, changes to a reddish yellow color.

Though this species is not official, yet it has enjoyed at different times considerable reputation as a medicine. Its medical properties are those of an astringent and mild tonic. In this respect, it has some resemblance to rhubarb. It is supposed to possess an alterative property, and has been employed in decoction and ointment in scorbutic disorders and cutaneous eruptions, and has attracted some attention

in the treatment of itch. The powdered root has been recommended as a dentifrice, in cases of spongy gums. Recently, it has been employed quite extensively in syrups and patent medicines.—*Dr. Salisbury.*

As much, therefore, as this plant is now detested by the agriculturist, it may yet be turned to his advantage, and may become a favorite and profitable plant among his cultivated crops. It has always been known to possess medicinal qualities, and a few years since has been extensively used in sarsaparilla syrups, &c. Persons are employed to procure the roots, and three cents a pound is paid for them in the green state. When dried, twelve cents a pound is allowed by some of our druggists.

Our attention was first directed to this subject on being applied to for the privilege of taking the dock from our fields. This we very readily consented to, rejoicing in the fact of having them taken from our fields without any trouble or expense.

The proper time to pull them is when in flower, and immediately after a rain, while the soil is moist, as they can then be raised with greater ease. The roots should be washed, if from a tenaceous soil, or the earth shaken off, if from a sandy soil.

This discovery we conceive of some importance to the farmer, as it will enable him to clear his fields of a pestiferous plant, and, if he chooses, make it profitable.

Now, if some of our chemists would discover some useful purpose for which the Canada thistle, the daisy, and the snap-dragon, (sometimes called toad-flax,) might be appropriated to advantage, they would be hailed as benefactors of the age.

Springside, N. Y.

C. N. BEMENT.

HOW MUCH CORN, OR HAY, IS REQUIRED TO PRODUCE ONE POUND OF MEAT?

MESSERS. EDITORS:—What guide have we to form an estimate, or an opinion, as to how much meat may be produced by feeding certain kinds of food to animals? This question is one of much interest, and worthy of more attention than has been given it. With the present high price of meats, it is a matter of much interest to know how much meat may be produced by feeding a bushel of corn, or a ton of hay; and if either, or both of these be fed, what quantity, and what proportion of the one to the other, ought to be given to produce the best results. From the best information which the writer has been able to gather, it is assumed that, as a common measure of food for animals, Indian corn should be the standard, and that it possesses double the value of hay by weight—that, in nutritive value, one pound of corn meal is equal to two pounds of good hay—and that, with good stock in fair condition, eight pounds of corn, or its equivalent in other food, will produce one pound of beef, and that one-fourth less will produce one pound of pork, when the animals are fed under cover. It is obvious that the quantity of food required by an animal daily, depends on its weight, in a great measure; and it is found that one and a half per cent. of the live weight of the animal, in corn, or its equivalent amount in other food, is necessary as food for working horses, working oxen, animals being fattened, or cows giving milk. A certain portion of hay, or other fodder, is necessary for an animal being fed with corn-meal; and a bul-

lock weighing ten or twelve hundred pounds live weight, should not be fed more than three to five quarts, or six to ten pounds, of corn-meal daily, and the balance of his food should be made up with hay, or other green fodder. A larger proportion of corn or corn-meal than this, will not be fully digested or assimilated; for when a larger quantity of corn-meal is fed, a portion of it may be detected in the droppings of the animals.

By an experiment made on two lots of steers, each fed thirteen months wholly on hay, BOUSSINGAULT found the one lot averaging 955 lbs. at first, at the end of thirteen months weighed 2,090 lbs. Increase, 1,135 lbs. They consumed, per head, 15,972 lbs. of hay; and one ton of hay produced 143 lbs. of increase of animals, or 14 lbs. of hay increased the weight of the animal one pound. The second lot, at the commencement of the experiment, averaged 896 lbs. each; at the end of thirteen months, the aggregate increase was 994 lbs. They consumed, per head, 14,553 lbs. of hay; and one ton of hay produced 137 lbs. of increase weight of animals. The second lot of steers were not allowed salt, which the first lot got. Thus the steers receiving salt increased 6 lbs. more on a ton of hay than those which were not allowed salt, and the coat and hair on the steers having salt were much smoother and more shining than the coat of those not having had salt.

It will be found from these data that the steers consumed about 37 lbs. of hay per day, and gained daily about 2½ lbs. If, however, instead of being confined wholly to hay, they had been allowed a suitable portion of hay, or corn fodder, with corn-meal—say 8 lbs. corn-meal and 21 lbs. hay daily—it is probable that their gain would have shown a larger per cent. From the above data, as per first lot, we have to conclude that 14 lbs. hay, or 7 lbs. corn-meal, will produce one pound of beef. Therefore, if we assume the price of corn fifty-six cents per bushel, or one cent per pound, and hay ten dollars per ton, or one-half cent per pound, the cost for feed in the production of beef would be seven and four-tenths cents per pound. Thus,

Feed for one day, 8 lbs. corn-meal, at one cent per pound,	8	cts.
do do 21 lbs. hay, at one-half cent	10½	"
	18½	cts.

Cost of feed for one day, eighteen and one-half cents, and this producing 2½ lbs., would make the feed, per pound of meat, cost seven and four-tenths cents. Are there not, among your many readers, some practical farmers who have useful data or remarks to offer on this subject? S. G.

Lebanon, Pa.

REFLECTIONS ON POOR ROADS.—NO. 1.

MESSRS. EDITORS:—As my business calls me to travel much (making and selling grain cradles and barley forks,) as I travel along "solitary and alone," I see a great many roads—get a great many jostles, and have time to reflect, being stirred up to the subject more or less every minute. We are a progressive people, but we progress faster in almost any other thing than we do in traveling or improving our highways—or rough ways more properly speaking. There are sad defects in our road laws—new path master ("cow path" it should be called) every year—what one does this year the next one undoes—all masters and nobody to obey. Now this is all

wrong and should be reformed. Among the many wrong things are these—1st. Too much ploughing and heaping up. 2nd. Too little care in constructing water courses across the road. 3rd. Not precision or mechanism enough in the general features of them, &c., &c. There should be a law to appoint, say three permanent residents—men of strong, practical ingenuity and taste (not whiskey taste) in each town in the State for the term of, say, 5 years—to superintend the roads—they should go on and make and mind the roads on a scientific, permanent plan, perhaps like this. Draw a line precisely in the middle of the road, regardless of old structures—then plow at a proper distance, say 12 feet from the center line and scrape up, raising the road one foot higher in the center than the bottom of the ditches with a nice convex from ditch to ditch 24 feet. Next for water courses.—Dig away 1 foot lower than the ditches from one to the other across the road—bed down large flat stones, or bed down timbers and lay a plank floor across the road 20 feet long and wide, enough for the sluice and walls to rest on, raise the walls high enough to give the water a free passage (though the whole should be dropped below the ditches to prevent the action of the frost in winter,) cover the sluice with thick flat stones and round up with earth to a level with the road. This reform in roads would take up considerable of the taxes for a year or two, but after that time not more than one half or one third of the tax would be required to keep the roads in even better condition than they now are. Well, says one, What shall be done with the surplus labor? I will tell you—draw gravel—draw gravel and put 6 to 12 inches in the centre with a gentle slope to the ditches. A certain number of inches, or some definite distance should be taxed or extracted every year from every day's assessment on every road beat in the State for making a grand road on the part of said beat that is used the most till the whole country has grand roads.—Plank roads—turnpikes—pavements or any thing discovered yet are all thrown in the shade by graveled roads. Who that has ever gone over the Ridge Road from the Genesee to the Niagara will dispute this doctrine of gravel roads. Most of the districts have more or less gravel within them, and those that have not are in a deplorable condition and need the assistance and the sympathies of those around them, as much as those that are doomed to the poor house. There should be a new ordinance to read thus:—"Woe to those that withhold gravel from those that live on the clay, for their lots are hard and their road full of mud holes."

Much more might be said on the subject, but short yarns are preferable, and short routes too, especially if you have to travel on clay roads.

Adams Basin, N. Y.

JOEL HOUGHTON.

LIME AS A MANURE

MESSRS. EDITORS:—After reading Mr. PALMER'S letter requesting information in regard to the use of lime, I have concluded to give you our experience. In 1843 we bought the farm where we have since resided, for a trifle over \$3,000; since that time we have used, I should judge, about six thousand bushels of lime, and of late have used considerable guano and phosphates, but consider that the lime has paid us the best. If I should say now that we could get

\$12,000 for our farm, I do not think I should exaggerate at all. Well, gentlemen, lime has done by far the most of this. To be sure, property has raised in value in our vicinity, as well as elsewhere. I think that property has increased in value more through here than almost any other place in New Jersey, on account of raising peaches, which, it is admitted, will equal the best that are sent to New York.

But to tell you about the lime. Lime costs us about sixteen dollars per hundred bushels, delivered, and we always calculate to get pay for our lime in the first crop of oats. We lime whenever it is convenient, but would prefer it put on at least one year before we plowed the ground. If the ground is limed over the summer before plowing, the first crop will be benefited; but if put on so late, it will not always show in the first crop, but will show itself in the oats and grass. Mr. P. must not abandon or condemn lime, if his wheat should not meet his expectations. Lime, when put on so recently, hinders wheat from ripening.

Now I will give you the rotation of crops as successfully practiced with us: Lime on the sod, from twenty-five to forty bushels to the acre, (I mean stone lime, but nicely slacked, of course, before spreading,) in the fall; plant with corn the following summer; next spring sow with oats and clover; and the next summer plow under the clover, and sow with wheat and timothy. We do not let our ground lie more than two years, unless it best suits our convenience, but consider that it is never in a better state to plow than as soon as it is in a good sod. I notice that a number of your correspondents speak of the ground as getting "clover sick." Well, ours used to do so too, and we had to quit sowing clover after clover; but since we have sowed timothy after clover, and clover after timothy, we have had no cause to complain of the land becoming *clover sick*.

We have a variety of soils, from a sandy loam to a stiff clay, and are certain that lime will pay on all or any of them. Some of the farmers of the best land in our county commenced liming when the lime cost twenty-five cents per bushel, and these farms are ahead yet, I should judge, more than the lime cost; and I am certain that if Mr. P. commences using lime at twenty-five cents per bushel, he will get so far ahead of his neighbors, while they are looking on, that they will never catch up.

Pennington, N. J. JOHN L. BURROUGHS.

TASTE AND THRIFT IN IOWA.

MESSRS. EDITORS:—I have seen an article from the pen of "VIOLA," of this county, reflecting severely upon the want of taste, thriftlessness, &c., of the Hawkeyes. For the sake of my adopted State, and the county of my choice, I will say a word for the farmers of Iowa. It is less than thirty years since the first white settler was fighting the savage for a foothold in this State. Then there were not twenty legal settlers in our territory. Now we have 600,000. Then there were no buildings for the abodes of civilization. Now the cities of Dubuque, Davenport, Muscatine, Burlington, Burin, Keokuk and Washington can each number their thousands of citizens, and their imposing edifices of wood, brick and stone. Then we had only the Indian trail and buffalo path for roads. Now we can boast of our common highways, our numerous railroads and magnificent bridges.

We have spanned the Father of Waters with the noblest bridge in America, save one. * * * *

Will "VIOLA" travel with me to some neighborhoods in Iowa, and see our waving prairies of greenness marked by the hedge row, dotted with orchards and groves, bedecked by neat white cottages amid blooming flowers and green trees, and tell me where has the sun seen a land of better promise? True, we are careless, and, with our hands full of bounties, we drop some that should be saved. Our faults are of the bountiful order. In the eager, onward rush of myriads, conquering nature, crowning art, extending science, developing "manifest destiny," and coronating popular sovereignty, we may not be so penurious and saving as the witch burners of Salem, or so quiet as the Rip Van Winkles of Sleepy Hollow. This cannot be helped. We are in a fast age, and those who don't "get out of the way" will be jostled out or run over. True, trees grow but little faster than in olden times, owing to the ignorance of the age respecting agricultural chemistry, and we cannot yet build houses by any railroad process; yet in all these respects we are making commendable improvement upon our forefathers. Those who come to Iowa expecting to find farms in cultivation, houses built and furnished, churches, mills and school-houses at the first half mile stone, with artificial bowers of luxury on every place, and all for one dollar and a quarter per acre, will be disappointed.

If "VIOLA" will confine her complaints next time to the audience that is reputed to list to certain lectures, she may do good. But she has not traveled if she imagines Iowa inferior to New York two hundred years ago, or one hundred years after that. This county (Washington) alone furnished 15,000 fat hogs and 30,000 bushels of grain to a foreign market in 1855. What if a few hogs did get away to the woods, and a few bushels of grain go back to dust, outside of the regular channel. The earth caught it all, and we will save it when necessity is as hard upon us as upon the unfortunate dwellers between the ocean and the lakes.

To say that we do not plant trees, is to make a mistake. True, we are too busy to take the care of ornament, luxury or secondary comforts necessary for their best success. But thousands of trees are planted annually in every settled county of Iowa; and if the frosts freeze some, and the water drowns some, and the rabbits and grasshoppers take some, we are gaining, and "VIOLA" might have written her article with apples, grown in Iowa, by her side, or under the shade of a planted grove, if she had *visited her neighbors*.

I like the ambition of "VIOLA" for the improvement of our State. She does not consider the necessity upon us which drives all new communities to make a home first, and adorn second. The most bountiful gardens for private use I have ever seen, were in Iowa. Green peas, lettuce, beets, radishes, cucumbers, beans, onions, potatoes, strawberries, &c., are common luxuries now, (June 30,) with many of our citizens, and most of these articles have been on hand for some time.

"VIOLA" complains of our large tracts of land to one land-owner. She ought to remember that, with our improved implements of labor, and with our kind and tillable soil, one man can cultivate three times the amount within the power of a New Yorker. As to our large farms, our Eastern friends have in times

past set us no better example. Remember the immense grants to the original proprietors, the great patron rights of New York, &c.; and if the children are any copy of their fathers, our prairies would demand in New York such notice and anxiety for possession as their gravel hills never received. We will better these patent faults as we grow older.

Hoping that many of your readers will visit, for themselves, our great valley, I will bring this article to a close.

C. F.

Washington, Iowa.

TURNIPS AMONG CORN—BUTTER FROM PRAIRIE GRASS—DRAINING, &c.

EDITORS GENESEE FARMER:—"S. W.," of Waterloo, N. Y., in the August number of the *Farmer*, makes some statements on which I will take the liberty to make a few comments. From sowing turnips among corn, if he plants his corn at the distance of three and a half feet, he should not expect a good crop for family use, but he may rely upon improving the land by it for the next crop, even if he keeps sheep enough to eat of all the turnips after the corn is garnered.

In our dry climate we raise turnips which keep good in our cellars till the middle of May to the first of June sweet and sound. For late keeping they should be sown late; even as late as the last of August one will often get a crop of turnips which are tender, and keep well till the German May turnip is grown fit for use the next year. We sow usually here for a field crop from the 20th July to the middle of August. It is a crop that every farmer should have.

"S. W." says: "But the butter from prairie grass is white and aromaless, and in stinted supply at that." I have heard that same story for twelve years past, and believe it much less now than when I first heard it. It is always the case that when poor butter is brought to market, the fact of its being poor is attributed to the pasture. But is it not a fact that natural pastures produce the best butter and cheese? I believe this is so from all I have noticed about the matter, and I have lived in a prairie region for the past twelve years.

Those who make good butter in this region (and some of us Hosiery do make good butter) never complain of our natural pastures; but here, let me remark, that we have it in great abundance. Our cattle are not confined to one particular locality, but have the range and choice of the numberless varieties of herbage which grow in such profusion in this part of Hosierydom. How is it they seed meadow and pasture in the dairy districts of England? not as of old with only one sort of grass. Men know that stock will not thrive on timothy, clover, blue grass, red top, or any single sort of grass, no matter how much grain they may have. That variety is the spice of life, and a change of pasture makes fat calves, is true now, and ever has been; and applies as well to quadrupeds as to bipeds.

We have here no draining tile, but as a substitute use rails, and split boards and brush. Thus—first we dig our ditch deep—not less than four feet; two feet wide at top and bottom; lay rails of most durable timber in the bottom, one on each side—having ready split boards from twenty to twenty-four inches long; cover the rails, laying the boards across; then

throw in a little straw or prairie hay. Over this put in your brush, tramping down close. Cover all with the sods with the grass side down, and your ditch is complete and very durable—much more so than some tile drains I have heard of. The brush is not necessary, but adds to effectiveness.

Ditches must be deep, and should run directly to the spring. I have a piece of prairie that was ditched twelve years ago, but always remained boggy, so that at its highest part a rail could be thrust down ten feet. I dug this spring a ditch four feet deep, running directly to the highest and boggiest part of the prairie; the result is that I have a fine spring of water at the outlet, and a piece of prairie in fine order for any sort of grain.

I find I am considerably off the track I started on, but will return by asking "S. W." if he means that his cows eat tomatoes.

C. BRACKETT.

Rochester, Fulton Co., Ind.

ADVANTAGES OF FORETHOUGHT IN FARMING.

MESSRS. EDITORS:—There is no pursuit in which our countrymen are engaged, wherein such great and lasting advantages may be attained by a rigid adherence to the proposition that forethought is the all-important lever in successful farming; while a neglect or absence of *thinking beforehand*, is as sure to lead to disastrous consequences as that when the "blind lead the blind both shall fall into the ditch."

I would not now say that it is a settled question that the agricultural community, as a body, has been injured more than benefited by the attempts at enlightenment by the great mass of scribblers who have no practical knowledge of the subjects on which they write, and hence have only tended to mislead the farmer, discourage the young beginner, and encourage a resort to experiments by the credulous, without *thought or reason*, simply because some flippancy writer, whose sole consequence is in the use of his pen, has caused to be spread out in *print* the result of an experiment based upon a dozen hills of corn or potatoes, which, if carried out according to his little pet theory, would give three hundred bushels of corn, and twelve hundred bushels of potatoes, to the acre. But that it has been seriously injured, there is no doubt; the extent is not now necessarily in question.

One moment's reflection is sufficient to convince any reasonable man, that the successful attainment of an object in which are so many details, and such a combination of arrangement, good judgment, coupled with a nice discrimination, is not only essential, but actually necessary, and consequently requires a perpetual *fore-thinking*.

Agriculture may properly be termed the *king of all sciences and pursuits*, as upon it our individual as well as national prosperity mostly depends. And as there is no royal road by which any one can attain position and eminence in any science without mental labor, and well-directed effort, all must labor for the prize, if they hope to win.

Besides, the soil and climate of our country is so various—so wonderfully diversified—that no general chart can be followed with success, and hence nearly every farmer must, in a great measure, rely upon his own judgment, and carefully study all the surrounding circumstances of his case.

A proper selection of the field to be cultivated,

with the kind of crop desired, is not all that the farmer must take into consideration. His time and means, the present and future use of that field, together with the manner he desires to cultivate the remainder of his little domain, ought all to be anticipated—thought of beforehand.

Again, upon the subject of rotation of crops, and the proper amount of manure, as also the kind of manure most practical for the intended use, nothing should be left to *chance* or *guess work*. He should study incessantly, that he may hit right the first time, and not lose his seed and labor by ill-digested and senseless experiments.

The country is full of *professing philanthropy* towards the farmer; yet many of these eminent *Professors* are, in fact, his deadliest foes, who use their eminence of position to aid in robbing him of his money. Lurking enemies meet him at almost every corner. The inventor, and the vender of tools, implements, labor-saving machines, instruments, special manures, seeds, and humbugs of every description, like Satan, are constantly tempting him. I would not place all these things in the same category of humbug. Some are of real, practical utility, without doubt; but the fact is equally true that some are *impracticable*, while others are not only *humbugs*, but *arrant frauds*—vide the leached ashes shipped from Rochester to New York, and there transformed into *guano* and sold at forty dollars per ton; also, the saw-dust scraped up in the marble yards near New York, and sold to farmers as No. 1 plaster. These swindlers accomplish their frauds by sheer force of mental action over the credulous, unsuspecting and *unthinking* farmer.

"Those who think will always govern those who toil."

To think beforehand—to anticipate in the mind—is the Pole star to successful husbandry. *Thought*—*thought systemized* and subjected to regular laws—is the key-stone in the arch, without which labor and toil are uselessly spent. Labor, without method and forethought, is like casting the mariner abroad upon the trackless ocean without a rudder or compass. It is as much the attribute of man to use his brains as his hands—it is his *mental* power that distinguishes him from the *brute*, excites in him a laudable spirit of ambition, fires his soul, and rouses all his latent energies to action. Thought, systemized, succeeds—captivates the eye with extensive landscapes and splendid scenery—whitens our hills and valleys with the ripening grain—in short, invigorates life by the pleasing prospects it throws around us, and elevates the farmer to competency. HIRAM C. SMITH.

Oakland Lodge, Fairport, N. Y.

HOW TO CLEAN AND KEEP FARMING TOOLS BRIGHT. —Take No. 2 or 3 corundum sandpaper, and rub off all the dirt and red rust, and continue until quite smooth. Then use a little spirits of turpentine, with the same paper, until polished and dry. Nothing more is necessary to clean hoes, forks, plows, cultivator teeth, &c., to have them work nice and easy. But to lay up and keep from rusting, first clean them as above, then rub over with a preparation made by dissolving beeswax in spirits of turpentine by a gentle heat. It fills the pores, and keeps water from affecting the parts where the wood and iron come in contact. N. N.

Darien, N. Y.

GREAT FECUNDITY OF WHEAT.

MESSRS. EDITORS:—In an article on "The Age of Seeds," from the *Springfield Republican*, mention is made of some wheat which was found with some mummies. The wheat, supposed to be 2,000 years old, "produced the astonishing amount of 1,200 grains to one." This seems almost incredible, yet I doubt not is true, since, from a field of Mediterranean wheat which I have growing, I took a root bearing twenty-five stalks, each containing fifty-nine perfect grains, making a product of 1,475 from one. This goes far to verify the Tullian plan of hand-hoeing this grain, giving plenty of room for the grains to tiller. Will not some of our careful farmers try one acre, or half an acre? In my middle field, I pulled out a root of rye having forty-nine stalks, and an average head of one of these stalks produced fifty-six grains, giving 2,744 grains from one, or 2,744 bushels from one. Corn sown broadcast at the rate of two bushels to the acre, yields from eight to fifteen or twenty bushels of *nubbins* per acre. The same two bushels, planted on sixteen acres, produces from thirty to one hundred bushels per acre, or from four hundred and eighty to sixteen hundred bushels from the two bushels. Will not wheat do the same? I think it will—in fact, I know it will. The fact is self-evident. The grains and stalks of rye were carefully counted in the field by Messrs. F. KENDRICK, J. MILLER, MOYER and myself; yet KENDRICK will not admit that the rule which holds good for corn is applicable to wheat or rye. But this is a mere matter of opinion. I have a head of wheat from my middle field, the grains, KENDRICK has just counted, are eighty-four, and I will demonstrate to him with those eighty-four grains the truth of what I have written above, by planting a bed in my garden, in rows both ways, eighteen inches apart, that wheat, as well as corn, will produce a thousand fold, more or less, according to season, &c.

The editor of the *Springfield Republican* probably has never paid very close attention to these matters, as he says "it is suggested that the immenseness of this wheat [the mummy wheat] is owing to the *long rest* of the seed." That is, as the seed had been so long idle it was necessary that it should make up lost time by increased fecundity. But let us give JETHRO TULL his due, and raise more and better wheat, with a saving of seven-eighths of the seed. CHARLES BRACKETT.

Rochester, Fulton Co., Ind.

CHESS AND COCKLE.

MESSRS. EDITORS:—I can cheerfully add my feeble testimony to that of your experienced correspondent, JOHN JOHNSTON, of Geneva, with regard to sowing clean seed, if we wish to raise wheat free from chess and cockle. I have not been much troubled with the pests since I got them out of my land, it being very foul when I purchased it about twelve years ago.

Many farmers (and this was the practice of the one of whom I purchased) when harvesting their wheat throw out the cockle, and leave it upon the land, and by so doing, they leave plenty of it in the next crop, and then wonder where the cockle comes from, as they are sure they sowed clean seed. Others feed their screenings to their hogs in their barn

yards; more or less of it gets mixed with the manure, and is drawn out upon the land, thus seeding and re-seeding their fields with cockle and ches.

I have two screens to my farming-mill, one coarse for cleaning wheat for seed, which takes out all the cockle and small shrunken grains, the other finer for cleaning for market. I do not, nor never have believed, that wheat turns to ches; and by sowing clean seed, and not feeding my screenings unless ground, I have raised but very little, yet I have seen some examples of raising ches that almost staggered my belief. I have seen fields that would produce twenty bushels of ches and not more than three of wheat to the acre. "But," you will say, "this was upon some old pastured field, and the ches had been sown there from the droppings of hogs and cattle." But that could not have been the case, for it was in Michigan, upon timbered land, in a newly settled neighborhood, and there had been but one crop raised on the land previously; and I found there were intelligent farmers in that vicinity who are firm believers that wheat turns to ches. I would like to have you, or some of your numerous correspondents, tell how so much ches came in that soil.

C. C. WILSON.

Newfane, Niagara Co., N. Y.

ONE WORD MORE ON THE MILKING QUESTION.

MESSRS. EDITORS:—There has been much written for the GENESEE FARMER on both sides of the milking question; yet, perhaps the better way lies between the two extremes. Whoever in the family has most leisure ought to do the milking. Yet I have often seen that it is not so. Mr. A. has a family of nearly a dozen children—their ages varying from six months to twenty years; yet the wife milks five or six cows, while the husband and sons sit in the porch smoking, or are lounging in the tavern or shops.

Mr. B. has several daughters, but they are too delicate to soil their hands; so their feeble, worn mother must bear the burden of the work in the house, and their aged father must do the milking. These young ladies say they do not know how many cows their father milks, but they believe their mother makes cheese!

But not like either of these is the family of Mr. C. He has three highly educated and lady-like daughters; but their mother has long been at rest. Sometimes when they have company, Mr. C. says: "Girls, I'll milk to night." But the girls say, "No, father, you'll not milk when we are all at home." These young ladies will be prizes to those who can win them. Education makes ladies better daughters, wives, and mothers, and fits them for their duties in any station. But if we see a young person lacking in kindness to parents, even in household labors, we may be sure the head, or heart, or both, are not well educated.

A. M.

BREAKING THE PRAIRIE.—I noticed in the January number of the *Farmer* an article on breaking the prairie, and I can say, from an experience of eighteen years, that your correspondent is somewhat mistaken in the time thereof, as I have never yet known any prairie breaking done before the middle of May, or later than the first of August, with the exception of some hazle ruff.

L. C. S.

Flint, Iowa.

SOUND CORN, AGAIN.

MESSRS. EDITORS:—I notice in the August number of the *Farmer* an article written on this subject by your correspondent "W. H. M.," of Indiana, Penn., in which he writes down his plan of securing corn and cornstalks in autumn, which will, no doubt, set to rights any or all "mistaken views" thrown out by me in an article on the same subject, found in volume 17, page 116, of the GENESEE FARMER, to which he takes the trouble to allude. In the article referred to will be found: "When the corn is well glazed, I cut off the stalks close to the ear, bind and shock them in the field for winter use. I consider corn left to ripen in this way (on the hill) will yield better, and be much sweeter and heavier, than when cut up by the roots." He "thinks" I must be "mistaken," for he says: "It has been proved by actual experiment that corn cut up by the roots and cured in shocks, is about four pounds per bushel heavier than the same variety, on the same kind of ground, left to ripen in the hill." I will inform "W. H. M." and others concerned how I came to be "mistaken," if mistaken I am. I find by referring to my diary that I have endeavored to till the soil eleven years "on my own hook," (the present year included,) and that I have planted more or less ground to corn every year. Of six of the best crops, three were treated precisely as stated in "W. H. M.'s" plan and three left to ripen on the hill. The soft corn at husking time was, *cut up by the roots*, 9 to 30 of sound; *on the hill*, 1 to 30 of sound. Weight of corn when ready for market averaged, *cut up by the roots*, 55 pounds per bushel; *on the hill*, 59 pounds per bushel strict measure—one year weighing 60½ pounds. Now, if Mr. "W. H. M." has a kind of corn that will weigh 64 pounds per bushel, cured in the shock, I should be glad to get seed of him for another year.

One thing more. I have found by "actual experiment," that corn shelled immediately before grinding is one third sweeter than when shelled a long time. I practice putting away in tight boxes corn in the ear, for family use.

J. C. ADAMS.

Seymour, N. Y.

FARMER'S CLUBS.

MESSRS. EDITORS:—There is a vast amount of information to be obtained by farmers forming themselves into Clubs. Let all the farmers within five miles (or more or less, as the place is inhabited,) form themselves into a Club. Let one and all join; those who cannot give advice to others, can there get information which will prove most valuable to them; but every man can learn, for there is no such thing as perfection in farming. We are always improving by the experience of others. The practical man's views and experiments are what we require the most.

The Club-room presents a good place to discuss subjects upon the different and best ways of cultivating the various kinds of grain and other crops, and the different varieties of seed which will be the most profitable to raise and least injurious to the land. Where there is a change of seed required, let the Secretary, or some member, get all that is required in a lot; it can then be obtained much cheaper than if each person sent for his own. Farmers can, there discuss upon the different kinds of stock—the

different breeds of horses which are the best adapted for farming purposes—and see which kind of cattle are the most profitable for the dairy, and which for beef, or working oxen—and all other animals the same. They can there discuss upon the merits of each, and which are the best and most profitable for the farmer to raise. Another thing that is very important to farmers, is to know which kind of implements will work well, and which will not; for instance, reaping and mowing machines, two of the best labor-saving machines we have, providing we have good ones—if not, they are only a great bill of expense to keep in repair. It would be better to be without them, and all other implements we use that are imperfect. Then, how are we to distinguish those which are good from those which are useless? for they are all extolled by the makers and their friends. We cannot afford to procure them all, for the sake of ascertaining which are the best. We must learn it from our fellow farmers. Let farmers have trials to test the different machines and implements, and see which will do the work best, and is the lightest in draught. Let their decisions be made public, for the benefit of others. In the Club-room, too, farmers could regulate the rate of wages; for they are often imposed upon by laborers, especially in haying and harvesting, who will club together and say that they will not work for less than so and so. But it is the farmers' place to say what they will give. Let them fix upon some fair price, and then pay no more, and there would not be so much strife among farmers as there often is.

There are many other advantages to be derived from Farmer's Clubs, which cannot be appreciated except by belonging to one. J. E. B.

FARMING GOING UP.

MESSRS. EDITORS:—That the business of farming is going up, is evinced in more ways than one. That it is gaining upon other branches of business, is shown by the increased demand for all farm products over those of the mechanic, manufacturer, and merchant. Everything seems on the rise, but nothing (unless it be the streams the past month) so much as the products of the farm. The general rise in price is owing to the diminished value of money, but as this is a subject of political economy rather than of agriculture, and more fit for other journals than the "Farmer," I will dismiss it for the present. The increase of the price of farm products over every other kind of property is caused mainly by the great drawing off from the ranks of its labors, to the mining interest, and to the building and running of Railroads. Another cause is that farmers have considered their business more laborious than other occupations, and as they have generally prospered and become independent, they have fitted their sons for what they have considered higher stations. The consequence is that the profits of farming have come up, till they are ahead of anything else. The product of an acre of land has in many cases the past season, planted with only common field crops, been sold for \$50, \$60, \$75, and even up to \$200. A few years since this would have been astounding, and set the whole country in a fever, but now it is too common to excite more than a casual remark.

That farming is looking up by mutual consent, is also shown by the fact that farmers are now often

made the heroes in our popular tales; formerly, if they were introduced at all, they came in as clod-hoppers and bushwhackers, and it was considered entirely out of character to make more of them than plain, honest, blunt, homespun men; but now novelists allow them to talk logic and science, and smart and accomplished young ladies to fall in love with them. This may look like a small matter to many a matter of fact man, but it is really a significant feather in the cap of the tiller of the soil, and like straws, shows which way the wind blows.

The habits, manner, tastes, and tendencies of an age, are shown by its popular literature. I do not make these remarks so much for the purpose of congratulating my brother farmer with the fact that we are getting on to the top of the shelf, as for the purpose of showing to the aspiring young man, who thinks to leave the old farm on which his father has prospered, for some wide and more dazzling field, in which to distinguish himself, that if wealth, happiness, fame, and long life is his aim, that it is well to pause and consider whether he should not remain.—The old farm, I will warrant you, will bear an increased investment beneath the surface soil, in improved stock and implements, and will pay for considerable more labor, if judiciously employed.—It is true that the chances for farmers' sons, in the learned professions, are above mediocrity, for having been subjected in early life to a sound physical training, they are the better fitted for that severe mental discipline that the professions require. It has been said, that "he who lives within doors, does not more than half live." This may not appear literally true in the first generation, but will be pretty sure to be shown up in the second. I would by no means detract from the merits of the learned professions; I do not hold that every man should be his own lawyer, doctor, or blacksmith; but I do think that whoever leaves the farm in these times, thinking to "go up," had better consider first whether he is not more likely to go down. It is not every young man who has the physical capacity to be a working farmer, and those who have it should prize it as a permanent capital.

AGRICOLA.

Gorham, N. Y.

SCARCITY OF FODDER AT THE WEST.

MESSRS. EDITORS:—We have suffered very much the past winter and present spring, from the want of fodder. Hundreds and thousands of cattle have died from want of food, and those which are left are mere ghosts of their former selves.

Now, the truth is, that last September there was fodder enough in the country to keep every hoof of stock comfortably until grass grew this spring, had it been properly taken care of. But no small amount of straw was burned as soon as the grain was threshed, and the remainder was stacked (for not one in five hundred thinks of housing straw) in so careless a manner that two-thirds of it was wasted. Corn-stalks are seldom cut at all, but left to the frost and winds, so that by the time the cattle are turned in there is little more left for them than there would be on so many *bean-poles*.

I want you men of *goose quills* and *printers' ink* to teach us farmers to take good care of the straw, and at least top the corn before the frosts come.

Empire, Ill.

G. C. LYMAN.

DRAINING WITHOUT TILES

EDS. GENESEE FARMER:—Your correspondent, I. Randall, wrote in the August No. because it rained. So do I. He suggests fall ploughing as a palliative for late and wet springs. A very good plan, particularly on strong land, that is likely to be mellowed by thawing and freezing.

He questions as to the propriety of draining hard pan land, worth only \$15 to \$20 per acre. I think that is just the one expedient by which the value of such land may be increased.

The want of draining tile is an objection. Has he no substitute? No stone? No brush? No rails? Where pine lumber is cheap, a very good drain may be formed by ploughing out a semi-circular groove on 2 by 4 inch scantling, 1 inch deep, and 2 inches wide; two of these, placed face to face, form a cylinder of 2 inch bore. It is better to let each piece project one above, the other below. By that means they keep each other at the same level, and "break joint." These will serve with a narrower ditch than is required for poles or stones, and, being less subject to displacement, they do not require to be buried so deep. By these means the expense of digging is diminished. Whether the drain is increased in value, thereby, is another question.

Innisfil, C. W.

T. G. S.

DIGGING AND PRESERVING POTATOES.

This is the month to expect frosts sufficient to kill our potato tops, corn, &c. I think it as well to consider the best method of digging and storing them for winter use, as the quality of this bulb is preserved or considerably impaired by the manner in which this process is performed; and I may say the time of digging has its bearing on the quality for future use. Potatoes, to retain all their preserving and nourishing properties, should, I believe, be harvested soon after the frost has killed down the vines, or, should they die before maturity, the sooner they are dug the better, before the ground becomes wet and muddy. They should be stored in the pit or cellar; if in the latter, put them in a dark bin in a cool part of the cellar—the cooler the better, if above the freezing point. I do not believe the practice a good one of digging potatoes out of the ground to lie strewed, exposed to the sun for several hours before they are stored.

Gates, N. Y.

D.

NOTES FROM MINNESOTA.

MESSRS. EDITORS:—How I would be pleased to have some of my Monroe county friends look upon this portion of Minnesota now. It is a pleasure to look upon the fields of grain just ready for harvesting. The wheat heads are long and well filled—the straw perfectly free from rust. There are six or eight reapers within three miles of me, (well done for a three-year old settlement,) and they will find plenty of work in a day or two. There will be a fine crop of oats. Potatoes are doing well. Corn has grown rapidly within the last six weeks, and is tassling out as tall as a Vermonter's head. There will be a good crop if the frost does not come too early. Such vines as grow here I never saw. Pumpkins, squashes, and melons are already large. I have had plenty of

green peas since the fifth of July, although I sowed late. We raise ruta-bagas, carrots, &c., without weeding—the tops already cover the ground. It does the farmer good to observe the growth of his crops from day to day.

But we have drawbacks. It is expensive living, while the pioneer is making a farm from the virgin soil. We hear of the devastations of the grasshoppers northwest of us, and the threatened inroad of the Indians from the west. The latter I do not fear, but we have no known means of protecting ourselves from the ravages of the grasshoppers, if they should make us a visit next season, as is predicted by some. They have entirely destroyed the crops where they have been this season.

E. HODGES.

Marion, Olmstead Co., Minnesota.

BUCKWHEAT TO KILL WIRE-WORMS.

MESSRS. EDITORS:—You ask for the experience of your readers about growing two or more successive crops of buckwheat to starve out the wire-worm. Having had some experience in this matter, I will give it. In 1854 I had an old pasture, containing twelve acres, all infested with this pest, eight acres of which were broken and sown to buckwheat. As it was a very dry season, the crop was light. In 1855 the remaining four acres were broken, and the whole sown to buckwheat. The season was favorable, and a good crop was the result. In the spring of 1856 the whole field was sown to oats. The result was, the four acres which had grown only one crop of buckwheat were considerably injured by the worms, while the eight acres which had grown two successive crops of buckwheat were scarcely touched by them.

Darien, N. Y.

N. N.

DRILLING IN WHEAT.

MESSRS. EDITORS.—In your article on the cultivation of the wheat in the August number of the *Farmer*, you state that, in your opinion, there is not much advantage in sowing wheat with a drill unless for the purpose of hoeing, and wish the opinion of farmers upon the subject.

Having had some experience in sowing wheat with a drill, I will give you my opinion founded on that experience. I have used a drill in sowing wheat upon a hard, stony soil, also upon a light sandy and loamy soil, and could see no difference in the yield of that which was drilled in or that sown broadcast.

Four years ago this fall, I sowed one half of a seven acre field broadcast, and the other half was sown with a drill. A portion of that which was drilled in, I harrowed across the ridges, for the purpose of levelling them down, as the advocates of the drill system claim, as one of its advantages, that the washing down of the ridges around the roots of the plants answers the purpose of hoeing, and also prevents winter killing; but I could see no difference either in the looks of the crop while growing, or when harvested.

Some seasons, upon some soils, wheat sown with a drill would be better than that sown broadcast, and the next year, perhaps, that sown broadcast would be the best, it all appearing to depend on the condition of the soil and season. I have also used the drill

in sowing barley, with no benefit that I could discover. But drilling possesses one advantage, and that not a small one, the seed is all covered with uniformity and all grows, whereas in sowing broadcast it does not, especially in dry weather.

C. C. WILSON.

Newfane, Niagara Co., N. Y.

BAKEWELL'S ANECDOTE,

ALIAS GOOD FARMING IN A NUT-SHELL.

A LATE number of the *Mark Lane Express* contains an old anecdote of the late Mr. BAKEWELL, the justly celebrated founder of the modern Leicester sheep. We have given the anecdote before, but it will bear repetition, for the attempt to farm too much land is one of the crying evils of American agriculture.

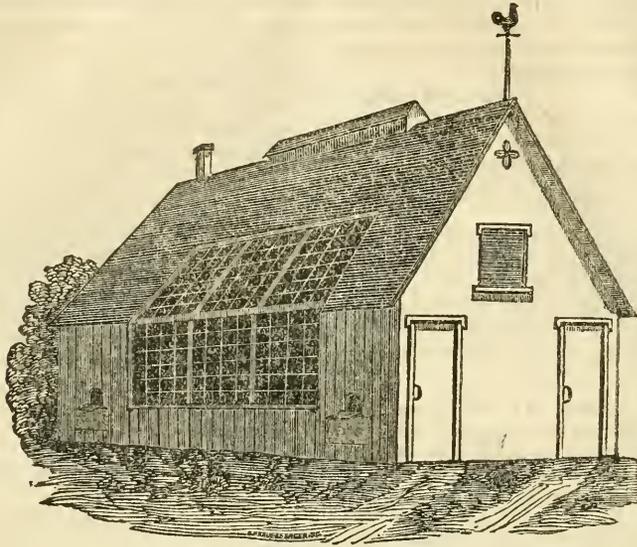
"A farmer of the old school and golden times, who owned and occupied 1,000 acres of clay land, but poor in point of money, had three daughters looking their father very hard in the face for money. He went to Mr. BAKEWELL to know what to do for them. Mr. BAKEWELL told him to keep his money and give each daughter some land, and make it known that he would do so, and he would very soon lessen his family at home. He then made it known that he would give his eldest daughter 250 acres of land. I need not add that the lady had forthwith plenty of beans to choose out of; the father's house was haunted with young men, and she soon got married, and the father gave her the portion that he promised, but no money; and he found by a little more speed and better management the produce of his farm increased. Three years after he made it known that he would give his second daughter 250 acres of land, which drew shoals of beans, and she soon got married, and the father gave her her portion. He then set to work, and began to grub up his furze and fern, and plowed up some of his poor furze land—nay, and where the furze covered in some closes nearly half the land. And after giving half of his land away to two of his daughters, he found the produce of his farm increased; because his newly broken up land brought him excessive crops. At the same time, he farmed the whole of his land better, for he employed four times the labor upon it; had no more dead fallows the third year; instead of which he grew two green crops in one year, and ate them on the land. A garden, Mr. BAKEWELL told him, never required a dead fallow. He no more folded from a poor grass close to better the condition of a poor plowed one. But the great advantage was, that he had got the same money to manage 500 acres that he had at first to manage 1,000 acres. Three years after the second marriage, he made it known that he would give his third and last daughter 250 acres of land. She had a bean stood in readiness, and three or four more within call, and she was married in a week. She thought it never too soon to do well, and the father portioned her off with land. He then began to ask himself a few questions, how he was to make as much of 250 acres as he had done of 1,000 acres. He found necessity was the mother of invention. He then paid off his bailiff, who weighed twenty stone; he found that he had been helping the men to manage the master, instead of helping the master to manage the men. He then rose with the lark in the long days, and went to bed with the lamb. He got much more work done for his money; for, instead of saying to his men, 'Go and do it,' he said, 'Come, my boys, let us go and do it.' He found a great difference between 'come' and 'go.' He made his servants, laborers, and horses move

faster—he broke them from their snail's pace; he found the eye of the master quickened the pace of the servant. He grubbed up every piece of furze on the farm, and converted a great deal of corn into meat. He preserved the black water, the essence of the manure, and conveyed it upon the land. He cut down all his high hedges, straightened his zigzag fences, cut his serpentine water-courses straight, and gained much land by so doing; made dams and sluices, and irrigated all the land he could. Some of his hedges and borders were covered with bushes from ten to fourteen yards in width, and some of his closes were no wider than streets; and there he grubbed up the hedges and borders, and threw several little closes into one. He found that, instead of growing white-thorn hedges and haws, to feed foreign migratory birds in winter, he ought to grow food for man. 'I sold him long-horned bulls, and let him rams,' said Mr. BAKEWELL, 'and told him the value of labor, and what ought to be performed by a certain number of men, worked oxen, or horses, within a given time. I taught him to sow less, and plow deeper and better, and that there were limits and measures to all things; but, above all, the husbandman ought to be stronger than the farm. I taught him how to make hot land colder, and cold land hotter; light land stiff, and stiff land lighter. I advised him to breed no inferior sheep, cattle or horses, but the best of each kind, as the best consumed no more food than the worst. Size has nothing to do with profit. It is not what an animal makes, so much as what it costs making.'"

HOW IT MAY BE EASIER FOR A MACHINE TO WORK THAN TO DO NOTHING.

It has been slightly puzzling to some to understand the results shown by the dynamometer in respect to the draft of several mowing machines, principally those of *cam* construction. In these, the draft of some is proved to be as great when the machine is drawn over the bare ground, as it is when cutting a swath of grass, if not absolutely greater! But the explanation of the paradox is by no means so difficult after all. The bar to which the knives are attached is driven at a speed that gives it a great momentum, which must be overcome as each vibration is changed from right to left and from left to right. The power required to effect this rapid jerk must be sufficient first to bring the knives to a high speed, and then to a full stop, before commencing an equally rapid motion in an opposite direction—in other words by the frequent change in the direction of this motion, the momentum which usually aids the working of a machine here becomes a double obstacle; no sooner is a high point reached, than it must all be overcome, and a new one created. Now if the force requisite for cutting grass is just enough to overcome the momentum of the knives, when the vibration changes from one way to the other, no further expenditure of power is requisite to stop them—and the draft of the machine is neither more nor less than when no grass was cut. If, on the other hand, the ease with which the cutting is performed is such that the operation does not deprive the knives of all their momentum, a portion of it only will be overcome, and the horses will then have actually less labor to be cutting than not!—*Country Gentleman*.

THE great objection to thin seeding of wheat, is that the plants tiller and do not ripen so early. In districts affected by the wheat midge, therefore, sow plenty of seed.

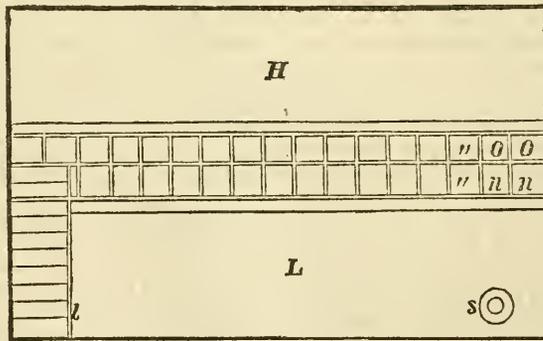


PERSPECTIVE VIEW OF BROWNE'S POULTRY-HOUSE.

FROM the *American Poultry Yard*, by D. J. BROWNE, we take the following description of a very pretty and convenient poultry-house, of which the above is a perspective view:

"A fowl-house," says Mr. BROWNE, "should be dry, well roofed, and fronting the east or south; and if practicable, in a cold climate, it should be provided with a stove, or some other means for heating, warmth being very conducive to health and laying, though extreme heat has the contrary effect. The dormitory, or roost, should be well ventilated by means of two latticed windows, at opposite ends of the building; and it would be desirable to have one or more apertures through the roof for the escape of foul air. The sitting apartment, also, should be ventilated by means of a large window, in the side of the house, and holes through the ceiling or roof. If kept moderately dark, it will contribute to the quietude of the hens, and thus favor the process of incubation. The sitting-room should be provided with boxes or troughs, well supplied with fresh water, and proper food for the hens during the hatching period, from which they can partake at all times at will. The laying-room, in winter, should have similar boxes or troughs containing old mortar, broken oyster-shells, soot, brick dust, gravel and ashes, as well as a liberal supply of proper food and drink. The perches, or roosting-poles, should be so arranged that one row of the fowls should not rest directly over another. They should be so constructed as to enable the fowls to ascend and descend by means of ladders or steps, without making much use of their wings; for heavy fowls fly up to their roosts with difficulty, and often injure themselves by descending, as they alight heavily upon the ground.

"The accompanying cut represents a hen-house in perspective, 20 feet long, 12 feet wide, and 7 feet high to the eaves, with a roof of a 7-foot pitch, a chimney-top, a ventilator on the peak, 12 feet in length and 1 foot or more in height, and openings in the gable ends for the admission of fresh air. In the easterly end there are two doors, one leading into the laying apartment and loft, and the other into the hatching-room. In the same end there is also a wooden shutter or blind, which may be opened whenever necessary to let air or light into the roost. In the back, or westerly side, there is a large lattice window, three feet apart above the floor or ground, 4 by 12 feet, for the



GROUND PLAN.

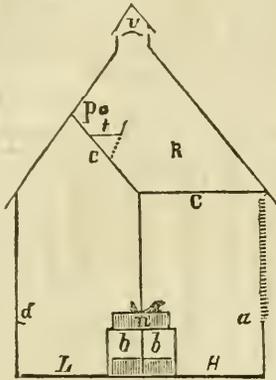
purpose of affording fresh air to the sitting hens. In front, or southerly side, there is a large glazed window, 4 by 12 feet, and another on the southerly side of the roof, of a corresponding size, designed to admit light and heat of the sun in cold weather, to stimulate the laying hens. In the southerly side there are also two small apertures three feet above the ground or floor, for the ingress and egress of the fowls. These openings may be provided with sliding shutters, as well as with 'lighting boards,' inside and out, and may be guarded by sheets of tin, nailed on below them, to prevent the intrusion of rats, weasels or skunks.

"The building may be constructed of wood or other materials, and in such style or order of architecture as may suit one's taste, only preserving the internal arrangements and proportions in reference to breadth and height. As a general rule, as regards the length of a building, each hen, irrespective of the cocks, may be allowed a foot.

"In the ground plan, L denotes the laying apartment; H the hatching-room, 6 by 20 feet; n, n, etc.,

nest-boxes for laying, 14 by 14 inches, and 10 inches deep; *o, o*, etc., nest-boxes for sitting hens of the same size; *l*, a ladder or steps leading into the loft; and *S*, a stove for warming the apartment, if desirable, when the weather is cold.

"The transverse or cross section shows the building from the bottom to the top, with the internal arrangements; *L* denotes the laying apartment, and *H* the hatching-room, divided in the middle by a partition; *n, n* the nest boxes, resting on tables, three or four feet above the floor or ground; *b, b*, boxes or troughs con-



TRANSVERSE SECTION.

taining water, grain, brick-dust, sand, ground oyster-shells, or the materials for the convenience of the fowls; *d*, an aperture or door three feet above the ground or floor, for the ingress and egress of the fowls; *a*, a lattice window, three feet above the floor or ground, for the admission of fresh air to the sitting hens; *R*, the roosting-place, or loft, shut off from the laying and sitting apartments by the ceilings, *c, c*; *h*, a hole or opening in the ceiling for the escape of the air below into the loft; *v*, the ventilator at the peak of the roof; *p*, the roosting-pole, or perch; *t*, a trough, or bed, for retaining the droppings or dung."

NEW YORK PREMIUM BUTTER.

B. C. CARPENTER, of Elmira, N. Y., to whom the New York State Agricultural Society at the last Fair awarded the first premium for butter, gives the following interesting account of his process:

"In compliance with the rules of your Society, I submit the following method of our butter making. The milk, when drawn, is strained into tin pails, holding twelve quarts each, and set on the bottom of our cellar, which is a water-lime cement, where it remains until it becomes loppered. It is then, both milk and cream, poured into churns, which hold a barrel each—a pailful of water to six of milk added, and the whole brought to a temperature of 68°. The churning is done by horse power, and requires about two hours. Just before the butter has fully come, another pailful or two of water to six of milk is put into each churn, to thin the buttermilk, so that the butter may rise freely. The butter is taken from the churn into large wooden bowls, thoroughly washed with cold water, and salted with about one ounce of Ashton salt to a pound of butter, and lightly worked through with a common ladle. It is afterwards worked at intervals of about three hours, for four or five times, with a common ladle, and packed into firkins the next morning.

"The firkins are filled within an inch or so of the

top—a thin cloth spread over the butter, and that covered with salt and brine, through the whole season. When the weather becomes cool, to hasten the thickening of the milk, we leave a quart or two of butter-milk in each pail when the milk is strained."

The butter which obtained the premium was made during the month of June, from five cows, fed on pasture alone. The whole amount of butter made from the five cows in thirty consecutive days was 252 lbs., or about 1 lb. 10 $\frac{3}{4}$ oz. per cow per day.

The cows were natives, with a slight mixture of Durham blood. The milk from the five cows, on the 2d of June, weighed 231 lbs.—measured 118 $\frac{1}{2}$ quarts, or about 23 $\frac{3}{4}$ quarts per cow.

A BOY'S CORN CROP.

LAST year the Hon. HORACE GREELEY offered a premium of \$50 for the best acre of corn raised in the State of New York by a boy under eighteen years of age. The premium has been awarded to F. B. SPAULDING, of East Otto, Cattaraugus Co. The following is an abstract of the boy's statement:

"1. The crop on this acre of land in 1855 was corn, without any manure, planted on green sward, plowed under in the fall of 1854. The soil gravelly loam.

"The land was plowed (with horses) the last of April, 1856, ten inches deep; dragged twice; marked off for hills, with a hand marker, three feet apart each way; planted on the 17th day of May; corn appeared above ground on the 22d day of May; four kernels were planted to the hill, and four stalks were left to each hill. The corn was planted dry, without any previous preparation.

"3. The variety of corn planted was the Dutton (yellow) corn, eight quarts of seed being used; 71 $\frac{1}{2}$ cords (128 cubic feet) of green barn-yard manure (droppings of cattle and horses, and including half a cord of hog and hen manure,) were used, spread broadcast, and in the hill—the former plowed under and the latter put in the hill, covered over two inches deep with earth, upon which the corn was dropped and covered about two inches deep; it was cultivated, lengthwise and crosswise, twice, and hoed twice, immediately after cultivating.

"4. The corn was cut up the middle (15 to 20th) of September, put into 'shocks,' and left in the field about four weeks, when it was carted to the barn and husked, and the corn put into common, out-door, slat cribs, to dry. There were ten loads of stalks, of half a ton each, valued at \$4 per ton, or total of \$20.

"There were 152 bushels of ears of corn; 76 bushels of shelled corn, by a sealed half bushel measure; weighed 63 lbs. to the bushel, which, at 56 lbs., (vide Revised Statutes of New York,) would make 85 $\frac{1}{2}$ bushels per acre by weight.

MOSSES.—No spot is too desolate, none too sterile, for mosses to inhabit and enliven. From Spitzbergen to the islands on the Antarctic Ocean, along the sides of lofty mountains, in the most exposed situations, couching on wild heaths, overspreading old walls, nestling in hedges, clinging to the bark of trees, loving much and equally frost and snow, wind and tempest, needing nothing but moisture for their sustenance—everywhere they may be seen, adding fresh beauty even to the loveliest spots, making gay the solitary places of the earth, and causing the arid desert to rejoice and be glad. Not only are they the first plants which make their appearance in a newly-formed soil, but they cling to the spot where they have taken root.—*English paper.*



Horticultural Department.

LOCATION AS IT AFFECTS TEMPERATURE AND VEGETATION.

THE influence of location on temperature, and on the successful cultivation of fruit, is a subject well worthy the attention of all horticulturists, and especially of those about to set out orchards. Unfortunately, however, we have few well established principles to guide us, and such as we have are so affected by circumstances, as to lead to different results in different localities. We need more extended and definite observations, and our main object in writing this article, is to call out the experience of our readers.

In a comparatively level country, such as a portion of Western New York, the principal object is to guard against the injurious influence of the severe winds from the west and north-west. A situation where a belt of woods, or a hill, which breaks the force of these winds is desirable; and when such a situation cannot be obtained, artificial shelter may frequently be provided with great benefit, by planting a hedge of American arbor vite, or a belt of rapid-growing deciduous and evergreen trees, such as the European Larch, Lombardy and Balsam Poplar, Soft Maple, Abele, and Norway Spruce.

In a hilly district, and where late spring frosts are to be feared, a southern and eastern exposure should be avoided, as it is desirable to keep the buds from starting till all danger from frosts is past. Low land, too, must be avoided, from the fact that it is subject to greater variation in temperature than the hill side—being warmer in the day time, and colder at night. In such situations, too, the wood is but imperfectly matured before its growth is checked by early frosts in the fall. It is well known that a slight frost in the fall, frequently cuts down Indian corn growing in the valley, while that higher up the hill escapes.—This may be owing to two causes: the increased succulence of vegetation, and the decreased temperature in the valley. That the air is colder in the valley during a still frosty night, than higher up the hill, is well known. THOMAS, in his *American Fruit Culturist*, says: "In the winter of 1845-6, when the cold, on a clear night, sunk the thermometer several degrees below zero, after the peach buds had been swelled by a few warm days, trees which stood on a hill thirty feet higher than the neighboring creek valley, lost nine-tenths of their blossoms, while on another hill sixty feet high, nine-tenths escaped. The lake of cold air which covered the top of the smaller hill, did not reach the summit of the larger."

The same author mentions several cases going to prove the importance of elevated sites.

In the beginning of March, of the present year, some experiments were made in the garden of the Horticultural Society (Turnham Green, London), for the purpose of determining the *lowest* temperature experienced during the night, at various elevations, between the surface and 36 feet above it. Upon a perpendicular pole, five accurate self-registering thermometers were fixed at six feet distances, and a sixth was placed on the ground. Every morning, the state of these thermometers was carefully noted—and we extract the result from the *Gardener's Chronicle*—for a few days in April and May, when vegetation was becoming active, and when all tender crops were most sensible of low temperature.

Thermometers at	Feet. 0	Feet. 12	Feet. 24	Feet. 30	Above the surface.
April 12	30°	33½°	35°	35°	
" 15	24	27	28	28	
" 16	25	27½	29	30	
" 17	27	30	32	32	
" 21	31	35	38	37	
" 24	24	26	28	28	
" 29	23	26	27	27	
May 3	26	31	32	32	
" 4	31	33	34	-----	
" 5	23	27	28	-----	
" 6	27	32	33	-----	
" 7	25	29	30	30	
" 8	28	29½	31	31	
" 18	37	40	41½	42	

It will be seen that in the spring of the year, when frosts are so injurious, the temperature at the surface of the ground, during the night, is on the average 3½° colder than at 12 feet above the ground, and nearly 5° colder than at 24 feet. Above 24 feet there is little increase in temperature. On the 6th of May, the temperature at 12 feet from the ground, was just at the freezing point, while at the surface it was 5° below. "An immense difference," says Professor LINDLEY, "when we consider how sensitive plants are to even small variations of temperature, especially when they are growing fast as in the spring."

These observations are confirmed, in a practical way, by a correspondent of the *Gardener's Chronicle*, who states that the blossoms of pear trees, in the lowest part of his orchard, were destroyed by foggy frost to the extent of 80 per cent., at ten feet from the surface; about 50 per cent. at 20 feet from the surface, and uninjured at 30 feet. This spring, the frosts were of the same description (foggy), and the result, as tested by examination of the ground, as it rose from the brook, showed that the damage diminished gradually—the lowest being the most injured. The ground was divided, for this comparison, into belts, by contour or level lines, following the inequalities of the surface, each 5 feet above the other. Hessel and Beurte Diel pears had all their blossoms destroyed in the valley, but set a portion of their fruit 70 feet higher up the hill. The damage to the gooseberry and currant crops was also far the greatest on the low ground, and diminished gradually with the ascent.

In this country, and in England, it is well known that fruit escapes spring frosts on the top-most boughs of a tree, while it perishes on the lower, and hitherto the fact has been accounted for on the supposition that the buds on the lower branches were started earlier by the reflected heat from the ground, while those on the upper branches, being in

a cooler temperature, remained dormant, and, consequently, escaped injury from frost. We still think this idea, to a certain extent, correct. QUETELET'S observations at Brussels, show that at nine o'clock in the morning, during the spring, the temperature at the surface of the ground was 35°, and at 10 feet elevation it was between 2° and 3° lower. We should certainly expect that, during sunny days, the temperature near the surface would be, from reflection of the sun's rays, much higher than at ten or twenty feet above, and had QUETELET'S observations been made at noon, instead of 9 a. m., they would probably have shown even a still greater increase of temperature between the surface and 10 feet elevation.

We may conclude, therefore, that the buds on the lower branches of trees are not only more liable to be started by the heat reflected from the ground, during sunny days, but are also exposed to a lower temperature during frosty nights. The observations in the garden of the Horticultural Society, were made on a level surface. Had it been a side hill, the result may have been different, for it can hardly be doubted that the air, as it becomes cooled and heavier by contact with the earth, would roll down to a lower level, while warm air, rushing in to fill the place, would keep up the night temperature of an orchard so situated.

HORTICULTURAL OPERATIONS FOR SEPTEMBER.

RASPBERRIES.—The raspberry season will be now over, and the fruit of all the early varieties, or those except the late monthlies will be all picked, and the plantations will require pruning and cleaning. Take a strong knife, and carefully cut out, without twisting and breaking, close to the ground, all the old canes that have borne fruit the present season, and carefully tie, but loosely, so as not to cramp the young foliage, all the young canes of this summer's growth up to the stakes. Now apply a moderately good coat of rotten manure and lightly fork it in.—Do not shorten the young canes, but allow them to grow the remainder of the fall and thoroughly ripen their wood; for from these the fruit will be expected the following season. This month will, also, be a good time to prepare the ground for new plantations—this fall or next spring; but I very much prefer fall planting to that of spring, if the ground be not too wet so as to subject the newly planted plants to severe winter freezing and heaving. But if they are carefully planted in the fall, in moderately dry ground and fine weather, and without exposing their roots very much to the atmosphere, the earth has time to become settled about them and they start into growth, in the following spring, with as much vigor as though they had not been removed, and make fine canes for fruiting the year following. Let the ground be thoroughly trenched twenty-four or thirty inches deep, throwing out the stones and incorporating plenty of manure as the work is being proceeded with. See directions last month.

CABBAGE.—From the first, to the tenth of the month, will be a good time to sow seed of early York, or early Winnings' adt cabbage, to be wintered over for early summer use. If properly managed, they will be a week or ten days earlier than those from the spring sowings. Prepare a piece of nice, light, rich soil, and sow the seed in drills, burying them half an inch; press the soil gently upon the seeds, and,

if dry weather, water them every evening. They will be up in eight or ten days. Should they fail, sow again immediately. Some cauliflower may be sown in the same way. Directions for wintering will be given next month.

Another sowing of Early Scarlet Short-top radish may be made. Sow in drills four inches apart, and half an inch deep; press the earth on the seed lightly, and water in dry weather; when up, thin out to two inches apart in the rows.

Carefully proceed with the earthing up of the Celery. See directions in July number.

Attend to the pruning and training of the tomatoes, and should they be in danger of being nipped by the frost, toward the latter end of the month, some of the best plants may be pulled up and hung by their heels in a dry shed, and many of the green fruit will still ripen. JOSIAH SALTER.

SPIRÆA CALLOSA.

This beautiful shrub proves perfectly hardy in this country. We have frequently recommended it to our readers, and now present a portrait of the flower which we have had drawn and engraved from a plant growing in the grounds of Messrs. ELLWANGER & BARRY, of this city.



The leader in the last *Gardeners' Chronicle*, (the best horticultural journal in the world,) fully sustains all that we have said in favor of this plant. We copy it entire.

WHAT IS THE HANDSOMEST FLOWERING HARDY SHRUB of July, after the Rose? Some may say the Fuchsia, but it is scarcely an ornament of July; others may point to the Scarlet Geranium, but it is tender; a third will possibly contend for the Berberis aquifolium; and we should acquiesce in the decision if flowers constituted the beauty of that glorious Evergreen; but it is a fruit, and not a flower of July. For ourselves we contend, without the least hesitation, for *Spiræa callosa*.

"*Spiraea callosa*! what may that be?" cries some eager reader. "I never heard of such a plant. I know *Spiræas*, but they are not so very remarkable; *Spiræa arifolia* is now in flower, and it is pretty enough, but not at all striking; *Spiræa Lindleyana* is no doubt a finer thing, but it is tender and rather coarse, and white-flowered also; but what can *Spiræa callosa* be? I never saw it advertised; I don't see it in the nursery catalogues; I have not seen it in my late visits to the great nursery gardens near town.—What can it be to be placed on such a pinnacle of fame?" That all this is true we have no doubt; for *Spiræa callosa* is not a novelty, nor an exhibition plant; nor a florist's flower. Its leaves are not speckled and spotted, nor its flowers as red as a *Pæony's*, or as big as a *Dahlia's*. But it is a gem for all that, when care is taken to cultivate it well.

Imagine a shrub about 4 feet high, and as much in diameter, most gracefully branching from the ground. Let its slender shoots be dull red, and its simple leaves a quiet green, such as the most fastidious artist would select for a contrast with brighter colors. Then let every branch burst out into spreading twigs loaded with tiny flowers arranged like those of a *Laurustinus*, but more loosely, the youngest dull red and as large as a pin, others more grown, with a vivid crimson centre, when the gay petals are preparing to burst their dingy calyx, and looking like rubies in a rusty setting. Such is the infancy of *Spiræa callosa*. More mature, the crimson petals begin to spread and reveal their still more rosy centres; and at last the ring of crimson stamens gradually unfolds and forms a glowing halo round the centre. Should the reader be able to receive all these things upon his mind's eye, he will then begin to know what *Spiræa callosa* is like.—Though each of these tiny flowers does not occupy the fifth part of an inch, yet their number most amply compensates for their smallness. Each truss is full 2 inches across, and every branchlet bears about 3 such trusses, of which that in the middle is full blown, while the side ones are still closed up; and at least a month's supply of flowers of all ages is provided at the time when the bush first breaks into blossom.

Does not a plant like this deserve a niche in the temple of *Flora Juliana*?

Spiræa callosa is a native of Japan, whence it is said to have been introduced by Mr. FORTUNE, through Messrs. STANDISH & NOBLE. It derives its name from the presence of a small red callosity seated on the end of each of the numerous notches that border its leaves.

CULTIVATION OF GRAPES IN THE OPEN AIR.

MESSRS. EDITORS:—W. LIVINGSTON, in the *Farmer* of last month, asks for information on the culture of the grape, and complains that communications on this subject are not sufficiently definite, &c. I presume that *he* is, as *I* have been on the subject, groping somewhat in the dark, notwithstanding the many writers I have consulted; and as I am now getting to see light, I offer him and whoever else of your readers it may concern, my experience, not presuming that my method is perfect, but hoping and expecting that some one or more of your correspondents or readers will criticise my practice—a thing much easier of performance than the laying down of a definite and intelligible system of culture.

I will first preface, by remarking, that all grape vines cultivated in the open air in this latitude, especially if the soil be rich and dry, incline naturally to grow too thick for the production of much perfect fruit, unless allowed a full and free range on living

trees—a thing impracticable to any great extent. The first thing, then, after planting your vines on a rich, deep, dry soil, with an aspect other than northern, is to counteract this tendency, which is more easily done in the early training and pruning than after the vines get large and stiff.

In the spring of 1855, I purchased 30 vines of one year's growth from the cuttings—one Clinton, one Catawba, and the rest Isabella. I prepared my ground by very deep plowing, and manured with barn-yard manure, and dried muck buried in the bottoms of the furrows; planted my grapes eight feet apart each way, and sowed the ground to carrots. I paid little attention to the *vines*, but took good care of the *carrots*, and had a fine crop. In harvesting them, the same system was pursued—little attention paid to the vines. They were cut with the spade, broken off, and trod into the ground, where they lay untouched till the following spring of 1856. I then got cedar posts eight feet long; set them two feet in the ground, in the rows east and west, midway between the vines; put four inch boards or slats on the top sixteen feet long, lapping them over each other at the ends, and fastening them to the posts with a four-inch carriage bolt and nut. Cedar does not hold a nail very well, and I thought to myself, while a pickle I should be in should the slats blow off white loaded with grapes. The centres of the slats I fastened with nails. I then put on three wires, so as to make with the slat four spaces of about equal distances, cutting off the wires at every third post, (16 feet,) and twisting the ends around nails, fearing that if I left the wires longer, the contraction in the winter would draw the nails. On the centre posts I fastened the wires by driving two nails so as to cross each other.

I then used a tight plow and cultivator between the rows, and sowed two rows of beets and carrots between each two rows of vines. I allowed three branches to grow from each vine root, training one perpendicularly and two horizontally; one each way on the bottom wire to the posts, and then perpendicularly, pulling off all the side branches as fast as they got an inch or so long. For training horizontally on the wires, I used cotton twine doubled, and tied loosely; for training perpendicularly on the wires, I found the twine would slip as the wind blew, and wear off the twine, and injure the vine, and that by first tying or noosing the twine to the wire, it would rust in the next rain, and remain fast. For twining up on the posts and horizontally on the slats, I used strips of India rubber cloth, obtained from the scraps at the carriage-makers, (bits of leather from the shoe or harness makers will do,) and nailed them with 12 or 14 ounce tacks. The vines mostly reached the slat, and were turned horizontally a few inches, securely fastened and cut off. This was the end of this year's work with the vines. They remained on the trellises, and none of them were injured, notwithstanding the severe weather—mercury 2 to 22° below zero for two or three weeks in January. I should add that on first planting the vines, I planted a thick row of honey locust seed across the west end of the vineyard for a screen to break the wind. They are not yet any protection, but are growing finely, and have stood the winters without the least injury. They do not grow as fast as the Osage orange, but, in my opinion, are decidedly preferable for a hedge fence. I think they will not throw up suckers on plowing near

them like the common locust. My beets and carrots yielded over 500 bushels to the acre, measuring the whole ground, notwithstanding the small part of the ground occupied by them.

In the spring of 1856, I enclosed my vineyard, and have followed the same course. The past spring, 1857, I used the plow and cultivator again, and planted two rows of carrots between each two rows of vines. I pulled off the suckers that came up from the roots as fast as they appeared; allowed all the branches to grow till the fruit clusters appeared. I then trained up perpendicularly about every alternate branch from the horizontal vines, and cut off all the rest from the old wood; those which had no fruit on, close, and the others about two leaves above the fruit, pulling off all the lateral branches from the shoots I threw up. In the forepart of July, and again about the last, I went over them, and twined up all the perpendicular branches, and pulling off all the side shoots, and cutting off all above the trellis. In this way I have taken off about half of this year's growth, allowing nothing to grow that is not wanted for the maturing of this year's fruit, or producing fruit next year. My trellises are now completely filled, most of the upright branches having reached the top, and been cut off. The grapes look fine, and will produce, I think, about one bushel to eight vines. During the winter I intend to cut off close all branches except those I have twined up, and perhaps a part of *them*, as I think they are too thick; and hereafter I can renew these perpendicular branches, by allowing new ones to grow when I think best.

I find that Mr. McKAY, of Naples, in this county, and other vine-growers, do not let their vines bear at this age; and perhaps his course is better in the end. Mr. McK. is certainly very good authority; but I am not fond of long credits, and am too fond of grapes to miss any opportunity to eat of my own raising. I think my vines are too close to each other for rich land; and if I had to do the work again, I should make the rows at least ten feet apart, and the vines about twelve feet in the rows, and should allow but two branches from a root, and train them horizontally each way till they meet, and then perpendicularly.

Next year I shall allow the vines to monopolize the whole ground, using the cultivator often. I think the three kinds I have mentioned require about the same kind of culture, but it is useless to try to make much of the Catawba here, unless you can give it some extra heat, as it will not ripen on the average more than once in three years in ordinary exposures. On the south or east side of a building, or high, tight fence, with a warm, rich soil, you will generally succeed. Of the Isabella little need be said. It is doubtless *the* grape for this region. The Clinton is at home here, being early, hardy, and productive, and mine are of a fine flavor; but I have tasted them from other vines, looking and growing like mine, that were like those the fox couldn't reach, "poor sour things." I think they are not genuine. I have a few other kinds which I tolerate for the sake of variety—one of them, the Connecticut Wild, is a large, hardy, early kind—excellent for cooking, makes good Port wine, but worthless for eating, and drops off when ripe. I have never seen the Charter Oak, Concord, Rebecca, or Northern Muscadine, but shall get one or two of the last mentioned next spring, if I can.

A word more on manuring, and I have done. I think, and I have good authority for saying, that if

the leaves and branches from the summer prunings are immediately covered, even slightly, with earth, no other manure need be added to keep up the fertility, as the nutriment of the fruit is furnished through the leaves and branches, they must contain, if cut while in full vigor, all the nutriment necessary for the fruit; and if buried at once in the soil, a greater share of it will be retained for the use of the plant. The nutriment in these unripe prunings will be more readily assimilated than that from the ripe autumn foliage. I have practiced on this principle with my Rhubarb or Pieplant, (a plant akin to the grape in its acid quality,) requiring all the leaves and refuse of the stalks used to be immediately placed under the remaining leaves in the hill, where the gases escaping from their decomposition come into contact with the living plant, and the mineral part will sink into the ground, and reach the roots, and with scarcely any other manuring, have measured leaves 29 inches broad, and have just counted over seventy-five fully developed leaves on a single hill that has been fully cut from till the middle of July. AGRICOLA.

Gorham, Ontario Co., N. Y.

IN MY "NEW GARDEN."—NO. 3.

THESE very warm days are of rather too ardent a temperature for your invalid scribbler, but they are just the thing for "My New Garden." Mornings and evenings, and the cloudy days rather frequent of late, generally find me there, for there is abundant opportunity for work at this season of the year. I now sit down to my pen after using the hoe until weary enough. You know that handsome but troublesome weed,

PURSLAIN.—The dictionary says it is "an annual plant of the genus *Portulacca*, with fleshy, succulent leaves, often used as a pot-herb, and for salads, garnishing, and pickling." I wish there was a demand for it for any of these purposes in this neighborhood. I could soon grow a sufficient supply. It is sometimes used for coloring purplish blue—a fast, but homely hue for stockings, etc., costing but a trifle for dye-stuffs. Purslain is quick to grow and slow to die, and one must be sure its roots touch no moist ground, or, like "that old fellow so much was about in the newspapers," it starts up and exclaims, "I ain't dead yet!" and you have all your work to do over again. Hoe it up and rake it off, and you have done with one crop, at least, although another will start up in a day or two, if the ground once gets seeded.

CABBAGE AND CAULIFLOWER.—What plants the cutworms left are doing well; the cabbages beginning to head out. Either the seed was wrongly labelled, or I made a great mistake in remembering where I sowed it, for cauliflowers prove cabbages and *vice versa*. So please correct your understanding of the growth of the two, as mentioned in No. 2, for it is the cabbages that come up and grow so rapidly—and that were the least troubled with insects.

SECOND CROPS—Are now growing in the place of my bush and dwarf peas. I set cabbages among the first, some weeks before they were removed, and sowed turnips in the place of the latter, the last of July. Though watered, my turnips vegetate but slowly, but make a good growth as soon as up, and a portion are now, Aug. 5th, in their third leaf.

CELERY—Is a new vegetable with me, my first sowing was last year, but the seed did not grow. This

season I sowed three times—the last time left the seed without covering—and the following week proving rainy, a portion came up. That sowed before was but *just* covered; it appears that it needs, or will bear no covering at all. When some were three inches high, I prepared my trench, and after it had stood through a heavy rain, set my plants. They have rooted well. I keep them shaded through the heat of the day, and water in dry weather at evening. I doubt getting much of a crop, it is now so late.

LIMA BEANS.—Promise an abundant crop. I find care in planting pays—care in placing the eye down, and covering with mellow earth. A few planted when the ground was rather wet, could not lift the crust—breaking in the effort. Fifty hills planted over a small shovelful of fine manure, have already formed pods and sent out vines ten or twelve feet long. I tied the poles on two rows together tent-wise, and I find they stand the wind much better, as well as looking more symmetrical.

TABLE ESCULENTS.—I have now from my garden, Beans, (China Red-eye,) Beets, Carrots, Cucumbers, Potatoes, Radishes, and Lettuce. Have had Peas and Pie Plant, and shall soon have Green Corn, Limas, and Summer Squashes. I fine it already begins to repay my labor; in a year or two I shall have much greater variety, with a little extra attention.

PLEASURE.—Real pleasure, aside from profit, I find in my garden. Let every man, woman, and child, have something of one, if it is no more than a few feet of earth, or even a box or a broken pitcher full of it. My first plant grew in a broken bowl, and I found a great deal of enjoyment in watching its growth and blossoming; and if I had not outgrown rhymes, might copy the partial biography written at the time for your pages. But I will not thus trespass.

A COUNTRY INVALID.

Maple Hill, N. Y.

THE CURCULIO.

This little insect is the greatest pest the horticulturist has to encounter. For his terror or destruction, the ingenuity of man is well nigh exhausted. He who can discover a perfect and forcible remedy against his bold and predatory inroads, will be deserving a monument. Though I have the weakness myself of desiring some such memento, I do not expect to acquire one on these hard conditions. I will therefore state, not how I have baffled the little Turk, but how I *haven't*.

In the first place, I will allude to the two most popular checks, viz., *paving* and *shaking*. Paving under the plum tree I think of but little benefit in a garden where there are other fruit trees; for the curculio may burrow in the ground, from the fallen fruit, under most all of them, and in the summer come out and take possession of the whole garden. Besides one of my neighbors has tried it to no purpose. As to shaking or suddenly tapping the trees, and catching the enemy in the sheets, that is too much trouble, even if it were effectual; but, in my opinion, it is not effectual—saying nothing of the fruit jarred off in the operation.

The last spring I had four trees set full of plums, and I determined to use my best endeavors to save them. Hearing that slaked lime was good thrown on in the blossom, I tried this, though without the least faith in it, and was not happily disappointed.

Before my plums were as large as peas, the enemy was at work. I next dissolved some assafoetida in a bucket of water, and ordering the tin-worker to make me a syringe about 18 inches long by one and a half in diameter, perforated like a watering pot at one end, I threw the offensive liquid into the trees, with the hope that it would leave a slight sediment on the fruit not agreeable to the curculio. But what water does not readily run off will hang in a drop underneath the plum, and here it evaporates and leaves the sediment, if any where; yet what is it worth on so small a portion of the surface as this? I thought nothing. Besides, I had to take considerable of it on myself, which was not very agreeable, while I suspected it would hardly be effectual, even if it coated the whole plum. I, however, gave my trees a few doses, though the enemy still continued to work. I now thought I would determine to remedy the evil after it was done, by attempting to destroy the egg in the fruit. For this purpose I threw salt water into the trees. But lo! while it would immediately hang on the lower part of the plum, it killed the leaves of the trees, and made them very unsightly, and thus retarded the growth of both tree and fruit. I next threw on lime and ashes while the trees were wet; but it is a very difficult matter to hit and cover the fruit, and I have not much faith in the operation.

Now I cannot say if any of these attempts at remedies did any good; but I can say that all of half of the plums were punctured, and afterwards fell, and the rot has taken about a quarter more, which leaves me one quarter of the fruit to ripen!

The curculio dislikes a wet tree, therefore syringing the tree with water every evening may be beneficial. I think if there is a remedy for the ravages of this insect, it will be found in some pungent evaporation, which will perpetually envelope the whole tree. Another season I shall try guano thrown under the tree, and placed wet in a crotch, and wait the result with more fear than hope.

D. W. LOTHROP.

W. Medford, Mass., Aug., 1857.

NOTES ON STRAWBERRIES.

MESSRS. EDITORS:—The largest and most splendid of all American strawberries is the Scarlet Magrate—a pistillate and highly productive. It will produce double the quantity that Peabody's or any other staminate *can do*. The best early varieties for market are the Eclipse, Jenny Lind, and Triumph; the highest flavored and most delicious family strawberries are the Le Baron, Ladies' Pine, and Perfumed Scarlet; and the standard market varieties for the medium to late crop are Malvina, resembling Hovey, but possessing great advantages over it, the Scarlate Magrate named above, Imperial Scarlet, Diadem, Imperial Crimson, Hovey, Crimson Cone, Primate and Wilson's Albany, the two last being staminate. Burr's New Pine is surpassed in productiveness by the Superlative, and is *infinitely* surpassed in flavor by all the three delicious varieties I have referred to above.

No man possessing full information is now so silly as to cultivate the Large Early Scarlet as a main crop, and we therefore see but few in the markets of Philadelphia, New York, Boston or Cincinnati.—The Boston Pine, Cushing, Brighton Pine, Triomphe de Gand, Trollope's Victoria, and La Reine, are too

unproductive for market, and the Genesee and Scott's Seedling are much less productive than many other varieties. McAvoy's Superior, on the contrary, is a most excellent and productive family berry, and ripens next to the earliest varieties. It is never difficult to fertilize and unproductive when attended by a suitable staminate, and is only so where the cultivator thoughtlessly relies on the Early Scarlet as the fructifier, whose blossoms expand much too early for the purpose. The Hooker is a very good berry, rather large, sweet, and of fine flavor; a very good family fruit, but, like most of the other staminates, not suited for field culture to supply the markets. Moyamensing is a seedling of the old Hudson, of medium size, not sweet, and with but little flavor. The Crimson Cone, which has been so abundant in the New York markets for years, is too acid, and is gradually yielding place to the other standard varieties of better quality.

W. R. PRINCE.

Flushing, N. Y.

CULTIVATION OF STRAWBERRIES;

MESSRS. EDITORS:—I have been surprised to see how little attention the majority of our farmers pay to the cultivation of strawberries. No fruit is more easily raised, and yet very many of our farmers have never seen a cultivated strawberry. They think it a very small business to spend time with such things; but I would say to those gentlemen that I can take an acre of suitable land, and cultivate with strawberries, and make more clear money off of that one acre than any of them do off of twenty-five acres of corn. Now this may sound rather strong, but it is true; and this is not the only consideration. The small fruits, such as the strawberry, the raspberry, the gooseberry, not forgetting the fine Lawton blackberry, are among the greatest luxuries we enjoy; but too many of our farmers have not sufficient energy to make one effort to partake of the choicest of blessings with which a bountiful Providence has surrounded them.

ELIJAH THOMAS.

Warren Co., Ind., 1857.

ANGLE WORMS.

MESSRS. EDITORS:—In reply to the inquiry of Mr. EDWARDS, of Little Genesee, I would state that the trouble with his garden, no doubt, is attributable to the "thousands of angle worms" spoken of by him in his inquiry. Many gardens in this vicinity are nearly ruined. Experiments of various kinds have been tried to clear them from the ground, but to little purpose. Land once light and dry soon becomes heavy and wet where they take up their abode, and altogether unfit for garden purposes. They delight in a rich, wet soil. If the ground is too dry for them, they soon fix it by boring thousands of holes up through the surface, that the rain and dew may not escape. They are no great favorites of light and heat. But at any time of night, or early morn, by simply stepping over the ground, may be heard drawing themselves down these holes to get out of harm's way. The noise thus made resembles falling drops of rain. Thus, by ascending and descending, they draw the soil together in such a way that it has the appearance of being baked. Having had some little experience with the "crawlers," I would recommend to impoverish the soil, by cultivating some crop that

draws hard on the land. Keep of all manures until such times as they have left the diggings, as they are not to be found in poor soils that I know of. Some seed down for a few years, but it prov'd to be of no use whatever.

J. C. ADAMS.

Seymour, N. Y.

COMPARATIVE BACKWARDNESS OF THE SEASON.

MESSRS. EDITORS:—Much has been said about the backwardness of the present season, and in support of the general opinion, I make a few notes from my garden book, showing the time of maturing of some of the leading vegetables for five years.

1853.	Sowed Peas	March 23.	Blossomed	May 31.	Picked	June 13.
1854.	"	"	"	"	"	" 16.
1855.	"	"	April 8.	"	June 5.	" 20.
1856.	"	"	" 10.	"	" 2.	" 16.
1857.	"	"	" 11.	"	" 5.	" 29.

It will be seen by the above table, that this year and 1855 were more backward than the others mentioned, and that this year is, at least, nine days behind two years ago.

We will take radishes, which I usually plant as soon as the frost is out of the ground.

1853.	Sowed Radishes	April 8.	Pulled	May 30.
1854.	"	" 19.	"	June 8.
1855.	"	" 12.	"	May 25.
1856.	"	" 11.	"	" 24.
1857.	"	" 11.	"	June 9.

The growth of early radishes depends more upon the temperature of the month of May than any other time, while peas require a warm and not very wet June for their early maturity.

CUCUMBERS.—Picked full grown ones July 1st, 1853; the same time, 1854; July 9th, 1855; July 14th, 1856; July 13th, 1857. Last year my cucumbers were much retarded by late frosts.

TOMATOES.—1853—picked first ripe ones July 24th; 1854—July 23d; 1855—August 8th; 1856—July 28th; 1857—August 10th.

If I should continue my extracts, they would but sustain the general opinion that the present is the most backward season we have experienced in many years.

P. C. REYNOLDS.

Near Palmyra, N. Y.

GRAFTING PEARS ON WHITE THORN.—In the June number of the *Genesee Farmer*, I see "D. F. H." wants to know about grafting pears on the white thorn. My experience you and he can have gratis. Some twelve years ago I grafted my first on the white thorn in the following manner. I selected a thorn about three-fourths of an inch in diameter; cut it off with a saw about one inch above the surface of the ground. Put in a pear scion, covered with grafting wax, &c., and that summer it grew six feet four inches. One week in June it grew six and a half inches; and I have now a very handsome pear tree well loaded with pears. I think it bore fruit in four or five years. My reason for cutting off the stock so low is, that a pear tree grows faster than the thorn, and therefore by raising a mound of earth up above the stock, the graft forms its own roots, and becomes a more permanent tree.

I have a graft of two years old, doing well, on a service, or as some call it, June berry. What the fruit will be, I cannot tell; but I should think that it will do well. The berries, when ripe, have a little of the pear flavor.

HUGH RAINEY.

Cotfield, Mercer Co., Penn.

SET OUT STRAWBERRY PLANTS THIS MONTH.

If the weather should continue as wet during September as it has been during the past few weeks, we would recommend those who have not already done so to set out strawberry plants. Under favorable circumstances plants set out at this time will become sufficiently rooted to endure the winter, and will bear a moderate crop of fruit next summer.

An underdrained, deep, rich, somewhat loamy soil is best for strawberries. It should be dug at least two feet deep. It is better not to bring the lower spit to the surface—as in ordinary trenching. It should be broken up, and have as much manure dug in with it as possible. You cannot make the subsoil too rich for strawberries.

Plant in rows two and a half feet apart, and from twelve to eighteen inches apart in the rows. Water the plants, if necessary, and let it be done thoroughly, so as to reach the roots. A light sprinkling on the surface is worse than nothing. Keep the soil loose and free from weeds, and in November spread a light coat of fresh manure on the surface between the plants. This will enrich the soil and protect the plants during the winter.

For best varieties, see article in last number, by one of our most successful and experienced cultivators.

GATHERING AND RIPENING FRUIT.

We make a few extracts on this subject from an excellent article in the August number of the *Magazine of Horticulture*:

"PEARS.—It should be distinctly understood that no summer pear should be allowed to ripen on the tree; there is no exception to this rule. There are a few which are barely eatable, but in most instances they are nearly worthless. Some become as dry and mealy as a baked potato, and not near so good; while others rot at the core, though seemingly sound on the surface. It is because most of the summer pears are allowed to ripen on the trees that many of the best varieties have been pronounced unworthy of cultivation. * * * The only requisite is that the fruit should have attained its growth, and the sooner it is picked afterwards the better. This may be known to the cultivator by the change which takes place in the appearance of the fruit. Some of the defective specimens will assume a smoother and paler surface; the coloring on the sunny side will be brighter, and the stem will become swollen, particularly at the junction with the tree. These indicate that the period of maturity is approaching, and the fruit may be gathered and ripened. We have found that very few early pears will ripen well when exposed to the air on open shelves, even in a tolerably close fruit room. At this season of the year the atmosphere is too dry, and the currents of air too great, and the juices are too rapidly exhausted. It is far better to place the fruit in boxes of moderate size, and let them stand in the fruit room or some other cool and dark place, where they retain their juices better than if exposed on shelves. *

"As a general rule, we should advise all early pears to be placed in boxes or drawers, covered with one or two thicknesses of paper, and kept excluded from light and air, where the temperature is cool and as even as possible at that season. A damp,

cool cellar is not so favorable a place as a cool, dry room, as the former checks the ripening process too suddenly; such a situation will do for the autumn and winter pears, but not for the early kinds.

"APPLES.—Some of these are about as good when they fall from the tree as by any process of keeping. The Red Astrachan, Porter, and some of the more acid kinds, seem to acquire their highest flavor in this way. But as a general rule they should be gathered a few days before eating. The sweet varieties, particularly such as the Bough, Golden Sweet, and some others, become too mealy if allowed to hang too long.

"PEACHES and PLUMS, except clingstones and prunes, are only fit to eat as they drop from the trees. The only objection to this mode of gathering, is, that it bruises and disfigures the fruit. They should not, however, be picked unless they part from the stem upon the least touch. Clingstones and prunes may be kept in the fruit room for one or more months."

TRANSPLANTING EVERGREENS EARLY IN AUTUMN.—In an account of the Fair of the New Jersey State Agricultural Society, in the October number of our last volume, we noticed a number of beautiful evergreen trees, exhibited by S. J. GUSTIN, of Newark. They had been taken from the nursery, and were "laid in by the heels" on the show grounds. Mr. G. informs us that at the close of the exhibition, the evergreens, some twenty in number, were sold to a gentleman of Newark, and planted on his grounds. *Only five of the number died.* They were taken up in hot, dry weather, about the 10th of September, and transplanted twice in the course of a few days. Mr. G. thinks that "this shows that evergreens may be successfully transplanted early in autumn."

WHY WEEDS GROW APACE.—There may be 130 flowers having seed-vessels on a single plant of groundsel, and in each seed-vessel there are 50 seeds. Thus, one groundsel seed is father to 6,500 sons, more than there are of visible stars in the firmament. Many of these settle where they cannot live; many exist to be eaten by birds. It is not meant that all seeds should produce plants—very many are as much bread to the birds, as seeds of corn are bread to us. If, however, by accident, every son to which a thriving groundsel seed is parent, grew up, thrived, and produced new seed in the same proportion—an impossible assumption—the descendants of a seed of groundsel in the second generation would exceed in number 40,000,000; the telescope itself has not enabled us to see so many stars. Chickweed is less prolific, though, indeed, even that may produce as many as 500 seeds upon each plant. But, then, look at the red poppy. It can yield 100 flowers from one root, and from each flower can develop not less than 500 seeds; 50,000 may, therefore, by chance, be the number of its offspring. Black mustard and wild carrot produce families of magnitude about equal one to another. One may, when in perfection, produce 200 flowers with six seeds in each, the other 600 flowers, with in each two seeds. One dandelion root may have 12 flowers, while each dandelion flower yields 170 seeds. The seeds of one sow-thistle may number 25,000. One plant of stinking chamomile may yield 40,000, one plant of mayweed 45,000 seeds.—*Dickens' Household Words.*

KNIGHT found that the bark of the birch tree contains more sugar the farther it is taken from the roots.

Ladies' Department.

WOMEN ON COMMITTEES AT HORTICULTURAL EXHIBITIONS.

OUR Agricultural and Horticultural Societies miss it in not putting ladies on their Committees. There are, in every community, ladies who are at least as good judges of fruits and flowers as the men; and there can be no doubt that it would not only add to the interest felt in the exhibitions, but increase the confidence of competitors in the correctness of the decisions, if ladies, with their exquisite taste and keen appreciation of the beautiful, could be induced to act in concert with gentlemen.

The Essex County (Mass.) Agricultural Society last year, for the first time, included the names of ladies on their list of Judges, and the fact called out the following lines from one of the ladies:

At the first Cattle Show of which we read,
MAN, sole Committee, over all presided,
Till the Great Husbandman, who saw the need
Of WOMAN'S gentler counsel, thus decided:
"It is not good for man to be alone;"
And straight a help-met formed to share his throne.

In this display, where Nature, fresh and fair,
To Eden's bowers tempts back the roving will,
The olden precedent is brought to bear,
And EVE'S quick tact is blent with ADAM'S skill,
To trace the hand of God in fruits and flowers,
And scan the product of man's feeble powers.

If, in the judgment thus conjointly rendered,
Error, like evil, craftily creeps in,
That same old plea, which father ADAM tendered,
Can now be urged to palliate the sin,
And every blunder written, thought or said,
Be visited on luckless woman's head.

ORIGINAL DOMESTIC RECEIPTS.

HOW TO KEEP PRESERVES.—Apply the white of an egg with a small brush to a single thickness of tissue paper; the paper must be sufficiently large to come an inch or two over the jar, and will require no tying.

TO PRESERVE PEACHES.—To every pound of large, white freestone peaches allow one third pound white sugar. Make a thin syrup; boil the peaches in it until tender, but not till they break. Put them in a dry, cool place and let them stand two days. Then make a new, rich syrup, allowing $\frac{3}{4}$ lbs of sugar to a pound of fruit. Drain the peaches from the first syrup and boil them, until clear, in the last syrup. The first syrup must not be added, but may be used for some other purpose.

CHEAP ICE CREAM.—Two table spoonful of corn starch, or common starch, for one quart of milk and one pint of cream; one fourth pound sugar. Boil the milk and cream together, and add the starch made smooth with a little milk. Flavor to the taste when cool.

MANGOES.—Take large green peppers and melons, (melons that are half ripe are very good,) take out the inside and put them in weak brine for four or five days. Then fill them with nasturtions, cabbage, green tomatoes, and onions chopped. Season with mustard seed, cloves and cinnamon, and cover with cold strong vinegar. They require no scalding.

BLACKBERRY JELLY.—Half a pound of sugar to a pint of syrup. Made like currant jelly.

BRANDY PEACHES.—Pare your peaches and weigh them. To one pound of peaches put three fourths pound of sugar. Make a syrup of one third of your sugar weighed, and boil your peaches gently in this syrup. When they are cooked to the pit take them out and drain them on a sieve. Then fill your glass jars one half or three fourths full of peaches. Take the remainder of your sugar and make a syrup, with but little water, and while it is hot mix equal parts of syrup with white brandy, and pour over your jars of peaches. Let them stand twenty four hours and then seal them up. The "Morris White Peach" is the best for this use.

PRESERVED PEACHES.—To one pound of peaches one pound of sugar. Pare your peaches nicely and halve them. Sprinkle your sugar over your peaches and let them stand over night. Put them over the fire and let them strike through. Take out the peaches; boil up the syrup; skim off the skum; pour it over the peaches hot. Use the "Yellow Crawford Peach" or "Lemon Cling."

PICKLE PEACHES.—To one quart of good vinegar, put three pounds of sugar. Boil and skim it. The liquid will cover a peck of peaches. Rub the peach with a coarse towel; stick two or three cloves in each, and boil them a dozen at a time (or more) in the vinegar and sugar until they are well cooked. Take them out with a fork and place them in a jar. When they are done strain the syrup over them. "First rate."

RIPE CUCUMBER PICKLES.—Pare and take out the seeds; cut them in strips; then put them in good cider vinegar twenty-four hours. Take them out; wipe dry. Make a syrup of two pounds of sugar, one ounce of cassia buds. When the syrup is hot put in the cucumber and cook fifteen or twenty minutes.

CUCUMBER PICKLES.—Place the cucumbers in a jar; throw a little salt on them; then pour boiling hot water over them, and let them remain twenty four hours. Then drain them and put them into vinegar, and let them scald up. Add cinnamon, cloves, red peppers, and a little pulverized alum.

PICKLE PEARS.—Leave the stem upon the pears. Make a syrup of one quart of vinegar, three pounds of sugar. This quantity of syrup will cover a peck of pears. Cook the fruit in the syrup until they are soft to the core. Then take out the fruit; place them in jars, and pour the syrup over them. Throw in a little mace in the syrup when hot.

LEARN TO COOK.—In my opinion the most important knowledge that a "housewife" can possess, is that which relates to the "art of cooking." It is true there are other duties which must be attended to, but if necessary, they can far more properly be left to others than the cooking. The wife knows better what food is most healthy and palatable for her family. And what husband, when he returns from toil, weary, would not rather feel that his "meal" had been prepared by the hand of her who was particularly interested for him, than to know it had been placed there by a servant. Truly every "housewife" ought to oversee her own cooking; and mothers should train their daughters to this, if it be to the neglect of some less important branches of "housewifery."
A. E. F.

Editor's Table.

New Advertisements this Month.

Genesee Valley Nurseries.—A. Frost & Co., Rochester, N. Y.
 How to Behave.—Fowler & Wells, New York.
 Hickok's Keystone Cider Mill.—W. O. Hickok, Harrisburg, Pa.
 New Catalogues for 1857.—Wm. R. Prince & Co., Flushing, N. Y.
 To Plasters & Dealers in Trees.—Isaac Pullen, Hightstown, N. J.
 Fruit and Ornamental Trees.—Ellwanger & Barry, Rochester, N. Y.
 Small Fruits.—Ellwanger & Barry, Rochester, N. Y.
 Hyacinths, Tulips, Double Dahlias, &c.—J. M. Thorburn & Co., New York.
 Rochester and Lake Avenue Commercial Nurseries.—J. Donellan & Co., Rochester, N. Y.
 Old Rochester Nurseries.—Samuel Moulson Rochester, N. Y.
 To Seedsmen, Planters, &c.—J. M. Thorburn, New York.
 Lawton Blackberry Plants.—C. P. Bissell, Rochester, N. Y.
 To Nurserymen.—Ellwanger & Barry, Rochester, N. Y.
 New and Rare Ornamental Trees.—Ellwanger & Barry, Rochester, N. Y.
 Fruit and Ornamental Trees, &c.—William King, Rochester, N. Y.
 Grape Vines.—Josiah Salter, Rochester, N. Y.
 Buffalo Nurseries, and Oaklands Gardens and Green-houses.—Manley & Mason, Buffalo, N. Y.
 Peach Trees, Grape Vines, &c.—Jas. Lennon, Rochester, N. Y.
 Strawberry Plants for Sale.—C. W. Seelye, Rochester, N. Y.
 Bulbous Roots, Roses, Strawberries and Trees.—Wm. E. Prince & Co., Flushing, N. Y.
 Strawberries.—John Wilson, Albany, N. Y.
 Quince and Apple Stocks for Sale.—Penfield, Burwell & Co., Lockport, N. Y.
 The American Farmer's Encyclopedia.—C. M. Saxton & Co. New York.

DOES WHEAT TURN TO CHESS?—To settle a controversy on this subject, BENJAMIN HODGE, of Buffalo, N. Y., offered a premium, some months since, of one hundred dollars, to any one who would demonstrate that wheat would turn to chess—to be awarded under the supervision of the New-York State Agricultural Society, and under such rules as a Committee appointed by the Society should prescribe. This premium was lately claimed by SAMUEL DAVIDSON, of Greece, in this county, who had in his possession, as he believed, the evidence of transmutation.—A Committee, appointed by the Society, consisting of Prof. DEWEY and L. B. LANGWORTHY, of this city, and J. J. THOMAS, of Union Springs, with Col. JOHNSON, Secretary of the Society, met at Rochester recently to examine the evidence. Mr. THOMAS is one of the editors of the *Country Gentlemen*, and we copy the following account of the examination from that excellent paper.

The experiment to prove transmutation was the following:—A quantity of earth was passed through a fine sieve, to separate all chess seeds. It was placed in a pan, and several heads of wheat planted in it. When the wheat came up, it was subjected to all the hard treatment that usually produces winter killing, viz: flooding with water, and alternately freezing and thawing for several times. Late in the spring, the whole contents of the pan were removed and set out in open ground. When the plants of wheat threw out their heads, there appeared chess heads also. This mass of wheat and chess plants was brought in and placed before the Committee. Stalks of chess were shown, the roots of which were found to proceed directly from the planted heads of wheat, which remained entire, and in some instances they were found to proceed directly from the planted heads of wheat, which yet remained entire, and in some instances they were found to issue from the half decayed grains of wheat themselves. This was looked upon as conclusive.

The roots were taken by the Committee and first soaked in water, and afterwards gently washed, by moving them backwards and forwards slowly through it. They were then carefully examined by microscopes. The roots of the chess were now perceived to issue, not from near the end of the grain of wheat, as is usual in sprouting, but from the *side*, and in fact from almost any part. Further examination showed that they merely passed through crevices in the decayed wheat grains, and they were separated from the grains without tearing, being merely in contact, without any adhesion or connection. Some of the more minute chess fibres were observed by an achromatic microscope, to extend over the inner surface of the bran, where they had gone in search of nourishment, (which is known to abound just within the bran,) in the same way that grape roots have been observed to spread over the surface of a rich decaying bone. But they easily separated, and had no connection with the grain. It was satisfactorily proved that the chess plant could not have come from these grains, by the fact that the same single stalk of chess was thus connected with five or six different grains,—which could no more have originated it, than five or six cows could have one calf. This examination, therefore, did not prove anything in favor of transmutation; and as there were many possible ways in which the chess might have become scattered on the soil, the whole experiment was admitted by all parties to be inconclusive.

The claimant is, however, perfectly "satisfied" that the wheat turned to chess; and he is also so well satisfied with the candor and accuracy of the Committee, that he is confident he will yet convince them of the fact of transmutation, as experiments, conducted by them with great care, are to be performed under his direction, another year.

GREAT PRICE FOR A SOUTH DOWN RAM.—At the last Annual letting of Jonas Webb's South Down Rams, at Babraham, England, one of the rams was hired by Mr. LINSLEY, of Connecticut, for one hundred and ninety seven guineas (\$992.88), the highest price, we believe, ever paid. The *Mark Lane Express* learns that since the public sale, Mr. LINSLEY has purchased this sheep for four hundred guineas (\$2,016). To show that this is not an artificial price, the *Express* mentions the following fact. "In 1855, Mr. WENB let a sheep to the Duke of Richmond, for 170 guineas, the season; in 1856, to Lord Chichester, for 130 guineas; and this year, still in strong use, he goes to that good judge, Mr. RIGDEN, for 70 guineas. This is something like four hundred guineas in the three years, and there may be something more to credit to him even then." Well does a contemporary observe—"Americans ought now to breed as good South Downs as any in the world, as they have secured as good stock as there is to begin with."

At the same sale, sixty five rams were let for the season at an average price of about \$140 each. This is not quite as high, we believe, as in 1856, but higher than the average of the past five years.

FRUIT GROWERS' SOCIETY OF WESTERN NEW YORK. The Autumnal Exhibition of this Society will be held in this city, September 18, 19. "A strong effort will be made to render this one of the most interesting meetings of this kind ever held in this country." All who are interested, both in Western New York and elsewhere, are cordially invited to attend.

SULPHUR FOR ROSE BUGS.—A correspondent at New Haven informs us that he has tried burning sulphur under rose trees to kill the bugs, with decided success—but unfortunately it killed the leaves also.

THE RURAL ANNUAL AND HORTICULTURAL DIRECTORY FOR 1858.—This work will be issued in a few weeks. We think it will be found fully equal to its predecessors. It contains treatises written expressly for its pages on Manures for the Orchard and Gardens, on the Cultivation of Grapes in the Open Air, on the Cultivation of Apples, Pears, Peaches, Plums, and other Fruit, for Market, on the Management of the Kitchen Garden, on Birds injurious and beneficial to the Horticulturist, on the Cultivation of Fruit at the West, as well as short articles on a number of other subjects of interest to all fruit growers. It also contains a considerable number of plans for Houses, Barns, &c., designed and engraved expressly for this work. The articles are written by horticulturists of experience, and we have spared neither labor nor expense in getting up and illustrating it. It will be alike attractive and useful, containing as much information as many dollar books.

The price will be the same as last year, 25 cents. In clubs of eight, the *Genesee Farmer* and *Rural Annual* will be sent for 50 cents the two, with an extra copy of the *Annual* to the person getting up the club. We prepay the postage on the *Rural Annual* in all cases.

We devote a few pages of the *Rural Annual* to advertisements, which should be sent in immediately.

THE DIOSCOREA BATATIS.—The experiments which have been made in France with this new esculent appear to have been quite successful. Prof. LINDLEY, the editor of the *Gardener's Chronicle*, in an account of a visit to the Annual Exhibition of the *Societe Imperiale et Centrale d'Horticulture*, held in the *Palais d'Industrie* at Paris, says: "One of the most interesting objects was the *Dioscorea Japonica*, of which there were some very fine specimens in all its stages of growth—from that of a tiny bulb to a root nearly two feet long, and somewhat larger than an ordinary sized parsnep. There was also a box containing flour prepared from the roots of this plant, as pure and white in appearance as if it had been obtained from some of our best kinds of wheat." As the climate and soil of many parts of France seem to be well adapted for the growth of this valuable root, he thinks it highly probable that at no distant period it will become of great importance for general cultivation as an article of food, and be as much esteemed for its nutritious qualities as the potato.

CORRECTIONS.—The Fair of the United States Agricultural Society takes place at Louisville, Ky., September 1—5, and not October 1—5, as stated in our July number and a portion of the August number. We exceedingly regret the error, and thank President WILDER for calling our attention to it.

There was also an error in the advertisement of C. P. BISSELL. The price of New Rochelle blackberry plants should have been \$150 per thousand instead of \$100, as printed in a part of our edition.

GREAT SALE OF IMPORTED STOCK.—We would call the attention of Breeders to the public sale of stock imported and bred by F. W. STONE, Esq., of Moreton Lodge, Guelph, C. W., which takes place September 16. Mr. S. is undoubtedly the largest importer of short horn cattle and Cotswold sheep in Canada. The animals were all selected by himself with great care, and without any regard to expense, and we can testify from personal examination, to the unrivalled excellence of his stock. For further particulars see advertisement in this number.

COUNTY AGRICULTURAL FAIRS.—In reply to a correspondent, we would say that the reason why we do not publish a list of the County Agricultural Fairs in New York, is not that we do not entertain a sufficiently high opinion of their value, but because the circulation of the *Genesee Farmer* is as large in other States as in New York; and a list of Fairs in New York would be of no interest to many thousands of readers in Pennsylvania and Canada, or in Ohio, Indiana, Kentucky, Michigan, Illinois, Iowa and other Western States. If we give a list of Fairs in New York, we should have to give a list of all the County Fairs in the United States and Canada,—for we have many subscribers in every State and Territory in the Union, and over three thousand in Canada—all of whom take an interest in their several County and Town Fairs. But our correspondent will agree with us that a list which embraced all the County Fairs in the country would occupy too much space, and be of little interest to our readers.

THE OHIO POMOLOGICAL SOCIETY will hold its eighth session at Cincinnati during the week of the State Fair, September 14—18. The meetings of this Society are now held biennially, alternating with those of the American Pomological Society, and a cordial invitation is extended to fruit growers and nurserymen from other States, especially of the West and Southwest, to participate in the meetings and discussions. Specimens of fruit, particularly peaches and pears, are also desired at this meeting.

PRIZE ESSAYS.—We have received a considerable number of essays on some of the subjects for which we offered premiums in the July number. The essays will be submitted to a competent committee, and those which are awarded a premium will be published in our next number.

We shall continue to offer premiums for short essays, and shall be thankful to any of our readers who will name subjects.

Notices of New Books, Periodicals, &c.

HOW TO DO BUSINESS: a New Pocket Manual of Practical Affairs, and Guide to Success in Life; embracing the principles of business; advice in reference to a business education; choice of a pursuit; buying and selling; general management; manufacturing; mechanical trades; farming; book and newspaper publishing; miscellaneous enterprises; causes of success and failure; how to get customers; business maxims; letter to a young lawyer; business forms; legal and useful information; and a dictionary of commercial terms. New York: FOWLER & WELLS.

Every young man should read this treatise. It contains much useful information, is written in a popular and pleasant style, and cannot fail to stimulate the most sluggish to make an effort to acquire good business habits. It is the last of a series of "Hand-books for Home Improvement," entitled "How to Write," "How to Talk," and "How to Behave,"—published by FOWLER & WELLS, New York—each of which will be sent prepaid to any address for 30 cents in paper, and 50 cents in cloth.

BIOGRAPHICAL AND HISTORICAL SKETCHES. By T. BABINGTON MACAULAY. New York: D. APPLETON & Co., 1857.

This is the first of a series of books, entitled the "American Railway Library." It is a very valuable work, of 394 pages, and contains ninety interesting but somewhat heterogeneous sketches.

THE BIOGRAPHICAL HISTORY OF PHILOSOPHY. By GEORGE H. LEWES. New York: D. APPLETON & Co., 1857.

This handsome volume of nearly 800 pages, is by one of the ablest writers of the present day. It traces the History of Philosophy from its origin in Greece, down to the present time, and discusses briefly the theories, various and conflicting, of the master minds of the Ages.

PUNCH'S POCKET BOOK OF FUN. The Essence of Punch. Being cuts and cuttings from the wit and wisdom of twenty-five volumes of Punch. Illustrated with 75 engravings. B. S. P. AVERY. New York: D. APPLETON & Co., 1857.

All the above works are for sale by D. M. Dewey, of this city.

Inquiries and Answers.

SUPERPHOSPHATE OF LIME.—(T. G.) You cannot convert bones into superphosphate without grinding them. We will give an article on the subject in a future number.

WHEAT DRILL.—(A. D. CORVELL, Vernon, Ind.) The grain drill manufactured by C. H. SEYMOUR, of East Bloomfield, N. Y., is one of the best we have seen.

SORE SHOULDER IN HORSES.—In reply to the inquiry in your paper concerning horses that are sore in the shoulder, I can say that I have seen a mixture compounded of verdigris and grease applied with success. STEPHEN POWERS.—*Rutuford, Ohio.*

SMUT IN WHEAT.—What is the cause of smut in wheat? When the cause is known, what is a preventive? I have been trying some experiments, which I will give after a while, but I would like to hear from you or some of the numerous readers of the *Genesee Farmer*, especially the wheat growing portion, so that actual experience can be given. None of the causes which I have heard assigned agree with my experience. A. J. N. CLEVELAND, *Hamilton Co., Ohio.*

Smut in wheat is caused by a fungus, which you will find fully described in MORTON'S *Cyclopedia of Agriculture*. We alluded to the best remedies in the last number, page 235. We shall be glad to hear the result of your experiments.

UNDERDRAINING.—Will it pay to underdrain land that is quite broke, and full of ravines, the soil being a hard, tenacious clay, overlaid with slate? There are no drain tiles to be had in this part of the country. The timber fit for draining purposes is not very plenty. The only material that is in abundance is the limestone, which has to be blasted, as it lies in a stratum of about five feet in thickness. It can be broke and split into any size required. A. D. CORVELL.—*Vernon, Ind.*

APPLE DISEASE.—Can you or any of your correspondents tell us what causes our apples to rot so badly, and what will prevent it? For four years we have had no good apples. They first become speckled, then spotted, then rotten entirely. They have now begun to rot again this year, and we shall have no fruit for winter use. J. N. BOAS.—*New Exchange, Ky., Aug. 8, '57.*

CANADA THISTLES.—How can the Canada Thistle be exterminated? Having been troubled with this nuisance for some time, and different ways of managing having failed to lessen them, I resolved to ask of you and your numerous correspondents a little information in the matter. Will some one be so good as to answer this through your paper at the earliest opportunity. S.—*Elma, Erie Co., N. Y.*

POTATO DIGGING MACHINE.—As the potato digging season approaches, I would like to hear from some person who has seen, in operation, the machine recently got up for that purpose. Does it take them out clean from dirt, where the ground is lumpy? Does it leave any potatoes in the ground? In short, all its merits and also the demerits, if there are any, belonging to the instrument. D.—*Gates, N. Y.*

I HAVE an apple tree, the fruit of which becomes everted, on one side, with a black scale; the apples then crack and become nearly worthless. Now will you or some of your horticultural readers be kind enough to tell me, through the *Genesee Farmer*, what I must do to redeem the fruit for another season as it is too late for this? D.—*Gates, N. Y.*

GROWING EVERGREENS FROM SEED.—I wish to inquire through the columns of your valuable paper how to grow Evergreens from seed, such as Hemlock, White Pine, and Balsam Fir, with full directions, from the time of gathering the cones to the transplanting from the seed bed to nursery row. JAMES VINTON.—*Manchester, Mich.*

State Fairs for 1857.

United States,	Louisville, Ky.,	September 1-6.
Vermont,	Montpelier,	September 8-11.
Ohio,	Cincinnati,	September 15-18.
American Institute,	New York,	September 15-29.
Virginia, Western,	Wheeling,	September 16-18.
Canada East,	Montreal,	September 16-18.
Illinois,	Peoria,	September 21-23.
Pennsylvania West,	Pittsburgh,	September 23-25.
North-Western Fruit & Growers' Associat'n, }	Alton, Ill.,	September 29-
Maine,	Bangor,	Sept. 29 to Oct. 2.
California,	Stockton,	Sept. 29 to Oct. 2.
Pennsylvania,	Philadelphia,	Sept. 29 to Oct. 2.
Wisconsin,	Janesville,	Sept. 29 to Oct. 2.
New Jersey,	New Brunswick,	Sept. 29 to Oct. 2.
Canada West,	Branford,	Sept. 29 to Oct. 2.
Michigan,	Detroit,	Sept. 29 to Oct. 2.
Indiana,	Indianapolis,	October 4-10.
New York,	Buffalo,	October 6-9.
Iowa,	Muscatine,	October 6-9.
New Hampshire,	Concord,	October 7-9.
Kentucky,	Henderson,	October 12-16.
Tennessee,	Nashville,	October 12-16.
Connecticut,	Bridgeport,	October 13-16.
North Carolina,	Raleigh,	October 20-23.
East Tennessee,	Knoxville,	October 20-23.
Georgia,	Atlanta,	October 20-22.
Massachusetts,	Boston,	October 21-23.
Maryland,	Baltimore,	October 21-23.
West Tennessee,	Jackson,	October 27-30.
Alabama,	Montgomery,	October 27-30.
Virginia, .....	.....	October 28-31.
South Carolina,	Columbia,	November 10-12.

ADVERTISEMENTS,

To secure insertion in the FARMER, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. TERMS—Two Dollars for every hundred words, each insertion, PAID IN ADVANCE.

HICKOK'S KEYSTONE CIDER MILL,

MANUFACTURED BY THE

EAGLE WORKS, HARRISBURG, PA.

THIS sterling machine has within the past year been put to severe actual tests, and been very much improved by the addition of a 22 inch fly-wheel, new gearing, joint-bolts, and other minor improvements, and is now offered to the public with the certainty that it is made in the very best manner, and that it will grind and press easier and faster than any other Mill in the market. Dealers and others supplied on liberal terms. Address

W. O. HICKOK,
September 1,—3t. Agent Eagle Works, Harrisburg, Pa.

STRAWBERRY PLANTS FOR SALE,

OF ALL THE NEWEST AND BEST VARIETIES.

NEW SORTS at \$1 per dozen, \$3 per hundred.

Hooker's Seedling,
Scott's Seedling,
Triomphe de Gand,
Ingram's Prince of Wales,
Trollope's Victoria,
Jenny Lind.

STANDARD SORTS at \$50c. per dozen, \$2.00 per hundred.

Biston Pine, McAvoy's Extra Red,
Boston Pine, McAvoy's Superior,
Black Prince, Monroe Scarlet,
Burr's New Pine, Moyamensing,
Crimson Cone, Ohio Mammoth,
Cushing, Rival Hudson,
Genevieve, Schneickes Pistillate,
Hovey's Seedling, Longworth's Prolific,
Large Early Scarlet, Walker's Seedling.

Particular attention is paid to packing the plants in such a manner that they may be sent any distance by Railroad or Express. Orders addressed to the subscriber will meet with prompt attention.

C. W. SEELYE,
Sept.—11. Rochester Central Nursery, Rochester, N. Y.

BULBOUS ROOTS, ROSES, STRAWBERRIES AND TREES

W. M. R. PRINCE & CO., Flushing, N. Y., offer their most extensive collection of Bulbous Flower roots in their priced catalogue for 1857. The new descriptive catalogue of the finest Strawberries, 105 varieties, and new catalogue of Roses, Tree and Herbaceous Paeonies, Carnations, Phlox, Iris, Chrysanthemums, Dahlias, &c., and a descriptive catalogue of Fruit and Ornamental Trees, are ready for applicants who enclose stamps. Chinese Potato tubers will now be contracted for, deliverable 1st of October, with a Treatise on Culture. 10,000 Linnaeus, Victoria and Early Tobolsk Rhubarb; 50,000 German Asparagus; 250,000 American Thorn, Arbor Vita, Osage Orange, Honey Locust, and Privet for Hedges; 10,000 Cherry and Province Currants; 50,000 Lawton and Imperial Blackberries; 30,000 Orange, Antwerp and other Raspberries; 20,000 Hardy Grapes, English and Houghton Gooseberries, and Cranberries. All in quantity at lowest rates.

N.2.—The collection in every department is unequalled; and many of the varieties of Fruit Trees, and of Strawberries, &c., cultivated by others, are shown to be worthless.

Sept.—11.

STRAWBERRIES.

PERSONS in search of a good Strawberry—one unequalled in productiveness, flavor, &c.—should order a few of the "Wilson's Albany." Plants ready for delivery last of August and first of September. Price \$2.00 per 100. All information cheerfully given.

JOHN WILSON, Albany N. Y.

A good lot of FRUIT AND ORNAMENTAL TREES, and all sorts of Currants, Gooseberries, Grape vines, &c., of good size and quality, on terms as favorable as at any other establishment.

Sept.—11.

I HAVE for sale Fifteen Hundred large, well-grown, Peach Trees, of superior sorts.

—ALSO—

Two Thousand Grape vines, from one to two years old. Currant Bushes, Gooseberry Bushes—Roses and Rose Stocks.

The above will be sold cheap for cash—packed and sent according to order.

JAMES LENNON,
No. 12, Gorham st.
Rochester, N. Y.

Sept.—11.

MOUNT HOPE AVENUE, ROCHESTER, N. Y.

THE PROPRIETOR offers for sale this fall and coming spring a large assortment of Fruit and Ornamental Trees, such as Apple, Dwarf Pear, Cherry, Peach, Plum, Apricot, Gooseberries, Currants, Raspberries, Grape Vines, Quince, Cherry and Plum Stocks, Rhubarb, Asparagus, &c. Shade Trees, Evergreens, Flowering Shrubs, Roses, Vines, Dahlia Roots, Bulbous Roots, Green-house Plants. Address WILLIAM KING, Rochester, N. Y.

TO PLANTERS AND DEALERS IN TREES.

THE subscriber would inform his friends that his Descriptive and Wholesale Priced Catalogue of Fruit and Ornamental Trees, for the autumn of 1857, will be sent, after the 10th of August, to all applicants who enclose a stamp. Address

ISAAC PULLEN,
September 1.—21. Hightstown, Mercer Co., N. J.

QUINCE AND APPLE STOCKS FOR SALE.

THE subscribers offer for sale, of their own raising, 100,000 Quince Stocks (Angers and Fontenay) at \$15 per 100. 200,000 Apple Seedlings, at \$5 " 10,000 Peach Trees.

Lockport, N. Y., Sept.—21. PENFIELD, BURRELL & CO.

HYACINTHS, TULIPS, DOUBLE DAHLIAS, &c.

THE subscribers offer this season a more extensive assortment than usual of DUTCH BULBOUS ROOTS, imported from the best Flower Nurseries of Europe, in the finest condition, and all first class bulbs—embracing every desirable variety of

DOUBLE AND SINGLE HYACINTHS, adapted for house or out-door flowering,
EARLY AND LATE, DOUBLE AND SINGLE TULIPS, of every shade and hue,
POLYANTHUS NARCISSUS,
ROMAN NARCISSUS, for early winter blooming,
SINGLE NARCISSUS,
DOUBLE AND SINGLE JONQUILLES,
CROCIUS of all sorts, including some very fine new named seedling varieties,
CROWN IMPERIALS,
FRITILLARIAS,
GLADIOLUS,
IRIS,
IRIAS,
LILIES,
ARUMS,
COLCHICUMS,

with numerous other sorts of approved tested value.

CATALOGUES of the above, with descriptions and directions for planting and managing, will be mailed to applicants enclosing a stamp.

HYACINTH GLASSES, FANCY CROCUS POTS, &c.
J. M. THORBURN & CO., SEEDSMEN, &c.,
September 1.—11. 15 John street, New York.

New Hand-Books for Home Improvement, by Mail.

HOW TO BEHAVE.—A NEW POCKET MANUAL OF ETIQUETTE.

AT HOME, AT PLACES OF AMUSEMENT,
ON THE STREET, AT WEDDINGS,
IN COMPANY, AT CHURCH,
AT TABLE, WHILE TRAVELING,
AT PICNICS, IN COURTSHIP, &c.

HOW TO BEHAVE, the third number of our "HAND-BOOK FOR HOME IMPROVEMENT,"—now ready—is a complete guide to Correct Personal Habits, embracing the principles of good manners; useful hints on the care of the person, eating, drinking, exercise, dress, self-culture, and behavior at home; the etiquette of salutations, introductions, receptions, visits, dinners, evening parties, conversation, letters, presents, weddings, etc, with illustrative anecdotes, a chapter on love and courtship, and rules of order for debating societies. Price, prepaid by mail, 30 cts.; muslin, 50 cts. Address FOWLER & WELLS, 308 Broadway, N. Y.

"How to Write," "How to Talk," "How to Behave," and "How to do Business," now ready—same size and price. The four works sent by mail for \$1. September 1.—21.

THE AMERICAN FARMER'S ENCYCLOPEDIA,

Embracing all the recent discoveries in Agricultural Chemistry and the use of Mineral, Vegetable and Animal Manures.

With DESCRIPTIONS and FIGURES of AMERICAN INSECTS injurious to Vegetation.

Being a Complete Guide for the cultivation of every variety of Garden and Field Crops. Illustrated by numerous engravings of Grasses, Grains, Animals, Implements, Insects, &c.

By GOVERNUR EMBERSON, of Pennsylvania,

upon the basis of Johnson's Farmer's Encyclopedia.

Price Four Dollars. Sent free of Postage upon receipt of price.

"No Farmer should be without it." Published by

C. M. SAXTON & CO.,

Agricultural Book Publishers,
Sept. 1.—11. 140 Fulton street, New York.

GRAPE VINES.

Concord.....\$1 each; \$10 per doz.; \$75 per 100.
Diana.....\$1 each; \$10 per doz.; \$75 per 100.
Northern Muscatine.\$1 each; \$10 per doz.; \$75 per 100.
Rebecca.....\$3 each.
Delaware.....\$3 each.
Child's Superb, \$5 each.

Carefully packed and sent to any part of the United States or Canada, on receipt of cost.

Address, JOSIAH SALTER,
Sept.—21. Rochester, N. Y.

PRINCE'S NEW CATALOGUES FOR 1857.

W. M. R. PRINCE & CO., FLUSHING, N. Y., will mail any of these Catalogues to those who send stamps:

Descriptive Catalogue of Strawberries, comprising all the new and estimable varieties, at greatly reduced prices.

Descriptive Catalogue of Roses, Phlox, Carnations, Chrysanthemums, and other Flowering Plants.

Catalogue of Bulbous Flowers, of every description, including Tree and Herbaceous Paeonies, Dahlias, &c.

September 1.—11.

TO NURSERYMEN.
STOCKS AND SEEDLINGS.

WE beg to announce to the trade that we are able to supply the following in large quantities, viz:

MAZZARD CHERRY Seedlings.....	1 year.
APPLE Seedlings.....	2 "
QUINCE from Cuttings.....	1 "
HORSE CHESTNUTS.....	1, 2 & 3 "
BLM. AMERICAN.....	2 & 3 "
BLACK WALNUT and BUTTERNUT.....	3 "
MAPLE, Silver and Scarlet.....	2 & 3 "
MAPLE, Sugar.....	1 "
MAGNOLIA, Acuminata.....	2 & 3 "
MOUNTAIN ASH, European.....	1 "
LABURNUMS.....	2 "
OAKS, Red and White.....	3 "

Add many other articles, for which see other advertisement, and Catalogues, Descriptive and Wholesale, which are sent gratis to all who apply and enclose stamps to prepay postage.

ELLWANGER & BARRY,

Sept. 1.—14. Mount Hope Nurseries, Rochester, N. Y.

NEW AND RARE ORNAMENTAL TREES.

MESSRS. ELLWANGER & BARRY solicit the attention of gentlemen who are interested in new and rare Ornamental Trees, to the following, viz:

KILMARNOCK WEEPING WILLOW, with pendulous brown branches and large glossy leaves—an elegant tree.

AMERICAN WEEPING WILLOW—A beautiful small tree with a profusion of light, graceful, drooping branches and small silvery green foliage.

ROSEMARY LEAVED WILLOW—A very striking tree with feathery branches and bright silvery foliage.

WEEPING POPLAR—A remarkably graceful tree; the tremulous foliage and drooping habit combined, are quite expressive.

CUT-LEAVED WEEPING BIRCH—No other tree possesses, in every particular, so much of lightness and elegance as this.

PURPLE-LEAVED SYCAMORE—A very striking tree, having large rich purple foliage.

AUCUBA-LEAVED ASH—Quite a novelty, having the leaves all profusely sprinkled with golden blotches.

GOLD-STRIPED WEEPING ASH—A variety of the common Weeping Ash, with golden stripes and blotches on both foliage and branches.

ELMS, PURPLE-LEAVED, NETTLE-LEAVED, PYRAMIDAL, HUNTINGDON and several other remarkable and beautiful species and varieties.

These are but a few of the many rare and fine trees which E. & B. now offer. In new and rare Shrubs, Roses, Peonies, Phloxes, and other popular classes of plants, their collection is equally rich.

For particulars they must refer to the following Catalogues, which will be sent prepaid to all who enclose one stamp for each:

No. 1.—Fruits. No. 2.—Ornamental Trees. No. 3.—Green House and Bedding Plants, Dahlias, &c. No. 4.—Wholesale.

Sept.—14. Mt. Hope Nurseries, Rochester, N. Y., 1857.

BUFFALO NURSERIES

AND

OAKLAND'S GARDENS AND GREENHOUSES.

THE subscribers offer for sale, the ensuing autumn and spring, a large and fine stock of—

FRUIT TREES.

EMBRACING

Apple,	Plum,	Nectarine,
Pear,	Cherry,	Quince,
Peach,	Apricot,	&c., &c.

—ALSO—

Apple, Cherry, and Quince Stocks. Strawberries, Gooseberries, Raspberries and Currants.

The Ornamental Department is full and extensive, including a superb stock of Evergreens and Roses.

Special attention is called to the Pear trees, both standard and Dwarf, as we have a large and unusually fine stock.

Catalogues will be sent to persons requesting them.

Office on Ferry street, Buffalo, N. Y.

Sept.—31.

MANLEY & MASON.

TO SEEDSMEN, PLANTERS, &c.

THORBURN'S PRELIMINARY WHOLESALE PRICED LIST of

VEGETABLE AND AGRICULTURAL SEEDS,

DUTCH BULBOUS ROOTS, DOUBLE DAHLIAS, &c.,

for the fall of 1857, is just published, and will be mailed to dealers and others requiring seeds in quantities, enclosing a stamp to return postage.

This year's seeds, so far as harvested, are of prime quality, generally abundant, and prices correspondingly moderate.

J. M. THORBURN & CO., SEEDSMAN, &c.,

September 1.—31.

15 John st., New York.

GENESEE VALLEY NURSERIES.

FRUIT TREES, ORNAMENTAL TREES, SHRUBS, ROSES, &c. &c.

THE Proprietors of these well-known Nurseries have on hand a large and well-grown stock of

FRUIT TREES, ORNAMENTAL TREES, SHRUBS, ROSES, GREEN-HOUSE AND BEDDING PLANTS, DAHLIAS, PHLOXES AND OTHER HARDY BORDER PLANTS.

The assortment of ROSES is very extensive, and embraces all varieties which could be obtained, and which are considered worthy of cultivation. Our collection of HYBRID PERPETUALS is the most complete in the country.

The GREEN-HOUSE DEPARTMENT receives particular attention, and the stock of Fuchsias, Geraniums, and other Green-house Plants, is large and varied. In the

FRUIT DEPARTMENT,

OUR STOCK CONSISTS OF

APPLES, of the leading varieties, Dwarf and Standard.

PEARS, of all desirable varieties, on Quince and Pear Stocks.

PLUMS—A choice selection of well-grown trees, of popular sorts.

CHERRIES—All the popular sorts, Dwarf and Standard.

PEACHES—A choice assortment.

NECTARINES, APRICOTS and QUINCES, in variety.

GRAPES—A complete assortment of both Native and Foreign sorts, including many of recent introduction.

SMALL FRUITS.

CURRENTS—Twenty-five choice sorts, including many new varieties.

RASPBERRIES, GOOSEBERRIES, BLACKBERRIES and STRAWBERRIES, of all new and approved varieties.

We have, for the accommodation of NURSERYMEN, STOCKS and SEEDLINGS, including APPLE, PEAR, PLUM, CHERRY, QUINCE, &c. &c. Also, SEEDLINGS OF EVERGREEN TREES, including Norway Spruce, Balsam Fir, Scotch Pine, Austrian Pine, Larch and Hedge Plants.

ORNAMENTAL DEPARTMENT.

The stock of Ornamental Trees and Shrubs, both Deciduous and Evergreen, will be found to embrace all that is desirable among LAWN and STREET TREES and SHRUBS.

ROSES—Consisting of Hybrid Perpetual and Summer Roses, Moss, Bourbon, Noisette, Tea, Bengal or China, and Climbing or Prairie Roses.

HARDY HERBACEOUS or BORDER PLANTS, and BULBOUS FLOWER ROOTS—An extensive assortment.

All the above will be disposed of at low rates, and on advantageous terms. For further details, we refer to our full set of Catalogues, which will be mailed to applicants who enclose a one cent stamp for each.

No. 1. Descriptive Catalogue of Fruits, &c.

No. 2. Descriptive Catalogue of Ornamental Trees, Shrubs, Roses, &c.

No. 3. Descriptive Catalogue of Green-house and Bedding Plants, Dahlias, &c.

No. 4. Wholesale or Trade List for Nurserymen and Dealers.

Amateurs and others interested in Horticulture, are respectfully invited to visit our Show Grounds and Green houses, at 153 South Sophia street, a short distance from the central part of the city.

All communications to be addressed to

A. FROST & CO.,

Sept. 1.—31.

Genesee Valley Nurseries, Rochester, N. Y.

J. DONNELLAN & CO.,

OF THE

ROCHESTER AND LAKE AVENUE COMMERCIAL NURSERIES,

ROCHESTER, N. Y.,

WISH to inform their friends and customers that they have on hand for Fall Sales the following select assortment of

Standard and Dwarf Fruit Trees,

Evergreen and Weeping

Ornamental Deciduous and Climbing Shrubs,

A numerous variety of select French and Domestic Roses,

Peonies, Phloxes, &c. &c.,

Hardy Herbaceous and Hedge Plants,

Bulbous Roots, Double Dahlias, &c., &c.,

which they will sell in quantities to suit purchasers, and on moderate terms.

100,000 3 and 4 year old Apple Trees, choicest kinds,

140,000 2 " " " " " "

130,000 1 " " " " " "

10,000 2 " " Peach " " "

10,000 1 " " " " " "

with an equal quantity of Pears, Plums, Cherries, &c.

We have also 100,000 Mametta Stocks for Roses, first quality.

50,000 extra 2 year old Apple Stocks.

40,000 " Mazzard Cherry "

5,000 1 and 2 year old Horse Chestnut Seedlings.

Descriptive and Price Catalogues furnished gratis. Rochester and Lake Avenue Com'l Nurseries, Sept. 1, 1857.—21.

**Fruit and Ornamental Trees,
FOR AUTUMN OF 1857.**

ELLWANGER & BARRY beg to announce that they offer for the ensuing Fall Trade their usual extensive stock of nursery articles, embracing

- STANDARD AND DWARF FRUIT TREES of all kinds.
- SMALL FRUITS, embracing the finest Currants, Gooseberries, Raspberries, Blackberries, Strawberries, &c. &c.
- NUTS, including Walnuts, Filberts, Chestnuts, &c.
- RHURARD—Linnæus, Victoria, &c., all the best.
- GIANT ASPARAGUS, &c. &c.
- DECIDUOUS ORNAMENTAL TREES, for streets, parks, lawns, cemeteries, &c.
- WEeping TREES, a great collection.

EVERGREEN TREES, including upwards of half a million of Norway Spruce of all sizes, and a large stock of the gigantic Washingtonia, and other California trees.

FLOWERING SHRUBS, Roses, Green-house, Border and Bedding Plants, Hedging, Stocks and Seedlings of all sorts; &c. &c.

Nurserymen, &c., dealt with on the most liberal terms, and amateurs' orders attended to with the greatest care. Packing done in the most thorough and skillful manner, and with the best materials.

For full particulars, we refer to special advertisements and to the following Catalogues, sent gratis to all who apply and inclose a stamp for each.

- No. 1. Descriptive Catalogue of Fruits.
- No. 2. Descriptive Catalogue of Ornamental Trees, Shrubs, Roses, &c.
- No. 3. Catalogue of Dahlias, Green-house and Bedding Plants.
- No. 4. Wholesale or Trade List.
- No. 5. Supplemental Catalogue of Fruits.

ELLWANGER & BARRY,

Sept. 1.—14. Mount Hope Nurseries, Rochester, N. Y.

**SMALL FRUITS,
STRAWBERRIES, RASPBERRIES, CUR-
RANTS, &c.**

WE solicit the attention of Nurserymen, Dealers and Amateur Fruit Growers to our collection of the above Fruits, the most extensive in quantity and variety ever offered in this country.

STRAWBERRIES—Upwards of 60 varieties, all fruited and tested on our own grounds—including the Hooker, Brighton Pine, Jenny Lind, Genesee, and all the best American sorts, and Triomphe de Gand, Trollope's Victoria, and all the best foreign varieties.

RASPBERRIES—All the popular varieties, including the Orange, the best and most beautiful of its color. Also the superb new Autumnal or Everbearing sorts—Merville de quatre Saisons and Belle de Fontenay.

CURRENTS—Upwards of 20 varieties, including those superb sorts—Cherry, White Grape, Victoria, Prince Albert, &c. &c.

GOOSEBERRIES—A large assortment of the best English large sorts, and the American Seedling, which bears immense crops, and is always free from mildew.

BLACKBERRIES—New Rochelle or Lawton, and High Bush or Dorchester.

We solicit orders for the above and all other Nursery articles, and pledge ourselves to give them our best attention.

The following Catalogues will be sent gratis to all who apply and inclose stamps to prepay postage:

- No. 1. A Descriptive Catalogue of Fruit.
- No. 2. A Descriptive Catalogue of Ornamental Trees, Shrubs, Roses, &c.
- No. 3. A Catalogue of Dahlias, Vorhenas, Petunias, and new and select Green-house and Bedding Plants, published every spring.
- No. 4. A Wholesale Catalogue for Nurserymen, Dealers and others who purchase extensively.

See other advertisements.

ELLWANGER & BARRY,

Sept. 1.—14. Mount Hope Nurseries, Rochester, N. Y.

**SAMUEL MOULSON,
OF THE
OLD ROCHESTER NURSERIES,
ROCHESTER, N. Y.,**

HAS just issued his "List of Leading Items" for the fall of 1857, which contains an exact inventory of the articles offered, with their heights and prices; and also, for Nurserymen and Dealers, a Trade List for the fall of 1857—either of which will be sent free to those forwarding stamps for prepayment.

For some of the items offered, see advertisement in the Horticulturist, and Hovey's Magazine, for September, 1857.

September 1.—14.

**EXTENSIVE AND IMPORTANT SALE OF IMPORTED
AND PURE-BRED**

SHORT-HORNED CATTLE,

Cotswold and South-down Rams, Berkshire and Yorkshire Pigs.

M. R. W. S. G. KNOWLES has received instructions from FREDERICK WM. STONE, Esq., to sell by AUCTION, at MORETON LODGE, on WEDNESDAY, THE SIXTEENTH DAY OF SEPTEMBER NEXT, upwards of 50 head of Imported and Pure-bred Short-horned Cattle, comprising Bulls, Cows and Heifers, of different ages. Also, 15 Imported and Pure-bred Cotswold Rams; 1 Ram and 10 Imported South-down Ewes, and 10 Ram Lambs; 3 Imported Berkshire Boars, and a number of Berkshire and Yorkshire Pigs, of the Small Breed, from stock imported in 1856.

The greater portion of the stock at Moreton Lodge are imported animals from the Herds of Sir Charles Knightly, Col. Kingscote, Capt. Gunter, Messrs. Tanqueray, Bowly, Jonas Webb, Bolden, Sandy, Mortons, and Henry Amber, selected by James Knowles, Esq., whose judgment in the selection and management of the celebrated Tortworth Herd (late Lord Ducie's) is a guarantee of the Moreton Lodge Herd, as respects first class blood, fine quality, good symmetry, and milking qualities.

This sale offers to the Breeders of North America the rare opportunity of obtaining FIRST CLASS STOCK, without the risk of a sea voyage, and great expense connected therewith; and offers to our American friends a selection from many of the First Herds of England, at a small cost of time and money to obtain them. The Cotswold Sheep are from the Flocks of Messrs. Slater, Ruck and Beale Brown; the South-downs from Sir R. Thockmorton's Flock, and from the same stock as the Prize Wethers for several years successful winners at the Birmingham and Smithfield Shows; the Pigs from Sir R. Thockmorton's and Capt. Gunter's stock.

Parties from Lower Canada and the Eastern States, reaching Toronto on the 15th, can leave at 8 A. M. on the 16th by the Grand Trunk Railroad and arrive at Guelph at 10 A. M.; and from the Western States, via the Great Western Railroad leaving Windsor in the early morning train on the 15th, reach Guelph the same afternoon.

TERMS.—Under \$200, cash; \$200 to \$500, four months; over \$500, six months, on approved endorsed notes, with interest, or a discount of 10 per cent. for cash.

Refreshments at eleven; sale to commence punctually at twelve o'clock.

Catalogues are in preparation, with Pedigrees, &c., and will be ready for delivery by the 15th of August.

Morton Lodge, Guelph, C. W., Aug. 1, 1857.—21*

NEW ROCHELLE (OR LAWTON) BLACKBERRY.

PLANTS FOR SALE AT

TWO DOLLARS AND A HALF PER DOZEN,
SIXTEEN DOLLARS PER HUNDRED,
ONE HUNDRED AND FIFTY DOLLARS PER THOUSAND.

C. P. BISSELL, Rochester, N. Y.,

East Avenue, near H. E. Hooker & Co.'s Com'l Nurseries.
August 1.—31.

NEW WORK! NOW IN PRESS!

**SORGHO AND IMPHEE,
THE CHINESE AND AFRICAN SUGAR CANES.**

A COMPLETE Treatise upon their Origin, Varieties, Culture and Uses; their value as a Forage Crop, and directions for making Sugar, Molasses, Alcohol, Sparkling and Still Wines, Beer, Cider, Vinegar, Paper, Starch and Dye-Stuffs.

FULLY ILLUSTRATED WITH DRAWINGS OF APPROVED MACHINERY; with an Appendix by Leonard Wray, of Calabria, and a description of his patented process for crystallizing the juice of the Imphee; with the latest American experiments, including those of 1857 in the South. By

HENRY S. OLCOTT.

To which are added translations of valuable French pamphlets received from the Hon. John Y. Mason, American Minister at Paris.

PRICE ONE DOLLAR.

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C. M. SAXTON & CO.,

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Contents of this Number.

The Practical Utility of Soil Analyses, 265
 Fair of the Royal Agricultural Society, 267
 Ten Essentials to Good Farming, 268
 Butter Making in Massachusetts, 268
 Items Suggested by the August Number, 269
 Growth of the "Sorghum," 269
 Notes for the Month, by S. W., 270
 Convenient Pig-Sty, 270
 Yellow Dock (Rumex crispus), 271
 How much Corn, or Hay, is required to produce One Pound of
 Meat? 271
 Reflections on Poor Roads.—No. 1, 272
 Lime as a Manure, 272
 Taste and Thrift in Iowa, 273
 Turpines among Corn—Butter from Prairie Grass—Draining, &c., 274
 Advantages of Forethought in Farming, 274
 How to Clean and Keep Farming Tools Bright, 275
 Great Fecundity of Wheat, 275
 Chess and Cackle, 275
 One Word More on the Milking Question, 276
 Breaking the Prairie, 276
 Sound Corn—Again, 276
 Farmer's Clubs, 276
 Farming Going Up, 277
 Scarcity of Fodder at the West, 277
 Draining without Tiles, 278
 Digging and Preserving Potatoes, 278
 Notes from Minnesota, 278
 Buckwheat to Kill Wire-worms, 278
 Drilling in Wheat, 278
 Bakewell's Anecdote, 279
 How it may be Easier for a Machine to Work than to do
 Nothing, 279
 Browne's Poultry-house, 280
 New York Premium Butter, 281
 A Boy's Corn Crop, 281
 Mosses, 281

HORTICULTURAL DEPARTMENT.

Location as it affects Temperature and Vegetation, 282
 Horticultural Operations for September, 283
 Spirea Callosa, 283
 Cultivation of Grapes in the Open Air, 284
 In "My New Garden"—No. 2, 285
 The Curculio, 286
 Notes on Strawberries, 286
 Cultivation of Strawberries, 287
 Angle-worms, 287
 Comparative Backwardness of the Season, 287
 Grafting Pears on White Thorn, 287
 Set out Strawberry Plants this Month, 288
 Gathering and Ripening Fruit, 288
 Transplanting Evergreens in Early Autumn, 288
 Why Weeds Grow Apace, 288

LADIES' DEPARTMENT.

Women on Committees at Horticultural Exhibitions, 289
 Original Domestic Receipts, 289
 Learn to Cook, 289

EDITOR'S TABLE.

Does Wheat Turn to Chess? 290
 Great Price for a South-down Ram, 290
 Fruit Growers' Society of Western New York, 290
 Sulphur for Rose Bugs, 290
 The Rural Annual and Horticultural Directory for 1853, 219

The Dioscorea Batatis, 291
 Corrections, 291
 Great Sale of Imported Stock, 291
 County Agricultural Fairs, 291
 The Ohio Pomological Society, 291
 Prize Essays, 291
 Notices of New Books, Periodicals, &c., 291
 Inquiries and Answers, 292
 State Fairs for 1857, 292

ILLUSTRATIONS.

Convenient Pig-sty, 270
 Perspective View and Ground Plan of Browne's Poultry-house, 280
 Transverse Section of " " " " 281
 Spirea Callosa, 283

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June, 1837.

Rochester, New York.



HOW CAN WE MOST ECONOMICALLY INCREASE THE FERTILITY OF THE SOIL?

It is high time this question was asked by every land-owner. In many sections of the country it is beginning to force itself on public attention. It is the great problem which American farmers have to solve. This is a new country. Our climate and circumstances are very different from those of Europe. We have comparatively little experience of our own to guide us, and cannot safely adopt practices which rest simply on the experience of European farmers. We must develop a system of agriculture adapted to our own peculiar circumstances. To do this we require more *science* than the farmers of any other country. European farmers have the recorded and traditional experience of centuries to guide them. Less than half a century ago, the soil, where we now write, was covered with primeval forests. The chief aim of the farmer has been to clear the land, and, without regard to permanent fertility, to get from it with as little expense as possible such crops as would furnish the greatest amount of ready cash. He has drawn heavily on the natural fertility of the soil. We do not blame him for so doing. It was doubtless the best thing that could be done under the circumstances. But now things are changed. The first flush of fertilizing matter in the soil has been abstracted. The same cultivation will not produce as good crops as formerly. *We must find means to enrich the soil.* Our experience on this point is limited. We know that manure will enrich it, but which is the most economical way of making manure we know not. We mean by this that we do not know what crops we ought to grow for the purpose of plowing under, or for feeding to animals on the farm. We possess certain information in regard to the value of manure made from this or that particular kind of food, but we do not know what food can be grown with least injury to the soil. In other words, we do not know what plants used as food for animals remove from the soil the least quantity of those substances most required for the growth of wheat and other plants used as food for man. Without this knowledge it is impossible to adopt the best system of rotation of crops. On this point we are entirely dependent on European experience. In England we know that turnips, clover, peas, beans and vetches impoverish the soil but little, and are the best crops that can be raised for feeding on the farm. But who can tell us what crops are best for similar purposes in this country?

The first rational *attempt* to institute experiments that shall throw light on this subject has yet to be made on the American Continent. Till we have a series of experiments, scientifically designed and carefully executed, we must grope our way in the darkness of ignorance, with what little aid we can get from the fitful and uncertain light of accidental and undefined experience.

To answer the question at the head of this article, in the present state of agricultural science in this country, is impossible. If it were true that the manurial requirements of plants were indicated by their chemical composition, there would be little difficulty in deducing a rational system of rotation and manuring; but this is not the case. The experiments of Lawes demonstrate that all conclusions in regard to the substances best adapted for the growth of plants drawn from their composition, are at best uncertain. Peas and beans contain three times as much nitrogen as wheat, and yet it has been demonstrated that beans and peas require for their maximum growth far less nitrogen than wheat. The ash of wheat contains five times as much phosphoric acid as the ash of turnips, and yet we know that a soil must be richer in available phosphoric acid for the maximum growth of turnips than for wheat. The only way, therefore, in which we can ascertain the relative proportion in which the elements of plants should exist in a soil to render it the most productive for the different kinds of crops, is by actual experiment. We can hope to make little advance in this direction, till we can have a properly conducted "experimental farm."

Our comparative ignorance in regard to the best systems of rotation and manuring, however, is no excuse for the unskilful processes of agriculture practiced by so many farmers. It would seem useless to desire more knowledge, when so few avail themselves of that within their reach. We know quite well that the best system of rotation, of tillage and of manuring, will not enable a soil saturated with stagnant water to produce good crops. Until such land is underdrained, it is vain to expect an adequate compensation for the expense incurred in applying manures. It would also seem useless to point out the means of increasing the quantity and value of manure, when so many farmers allow the little manure they make at present to run so shamefully to waste. But such farmers are not readers of the agricultural papers, and the remarks which we have to offer are intended for that enterprising and intelligent class of farmers who avail themselves of every means of in-

creasing the fertility of their soil, but are unable to make it as productive as is desirable.

In the majority of cases, underdraining is the first step to be taken in all attempts at increasing the fertility of the soil. It will do more for American agriculture than it has for that of Great Britain. Our rains are heavier and more prolonged, and our droughts longer and more intense. Underdraining carries off the water when it is in excess, and increases the supply when it is deficient. Where land is not worth more than \$10 per acre, it may not be profitable to expend from \$20 to \$30 per acre in underdraining; but where land that needs underdraining is worth \$50 per acre, nothing can be more profitable. Underdraining is a permanent investment. It frequently doubles the crops. The soil can be plowed earlier in the spring and later in the fall. Underdraining increases the temperature of the soil, and crops mature much earlier. *The entire increase of the crops is net profit.* In other words, if it costs \$10 per acre to raise a crop of wheat on undrained soil, and the crop sells for \$15, there will be \$5 per acre profit; while on the underdrained acre, if the crop sells for \$30, there will be \$20 profit. The crop is only doubled, while the *profit* is quadrupled.

To increase the quantity and quality of the manure should be the next object. The mineral matter in a ton of ordinary barn yard manure can be purchased in the form of ashes, plaster and bone-dust, for less than 15 cents; and the carbonaceous matter can be obtained in the form of peat, muck, &c., for 5 cents. All the substances in a ton of manure, therefore, *except the ten pounds of ammonia that it contains*, can be purchased for 20 cents. If manure is worth a dollar a ton, the 10 lbs. of ammonia is worth 80 cents, or *four times* as much as all the other ingredients of the manure. We may add that there is no artificial source of ammonia from which it can be obtained for less than 12 cents per lb. In making manure, therefore, the great object is to get ammonia. The atmosphere and rain water contain it, and plants can obtain it from these sources. Some plants can obtain more than others. Other things being equal, we should grow those plants which obtain the most from these natural sources. It has been ascertained by experiment, that clover, peas, beans, vetches and lupins, obtain a considerable quantity of ammonia from the air, rain, dews, &c., while wheat, barley, and probably other similar plants, do not. The more we can grow of the former and the less of the latter, the richer will our soil become, provided they are consumed on the farm by animals, and the manure returned to the land.

The more ammonia a manure contains, the more valuable will it be. The quantity of ammonia in a manure bears a constant proportion to the nitrogen (ammonia) in the food consumed by the animals. Other things being equal, therefore, we should not only grow those plants which obtain the most ammonia from the atmosphere, but should feed out on the farm those foods which, other things being equal, contain the most nitrogen (ammonia.) Among these, peas, beans and oil cake hold the first rank. Either of these foods contain nearly three times as much nitrogen as barley, oats, rye, &c., and the manure made from their consumption would be nearly three times as valuable. Clover hay contains twice as much nitrogen as timothy hay; pea and bean

straw twice as much as wheat, barley, oat and rye straw, and the manure made from them would be correspondingly valuable.

Among the most economical means of increasing the fertility of the soil at present known, therefore, are underdraining, good tillage—which not only destroys weeds, but renders the inert matter of the soil available, and enables it to absorb more ammonia from the atmosphere; growing less wheat, barley, oats, rye, timothy grass, &c., and more clover, peas, beans, vetches, lupins, and other leguminous plants, as well as more turnips and other root crops; keeping more stock, and feeding them with the last named plants, and carefully preserving and applying the manure.

STUDY THE MECHANICAL QUALITIES OF THE SOIL.

WHILE we can hardly be said to have paid *too much attention* to the simple elements of plants which a soil contains, we may safely aver that we have given far too little attention to the mechanical condition of the soil—to its power of absorbing moisture and fertilizing gases from the atmosphere, to its *retentive and capillary* powers, and to the quantity of water required to saturate it. Led away by the delusive fascinations of the "Mineral" and "Special" manure theories, we have neglected for the past ten or fifteen years to study these characteristics of soils; and, indeed, many writers at the present day appear to have forgotten that soils have any such qualities.

It is known that soils which contain much *humus* or decayed vegetable matter, have great power in drawing moisture from the air. Clay, too, possesses this power to a great extent, but it should be well pulverized in order to allow the air to permeate through it. Pure sand does not possess this power at all; and yet sandy soils which contain a little clay and humus, often suffer less from drouth than tenacious clays, owing doubtless to their permeability. Sir HUMPHREY DAVIS says: "The soils which are most efficient in supplying the plant with water, by atmospheric absorption, are those in which there is a due mixture of sand, finely divided clay, and carbonate of lime, with some animal or vegetable matter; and which are so loose and light as to be freely permeable to the atmosphere. With respect to this quality, carbonate of lime and animal and vegetable matter are of great use in soils; they give absorbent power to the soil without giving it tenacity. Sand, on the contrary, which also destroys tenacity, gives little absorbent power. I have compared the absorbent power of many soils with respect to atmospheric moisture, and I have always found it *greatest in the most fertile soils*; so that it affords one method of judging of the productiveness of land." There is a rich field open for investigation in this direction, and we should be thankful for the experience of our readers.

The quantity of water required to thoroughly saturate the various earths is a question of much importance. SCHUBLER found that a cubic foot, when thoroughly saturated, contained of water as follows:—Silicious sand, 27.3 lbs.; gypsum powder, 27.4; calcareous sand, 31.8; carbonate of lime 47.5; fine slaty marl, 35.6; pure grey clay, 43.3; stiff clay or brick earth, 45.4; garden mould, 48.4. The fact that "garden mould" imbibes more water than any

other soil, and the poor "silicious sand" the least, indicates that rich soils are less easily saturated than sterile ones. Is such the case?

The power of retaining water, when exposed to the atmosphere, is also known to differ materially in the several earths. SCHUBLER found, calculating the evaporation as from 100 grains of water contained in the earth, that 200 grains of earth, spread on a surface of ten square inches, at a temperature of 65°, evaporated in 4 hours as follows: Silicious sand, 88.4 grains; calcareous sand, 75.9; gypsum powder, 71.7; sandy clay, 52; loamy clay, 45.7; stiff clay or brick earth, 34.9; pure grey clay, 31.9; fine lime, 28; garden mould, 24.3; magnesia, 10.8.

Our space will not allow us to comment on these results, or to pursue the subject further at this time, but we would commend their study to every farmer, and especially to every farmer's son. Do not forget, moreover, to let us have the results of any observations which throw light on this subject.

ITEMS SUGGESTED BY THE SEPTEMBER NUMBER.

OUR "dry spell" has come at last, and for two weeks we have had no rain. Fine for the oat harvest—for ripening our corn—for fall work generally. I have been too busy almost to *itemize* for the *Farmer*. But I must remark on some things perused therein.

THE ROYAL AGRICULTURAL FAIR.—Would present to our republican eyes "a sight worth seeing." The symmetrical Short horns, the handsome Herefords, the dainty Devons; it would be difficult to say which best pleased us; while the South Downs and Leicesters would make us ashamed of our muttonless and light-fleeced breeds. Yet American stock is rapidly improving; we get the pick of English herds and flocks, and shall soon be able to contest the palm.

MASSACHUSETTS PREMIUM BUTTER.—The extracts given on this subject are particularly interesting to dairymen; they show, what we were well aware of before, that there are *different methods of making good butter*. "To wash or not to wash is not the question," but rather, sweet cream, careful churning and working, and good care in packing and keeping. Let every butter-maker do the best circumstances will admit, and there will be great improvement in the quality of this product.

GROWTH OF THE "SORGHUM."—Six weeks has lifted the sugar cane about ten or twelve feet in the air; it has grown amazingly since warmer weather came, and is now headed out, with a prospect of nearly ripening.

POOR ROADS.—The plan proposed by Mr. HOUGHTON would improve our roads, could it be carried into effect. And it would be a capital plan to expend the road tax every year, in *finishing up* a portion of the road, instead of "spreading" it over the whole district, one-half of it to no purpose. Complete a road—a raised and well-gravelled road-way, with good drainage on each side, for a few rods every year, and at last, all our roads would be fit for use.

APPLICATION OF LIME.—In applying lime to land, would it be best to put it on grass land one summer, to plow under the next season for corn or roots? Or, would you put it on plowed land, and harrow in before sowing to any grain crop? Practical limers, please answer.

TURNIPS AMONG CORN.—Little chance would tur-

nips have in our corn field—the ground entirely shaded, though the hills are three and one half feet apart each way. I am raising turnips after early potatoes, and peas, and hope to have something of a crop of them.

GREAT FECUNDITY OF WHEAT.—Wheat and other grains will yield enormously if they have the chance. If the saving in seed would pay for the increased labor, and the maturity of the crop was not delayed by tillering, it could readily be shown that one peck of seed is better than three bushels, per acre. But thin sowing gives room for weeds. These must be removed, or they will overpower the wheat, however great its fecundity. *The losses by weeds are enormous.*

DIGGING POTATOES.—When potatoes are affected by the rot, shall we dig them immediately or let them lie until the usual time? I think they rot no worse to remain in the hill until cool weather comes, but, of course, cannot be certain about it. I know I find no more rotten ones in a hill, than three weeks ago, when the disease fairly commenced its work; and it seems to me that handling and sorting while yet scarcely ripe, would injure more than it would save.

N. Y. PREMIUM BUTTER.—Is made from *sour cream*, while the Massachusetts folks say only *sweet cream* will make the prize butter. "Who shall decide when doctors disagree?"

HOUSE RIPENING PEARS.—Our *Jargonelles* were picked and ripened in the house this year, and there is a *very marked* difference in their quality. They are tenderer, meling, more juicy, and better every way. Besides, we gathered them ourselves, instead of having them half carried off by fruit thieves, as usual.

Niagara Co., N. Y.

B.

NOTES FOR THE MONTH.—BY S. W.

TRANSMUTATION OF WHEAT TO CHESS.—Great credit is due to that indefatigable rural economist, JOHN J. THOMAS, and his co-committee men from our State Agricultural Society, for their very thorough examination of those specimens of chess growing from wheat seed presented by S. DAVIDSON, because a less careful testing would have given to error that ostensible triumph, which so often makes Nature appear inconsistent with herself. When this country was being cleared of its heavy continuous forests, I heard many farmers say that sowing plaster on a new clearing would invariably bring in white clover. As no white clover seed could have been scattered on such virgin soil, it would have been quite as much in accordance with Nature's laws to say that plaster was transmuted into clover, as that wheat was turned to chess.

TURNIPS AND TOMATOES AMONG CORN.—C. BRACKETT, of Fulton Co., North Indiana, grows turnips successfully among corn. That they do not grow pithy, must be owing to their slow growth and small size. Is Mr. B.'s a limestone or granite soil? Is a limestone soil, and devoid of vegetable mould, methinks a crop of English turnips in the sunny climate of Indiana must be very uncertain. The best and largest tomatoes I have this season are seedlings that came up among early planted King Philip Corn. The corn was picked green, and the stalks up by the 5th of August. Last year it was fit to cut by the 20th July. Planted 10th May each year. Soil, rich & calcareous clay. Mr. B. asks if a cow will eat toma-

toes? Certainly, and with as much relish as bipeds, men, women, and chickens.

That the coarse wild grass of the prairies makes as good flavored yellow butter as either the white or red clover, or June grass (*agrostis*) of the dairy regions of New York, (perhaps even Mr. BRACKETT does not believe. More than one woman has written from the all fertile Kansas prairies that perfect butter cannot be made there.

INDIAN CORN AND SORGHUM.—Corn has improved much in the last three weeks. Although the long cool nights have been a great drawback to the unfilled ears, the prospect is now fair for a middling crop of corn.

Sorghum has triumphed over the spleen of its conservative enemies; and if it will ripen in this region, this cold wet season, it will in any other season. I measured stalks to-day twelve feet to the top of the seed panicle, which is now turning brown, this 9th September. The ratoons are not as tall as the main stalks, but they generally bear seed. The maximum thickness of the stalks is $1\frac{1}{4}$ inches in diameter, but when planted to stand less than six inches apart, in the four foot rows, an inch only is attained, and the suckers will be less. Thus far the juice is no sweeter than that of sweet corn stalks, but much more abundant. That planted tenth May, seeded a week earlier than that planted first June. A few transplants are now full size.

POTATOES.—There is a general complaint that the vines of late planted potatoes are prematurely dying, and the rot is increasing. I planted some Mexicans on a well manured sandy knoll, which are now so rotten that they are not worth digging. Blue Mercers are yet unripe, with dead vines. Inferior round potatoes escape the rot better.

MAKING AND SAVING MANURE.—Throw potato or pumpkin vines, or any other vegetable refuse, on the top of the ground, and it is soon lost in the air, its ashes excepted; but put them in the hog pen or a calf pen, and you soon have a quantity of manure that will make your back ache to throw out. It is said in Rhode Island, that every hog makes seven dollars worth of manure yearly; and yet who in Western New York ever heard a Western farmer deduct anything from the cost of an animal's keeping by giving credit for the manure it makes? On the drift formations at the East, where they have but little vegetable refuse to compost, a kind Providence has given to almost every detritus farm its swamp, the muck from which abounds in plant food, which to be made truly available, must be composted with the unfermented manure of the stable, or the still more nitrogenous fish or dead animals, by which means all the organic matter of the pile is held, by chemical affinity, ready for the use of growing plants. I asked a farmer, the other day, if he did not reflect that every load of distillery slop that he hauled home was worth more than three loads of fire-fanged stable manure? He replied that he had never thought of it before, but it "stood to reason." He, however, had noticed that the poorest knolls in his field, when slop was fed out, soon became black and muddy, and would hardly become dry in the hottest sun. Such is the invariable effect of nitrogen, particularly on those alluminous soils, which are so quick to dry up and bake when wet with water only. The scrapings from those ammoniated knolls would be the best of manure for wheat.

THE COMING STATE FAIR AT BUFFALO, 9 TO 12TH OCTOBER.—Great preparations are making at Buffalo, to accommodate the State Fair as its increased magnitude requires. The last State Fair at Buffalo was the best up to that date, and an earnest is now given that a greater display, or, as the French say, exposition, will be made there this year than ever. As liberal premiums are offered to all outsiders, Canada, Ohio, and the whole lake region will be well represented.

S. W.
Waterloo, Sept. 10th, '57.

GOOD SHEEP THE MOST PROFITABLE.

MANY farmers when they want to purchase a flock of sheep, enquire of A. B. and C. who has sheep to sell.

"Well, JIM has a beautiful flock of sheep, and I heard him say that he would sell a few of them to a farmer that would improve them and give the result to his brother farmers through the medium of the *Genesee Farmer*."

"What price does JIM ask for them?"

"Five dollars per head."

"Outrageous! JIM has no conscience! I won't pay such a price for sheep anyhow."

"Well, JACK has some sheep to sell."

"What does he ask for his sheep?"

"One dollar per head."

"What kind of sheep are they?"

"Well, rather small, but they have been starved."

"Well, I'll go and see them; I can feed them up."

And, sure enough, there he comes, driving his little runts home, and carrying one of them in his arms.

Before spring one-half of them are dead, and the other half are so lean that they have no milk, and their lambs are starving. The foolish man hangs his head, and mutters "*rotten sheep*."

Mr. LOOKOUT comes to JIM and says, "I'll give you 25 dollars for five of your best ewes, and promise to show the best pen of sheep at the next County Fair."

"You shall have them."

"How can I get them home? They are so fat that if I run them they will melt. I'll take them home in my sleigh. Don't catch them by the wool; it will injure the sheep. Take hold of the hind leg, and I will put my arm under her neck. Don't hurt her. Be cautious. Don't turn her over. Another and another is caught, with the same caution."

The winter is past, and the spring has come, and what a beautiful sight! Five large ewes and ten fat lambs.

"Mr. LOOKOUT, what will you take for your lambs?"

"Don't want to sell them, sir."

"Well, what are they worth?"

"Twenty dollars."

Shearing time has come.

"What amount of wool did your brag sheep shear?"

"Twenty pounds."

"What did you get for it?"

"Thirty cents per pound."

"A very good investment, Mr. LOOKOUT."

Brother farmers, I leave it with yourselves to decide who made the best purchase; Mr. LOOKOUT or his brother farmer.

JIM.

"THE MANURE QUESTION."

EDS. GENESEE FARMER:—The management and application of manures has been freely discussed in your pages—and very properly and profitably so, in my opinion. Perhaps the following may throw some light on one phase of the question:

In removing the contents of an earth-floored calf pen or stable, a few days ago, I found the manure which was made therein last winter and which had accumulated to some two feet in depth, *still unfermented and fresh*, and in its best condition for composting with swamp muck, or other refuse vegetable matter. The pen was kept level and well littered and become packed down hard, so that there was no chance for the admission of air—indeed the readiest method of getting it out was to cut it in chunks with an axe—hence fermentation and loss was impossible. I have piled this with an equal quantity of muck and intend to apply it to green-sward, the last of September, as a preparation for corn the next season. I have also spread some decomposed manure, already, for that purpose, as I am bound to try Mr. JOHNSTON'S method.

Now, I think this shows that manure can be kept without loss, as long as we design, for some treated in the same manner, two years ago, is scarcely changed. Let us then have plenty of shed room and remove thereto the stable manure, keeping the sheds at the same time well littered for the shelter of stock, which will tread it down solid, and prevent all loss. Then we can remove at any season most convenient. But I need not further remark in this connection.

J. H.

Niagara Co., N. Y.

BUTTER FROM PRAIRIE HAY.

EDITORS GENESEE FARMER:—I take my pen to correct an idea advanced by your excellent correspondent "S. W.," in his *notes* for August. It is under the head "Prairie Hay and White Butter." Referring to a lady writing from Kansas, he says:—"The butter from prairie grass is white, aromaless, and in stinted supply at that. She advises her brother not to bring his Chautanque horses to Kansas, as they are too quick for the sloughy roads, and may not relish, much less thrive on, prairie hay." Now, I have resided in the West and on the prairies in Wisconsin or Minnesota for more than five years, where the tame grasses are not grown, and have had butter upon my table every day, and still have not found it "white, aromaless, or in stinted supply." I have eaten what was pronounced by good judges to be good butter in all of the New England States, in New York and in Pennsylvania, but have found the butter from prairie grass to be of as good *quality and color*. In the spring of 1856 I drove one cow from Eastern Wisconsin, turned her upon the prairie weak and poor, with two sucking calves, weak and poor from the effect of the drive and scanty feed while on the road. The calves run with the cow unmolested until August 16th, (when my family arrived) at which time I found them growing *rapidly* and in *good* condition. I then muzzled them, and made butter enough to supply my family (of from three to four grown persons) until she came in again in the spring. The calves did *well* all winter on prairie hay, and so did the cow. The same cow

with another, both ordinary cows, have supplied my family (averaging five grown persons) with milk and butter since spring, besides keeping two calves (which we still feed with milk) in *good* condition, and furnishing most of the food for one hog, and some butter to sell, and some to put down for winter and spring. Cows that are not milked *regularly* of course do not do as well. Horses do *better* on our prairie grass, after the first year, than on the tame grasses; they never have the *heaves* here. I am giving *my own* experience. It may be different in Ossawatamie, as they have the *milk fever* in some portions of Illinois and Indiana; but it should not be inferred from that, that it is universal in prairie countries.

We have lately had much rainy weather. Wheat and oats are not all harvested, though *some* have been marketed at one dollar per bushel. Corn will be fit for harvesting in a few days. Potatoes, carrots, turnips, &c., growing rapidly. E. HODGES.

Marion, Olmsted Co., Minnesota, Aug. 17.

UNDERDRAINING.

It is time that underdraining was thought of more, talked of more, and practiced more than it is. The value of underdraining is almost unlimited. Land properly drained, will produce double crops. A drain is not like a load of manure; once placed in the earth it will last for ages, while manure must be applied every year or two; and besides that, manure is not half so valuable on undrained as it would be on properly drained land. And, besides getting more value for your manure when your land is drained, you save half your labor, because you can produce just the same amount of grain on half the number of acres.

The proper way of constructing a drain on land descending a little, is to dig a ditch 18 inches wide, and about two feet deep; then place stones four, five or six inches square against each side on the bottom of the ditch. Then lay flat stones across the top of these; then throw small stones on the top of the flat ones; then haul in your dirt, and your drain is completed. If you have no flat stones, round stones will answer, placed in the same way.

Duaneburg, Schenectady Co., N. Y.

PRESERVING BUTTER.

EDITORS GENESEE FARMER:—I see in the July No. a very sensible article on butter making, from the pen of H. H., of Rutland, N. Y. I was also much struck with a plan of preserving butter by boiling, as practiced in Switzerland, taken from a work of Dr. JOHN FORBES, entitled a Physician's Holiday, or a Month in Switzerland. The *modus operandi* is as follows:

Into a clean copper pan (better, no doubt, lined,) put a quantity of butter. Place it over a very gentle fire, so that it may melt slowly, and let the heat be so graduated that the melted mass does not come to a boil in less than two hours. During all this time the butter must be frequently stirred, say once in five or ten minutes, so that the whole mass may be thoroughly intermixed, and the top and bottom change places from time to time; and when the melted mass boils, the fire is to be so regulated as to

keep the butter at a gentle boil for two hours more, the stirring being still continued, but not necessarily so frequently as before. The vessel is then to be removed from the fire and set aside to cool and settle, still gradually—this process of cooling being also supposed to require two hours. The melted mass is then, while still quite liquid, to be carefully poured into the crock or jar in which it is to be kept. In the process of cooling there is deposited a whitish, cheesy sediment, proportional to the quantity of butter, which is to be carefully prevented from intermixing with the preserved butter. These cheesy grounds are palatable and nutritious, and may be used as food.

It is said that butter so prepared will stand for years perfectly good, without any particular precaution being taken to keep it from the air. That it is good at the end of one year is a fact. What think you of the plan?
J. F.

Liberty, Tioga Co., Pa.

REMARKS.—One hundred pounds of ordinary fresh butter contains:

Water.....	12 lbs
Curd or caseine.....	1 "
Pure oil.....	87 "
	100

Pure oil will keep fresh for any length of time. It is owing to the presence of water and curd that butter becomes rancid. Salt preserves butter, by saturating all the water—the less water it contains the less salt is required to preserve it. All that is necessary to render butter capable of being kept fresh for any length of time in a fresh condition, is to remove the water and curd. This can be done in the way stated by our correspondent. The butter must be boiled till all the water is driven off, which is marked by the cessation of violent ebullition. The caseine, like albumen, (white of egg) is coagulated by heat, and will, on cooling, settle at the bottom of the vessel; or it may be separated by straining it while hot through muslin.

Butter is often prepared in this way for use on ship-board. It is also the usual way of preserving it in India, where it is called ghee. Similar methods are also employed in many parts of the continent of Europe. The boiling, however, destroys much of the flavor of the butter.—Eds.

BREAKING PRAIRIE LAND IN THE FALL.

MESSRS. EDITORS:—"L. C. S." says, in the September number of the *Genesee Farmer*, that he has "never yet known any prairie breaking done before the middle of May, or later than the first of August." What does he mean by this? Does he mean that *because* he has never seen it done at other times, *ergo* it *should never* be done at other times? A strange doctrine; yet I would like to know what his "eighteen years' experience" has taught him. It has taught me (three years' experience) that *heavy, wet prairie* had much better be broken after vegetation has ceased in the fall. Then the frosts of winter pulverize it thoroughly, and make it a fit bed for seed to vegetate in the next spring, (of course after thorough drainage, for wet prairie is only fit for wild grass, and produces none of our cultivated grasses.

If not plowed in the fall, do so in early spring. Plant in corn, in rows eight feet apart, the stalks six inches in the row. Cultivate thoroughly with the

harrow till the first of July. Then sow buckwheat between the rows, and you will have your sod thoroughly pulverized; or you can wait till the last week in August, and sow between rows with wheat or rye, and get a good crop, and the land in fine tilth for succeeding crops.

I cannot get a plow that breaks heavy prairie well, but hope to find one that will operate satisfactorily.

Rochester, Fulton Co., Ind.

C. BRACKETT.

P. S.—In my letter on covered ditches, in the September number, I meant to convey the idea that it is better to leave the covered ditch a little concave, so that it might run off the surface water, if at any time the rain should be so abundant as to super-saturate the earth, thus preventing water from standing on the surface at all.
C. B.

TAKE CARE OF YOUR TOOLS, FODDER, &c.

MESSRS. EDITORS:—The season of hard labor is past, and now comes the season of care. First and foremost, the tools that will be required no more this fall, should be oiled, (such as are of wood,) and laid by in some safe place until needed next spring. Scythes, harrows and such plows as will not be required for fall plowing should be housed secure from dampness, so as not to rust. Keep no more pitch-forks around than are needed for convenience; the remainder should be laid by, and so with the rakes, as only one will be needed on the barn floor during the winter.

After the tools are disposed of, attend to your stock. See to it that your corn stalks are well taken care of, for I believe we shall need all the fodder for use next winter, that we have. There are strong reasons why we should use what we have with economy, and not join in, nor be deluded by, the cry of superabundance of fodder. True we have a good, average crop of hay, perhaps as much of straw, of the various kinds, as we had last year, but there is less corn stalks, besides being of an inferior quality to those of last year's growth; if from no other cause, many pieces are injured by the frost, which was the case with very few pieces last year. There is no old hay in the country to fall back upon in case of necessity, as there was last winter, and still we have the same amount of stock to feed. These are a few of many reasons why I would urge economy in feeding. Let there be nothing wasted, nor, as is too customary, leave the carrot and turnip tops to rot on the field.
D.

Gates, N. Y.

ON THE MANAGEMENT OF YOUNG STOCK.

MESSRS. EDITORS:—The thought this evening struck me that I would give you my ideas on the management of young stock, commencing when we begin to fodder in the fall. I would say if you do not stable your young stock, (as but few in our section do) prepare sheds covered with slabs, if nothing else, to break off the cold winds, and hard storms. Do not at first, begin to feed straw, and coarse fodder; feed as good as you have, and when very cold weather comes, feed your coarse fodder once or twice a day. By this process your stock will be kept in good heart the forepart of winter, which is the very worst time in the year for them to get thin. If you commence about the 15th of February to

feed, say one quart of grain per head each day, there will be no money lost, for your stock will come out in a thriving condition in the spring, and when you see them ranging the field the first day of June, with their old coats entirely off, and their new ones glistening like a new Mexican dollar, you will feel yourself three-fold paid for the few shillings' worth of grain they have consumed.

Some people in this vicinity are in the habit of keeping their stock confined in a small yard, until grass gets a sufficient start for them to pick their living; then turn them out at once and feed them no more. This idea I do not support. The sudden change from hearty hay to fresh, fleshy pasture, is too much for them; it is too physicizing and weakening,—they will look for some time like a shadow by moonlight. I prefer giving them a large range from the time grass begins to start, and feed them hay as usual, and when it does them no good they will make it manifest by refusing to come and eat, when you carry it out.

Do not forget to salt your stock once every week. In my opinion that is often enough, and none too often. I think it a first rate plan to change from one pasture to another occasionally; once in three or four weeks is often enough, unless the feed gets too short to afford a sufficient supply for them.

W. B. GARATT.

Spencer, N. Y.

PLOWING IN GREEN CORN FOR MANURE.

To what means shall farmers resort for the cheapest and quickest means of keeping their farms in a high state of cultivation?

This is a subject in which every farmer should be interested, and one which should call out the experience of scientific and practical farmers. It is a lamentable fact, that most of our farms are deteriorating, and are growing poorer. The farmer who has one hundred and sixty acres of land under cultivation, is not able to manure more than fifteen or twenty acres each season with his barn-yard manure, and this is not enough to keep up the farm, with an occasional crop of clover plowed under as a green manure, unless it is permitted to lay over several years, which but few think they can afford to do.

The means to which I shall resort are these:—For winter crops I shall break the fallows early, say about the first of June or soon after, using the jointer plow, and harrow it down very smooth, and then drill two bushels of corn per acre, or sow two and one half broadcast, and harrow it in; but I should prefer to have it drilled, and then harrow afterwards if necessary. The drift covers almost every kernel.

After it has grown as large as can be plowed under, which I should judge will not be far from the first of September, or before, turn it under. I have a few acres which were drilled on the 24th of June last, which is now nearly as large as could be plowed under. It has now two months' growth, and would cut eight or ten tons to the acre, and will probably grow to several more, as it has just begun to tassel. Now, suppose such a body as this should be plowed under, what must be the result? It must certainly be worth as much as three or four crops of clover, and has many other advantages. It is grown in two or three months, and is very effectual in checking grasses and other obnoxious weeds. The expense of

the seed is not very great at present, and when the sorghum is more generally cultivated, it may be used, and the expense will be very materially lessened.

Another advantage in this mode of manuring is, there is no carting to be done, which amounts to no small sum, especially where the distance is great. I have seen and heard of many who sow buckwheat, and plow it under, for manure, but if I am not very much mistaken, this plan would leave it entirely in the shade. I have mentioned this plan or mode of manuring to several farmers, who entirely agree with me that this will supersede any other green crop as a manure.

It may be that this plan has been tried by some one. If so, I should be glad to hear from them through your columns. I have fourteen acres where I intend to test it next season, and see if it proves to be as valuable in practice as it appears in theory. We hear much now a days about the deterioration of the wheat crop, and it is my opinion that it is almost entirely caused by the deterioration of our farms for the want of manure.

JOHN C. MOVEAN.

Scottsville, Monroe Co., N. Y.

WILL RYE TURN TO CHESS?

I ASK the question because by many in this part of the country it is believed that it will, although not by me. A few years ago I was in a mill when a man of my acquaintance brought in a grist that he called wheat; there was certainly as much cockle as wheat, with a fair allowance of chess. "My friend," said I, "why do you sow such stuff as that?" "When I sowed it," said he, "there was but little cockle in it, but the wheat has turned to cockle, and I cannot help it." Now, this man thought that because he gathered more cockle in proportion to the wheat than he sowed, that the wheat had turned to cockle.

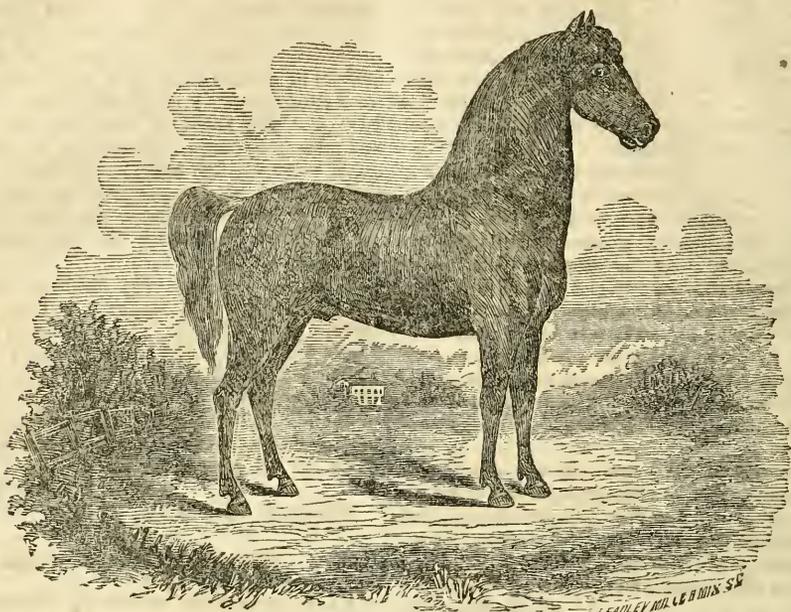
Did ever any one attempt to find out how much more seed may be obtained from a single grain of chess or cockle than from a grain of wheat or rye? While wheat and rye will winter-kill, chess seldom does. This, together with the greater amount of grains grown from the same number of seeds sown, explains, probably, the true cause of the apparent change of wheat and rye to chess.

I had a piece of rye the last season that was badly winter-killed. In fact there was more chess than rye on the ground, although there was but little chess in the rye when sown. This shows that while the rye was killed by the winter the chess was more hardy, and escaped. Farmers should not sow cockle or chess with their wheat or rye. If they do, and reap, they will be sure and find the cheat, if not the wheat.

A. TITUS.

Yorktown, Westchester Co., N. Y.

NATIONAL WEALTH.—"There seems to be," says FRANKLIN, "but three ways for a nation to acquire wealth. The first is by war, as the Romans did, in plundering their neighbors; this is robbery. The second by commerce, which is frequently cheating. The third by agriculture, the only honest way, wherein a man receives a real increase of the seed thrown into the ground in a kind of continued miracle wrought by the hand of God in his favor, as a reward for his innocent life and his virtuous industry."



GENERAL GIFFORD, JR.

"GENERAL GIFFORD, JR."

AMONG the many beautiful stallions, says the *Palmyra Courier*, exhibited at our Horse Show last week, we noticed a capital specimen of a horse, owned by ELIAB YEOMANS, Esq., of Walworth, N. Y., known as the "General Gifford, Jr." horse. In his general form, although he is but three years old, he possesses the most important requisites in a stallion, viz:—"as much goodness as could possibly be condensed in a small space." His head is fine, eyes lively and prominent, his chest capacious, barrel round, loin broad, back short, quarters long and muscular, flanks deep and full, limbs short-jointed, flat and sinewy; a lively, quick action, with head up, and an intelligent and docile temper and spirit. Color, chestnut, with no white. General Gifford, Jr., was got by old General Gifford; grand sire, Gifford; great grand sire, Woodbury; great-great grand sire, Justin Morgan. Dam, a beautiful, clean limbed and very active animal, of Messenger descent. General Gifford, Jr., took the first premium at the Show.

TURNIPS AND CARROTS.—My testimony is in accordance with that of "B." of Niagara Co. The white carrot not only yields better, but I have always found it harvested much more easily. I consider the popular notion that the yellow is best and more nutritious, founded in error.

I received from B. P. JOHNSON, Esq., of the State Agricultural Rooms, a new variety of turnip—River's Stubble. They have done nobly this season. I am a friend to turnip growing, but consider it useless to undertake their growth, even on very rich land, without a liberal dressing of rotten manure. Let the successes and failures be reported. Who fails in growing turnips on land manured especially for them? I never have—have you, reader?

Homer, N. Y.

JNO. SANFIELD.

MANAGEMENT OF MILCH COWS.

As soon as grass begins to fail in the fall, milch cows should be well fed on good warm "slops," that they may not get a "backset," and kept at night in a warm and comfortable stable. If the farmer prefers using hay, they should have all of it they will eat up clean, and each night and morning a feed of from four to six quarts of "shorts," wet with about the same quantity of warm water. Or a more economical way is to feed them twice a day with about half a bushel of nice, clean, cut straw, mixed with about three gallons of meal,—two-thirds "shorts," and one third "finished middlings," wet with three gallons of warm water. They will then need no hay, and give an abundance of good, rich milk. Corn is too heating for milch cows, and too much of a tendency to fatten.

The stable should be thoroughly cleaned every morning after the cows are turned out, and littered with clean straw. When it is stormy they should remain in the stable until the middle of the afternoon, when they should be turned out to get water.

Salem, Ohio.

DAVID STREET.

PUMPKINS.—There is much difference in pumpkin. I had a variety which kept much longer than the common sort, without freezing or decay. They were solid-fleshed as the squash, and should be propagated. I suppose I have some of them now, but, as the seeds got mixed, I cannot tell until winter. Who else has them? Save their seeds in abundance, and distribute them at your winter Agricultural Meetings. Send some for distribution to the office of the *Genesee Farmer*.

Homer, N. Y.

JNO. SANFIELD.

SIX DRACHMS OF ALUM, dissolved in quart of sea tea, will stop a horse from frothing at the mouth.

Genesee Farmer Prize Essays.

ON THE BEST METHOD OF SEEDING LAND TO TIMOTHY OR HERD'S GRASS.

I HAVE very little acquaintance with Herd's Grass, but can speak from a number of years' experience with Timothy.* Timothy is one of our favorite grasses in this location, latitude 38, and I am satisfied will always pay well when put in right.

In the first place it is all important to procure good, clean seed, and the surest plan is for farmers to save their own seed, when it can be done. When the Timothy is quite ripe, cut it carefully with sickles; tie it up in small bundles, some three inches in diameter; set them up in small shocks, of some 10 or 12 bundles each, out in the field, where it should remain exposed to the weather until it will rub off pretty freely with the hands; if necessary, change the bundles, that is, put the inside ones outside, in order that it may all have the rains, sunshine, &c., until it will rub out freely. Then, when it is dry, rub or thrash it out, (a careful hand could sow it in the chaff very well) but it is preferable to have it carefully cleaned with a good mill, when it will be ready for use, and should be kept in a cool, dry place until sown.

The next and most important step is to prepare the ground, which should be pretty thoroughly broke up in August. Oat stubble is preferable to most other ground, but it must be clean of all extra straw or litter, &c., before plowing. (Ordinary stubble will not hurt.) As soon after the first of September as the ground can be got ready, if seasonable, is the best time to sow, but it will do very well during all the month of September, and even until the middle of October, but after that it will be rather difficult for the young grass to get a good start to stand the winter. In our latitude, 38, the weather is generally two dry and hot before the first of September to sow, and frequently some time later; but the first seasonable weather in September is the proper time.

It is useless to lay down any certain or definite rules about how much plowing, rolling, harrowing, &c., the ground should have, for we must be governed by circumstances. It should be thoroughly plowed, and as much rolling, harrowing, dragging, &c., as may be necessary to pulverise and level the soil; and if in any ways inclined to be wet, it should be drained. (Such land is excellent for Timothy.)

Underdraining, of course, would be preferable, but surface draining will answer. It can be pretty well done with the plow in breaking up, or the last time it is plowed, if plowed more than once, by making the lands about 18 feet wide; and just before the last harrowing, preparatory to sowing, open the valleys or old furrows again with a two horse plow, and complete them, if necessary, with hoe and spade; also a few cross furrows if needed, for it must be distinctly understood that no surplus water is to remain on the ground.

Should there be stumps or similar obstructions that cannot be got out handily, they should be dug around and leveled, and so of every little abrupt knoll or hollow, in order to give the machine or

scythe a good bottom to work upon. The last thing to be done before sowing is to lay off the ground. A stick of wood will answer, something like a short, thick sled runner, with a clevy and single tree for a horse in the forepart, and a handle for the driver in the afterpart, which will make a broad, flat mark, that can be seen without any trouble. The lands should be five feet apart for sowing by hand. Some prefer laying off and sowing both ways, but a good machine or a good steady hand can sow it very accurately one way.

One more important point to be observed is the quantity of seed used per acre. There is a great difference of opinion about this matter. Some say one gallon, some one gallon and a half, and some as high as half a bushel per acre. My experience demonstrates to me that one peck (rather over than under) is about the proper quantity for any ordinary soil. But should the ground be very foul with bad seeds, a half bushel will not be a great deal too much to choke them out. If less than a peck per acre be used, there will be so much more chance for a crop of weeds the first year. The old adage will apply here, viz: Nature abhors a vacuum; and just as certain as there is any amount of space left not covered with the Timothy seed, it will grow up the first season with weeds and foul grass. On the other hand, if the seed is properly put in, we may look with confidence for a good crop the first season, (I have never yet failed,) and if the Timothy should be too thick it will thin itself.

It should be brushed in with a good heavy brush, and, if necessary, the water furrows again opened with a one horse plow. Then, in the spring, if there is any obstructions on the ground, such as stones, roots, sticks, &c., they should be removed, and the ground well rolled, as soon as dry enough, which will leave it in good order for mowing.

Spring sowing is very uncertain with us, and unless under a great many favorable circumstances, such as good clean ground, good weather, &c., should not be attempted.

J. L. K.

Jefferson County, Ky.

ON THE MANAGEMENT OF CALVES.

[We have received a number of excellent Essays on this subject, and the committee, after considerable hesitation, have selected out the two following, and award a premium to each of them.]—Eds.

THE calf should be taken from the cow when one or two days old, and taught to drink new milk. As soon as it will drink milk readily, or when about eight or ten days old, part skim milk may be added, first warming it to the proper temperature, with the addition of about a table spoonful of corn meal, stirring it while drinking. When about two weeks old, give a little sweet hay once or twice a day, if in winter or early spring, and as soon as the grass starts, let it have the run of the calf pasture. The skim milk may be gradually increased, and the new milk diminished, until it is about three weeks old, when the whole feed may consist of skim milk, and the meal increased to about half a pint. This course should be taken when it is an object to make butter. If butter is no object, of course feed new milk.

It must be borne in mind that all changes from the natural course should be gradual, as there is much danger of bringing on the scours at this tender

* Timothy is called Herd's Grass in New England.—Eds.

age. A very good way is to make a porridge, by stirring in buckwheat flour, and heating to the boiling point, and when sufficiently cool, feed; but this is more trouble than to feed corn meal, and no better. The feeding should not be left altogether to the boys, but they should be carefully watched, and if there are any symptoms of scouring, immediately return to new milk, fresh from the cow. This has always cured with me. But if the changes of feed are made gradually, and the calf is fed regularly, and not too much at a time, and provided with good bedding, and a shelter from cold storms, there is not much danger of the scours.

When the calf is about four weeks old, a little sour milk may be added, and gradually increased until the whole feed may consist of sour milk. Some calves will drink it readily the first time; others want considerable coaxing, but by adding a little at a time, and increasing gradually, they will soon drink it, and will not be so apt to scour as when the feed is changed it once.

When the calf is about four months old, feeding once a day will be sufficient. I am now feeding mine once a day, on sour milk, with the addition of about a half pint of meal and nearly a quart of wheat bran stirred into the feed, and they are growing finely.

They should have warm shelter the first winter, with plenty of good sweet hay, with feed of roots once a day, together with bran and oat or corn meal; and when they are turned out to grass in the spring, they will commence growing immediately, while those that have been but half fed and cared for will require half the summer to make them as good as they were in the fall; and when once stunted in their growth, as they often are the first winter, they never recover, but always remain inferior animals.

It should always be borne in mind, in feeding young and growing animals of any kind, that nothing is gained by stinting their feed. They need a greater variety of food, and of a more nourishing nature, than the one of mature growth, for in addition to the natural wear of the system, their frames should be continually enlarging; and where are they to obtain this increase of bone and muscle but from the food which is given them? C. C. WILSON.

Newfane, Niagara Co., N. Y.

ON THE MANAGEMENT OF CALVES

THE management of calves must necessarily depend much upon the object the owner of them has in view. If they are designed for the butcher, the quickest and cheapest method is to let them take the milk from the cow in the natural way. If they are to be raised, and their value is to be the only consideration, by all means let them run with the cow. Letting them run with the cow is objected to by some, "because," say they, "the calf does not allow the udder to fill with milk, consequently it becomes permanently contracted and materially injured." This kind of reasoning may, at first, appear correct. But cases that have come under my observation fail to prove it so. When we consider that Nature's laws are perfect, and that we are infringing upon one of them by removing the young from its parent, we are led to doubt the theory altogether. Many farmers attempt to raise a calf from each cow, and make butter from her at the same time. This is like

trying to raise two crops upon the same ground at the same time; *one or the other must be deficient.* Calves should never be fed with sour milk. They will sometimes do "very well," but they will do much better if the milk be sweet.

It is very important that calves be well fed and cared for during the first year of their lives. If they are to be raised by hand, they should have the milk that is taken from the cow, the first four days after she comes in, as it is particularly adapted to their wants at this age. After this, they may be fed with milk skimmed before it is sour, and mixed with an equal quantity just taken from the cow. They should be fed in this manner until they are at least two months old, when the new milk may be dispensed with, and a handful of oat meal sifted from the hulls and stirred into the skimmed milk. In skimming milk for calves, if some of the cream accidentally escape with it, it need not cause alarm, as it will not injure them seriously. Calves should not be weaned entirely until they are four months old. Milk once a day, with a pint of oat meal, will do very well for the fourth month, when the milk may be taken from them entirely, and the quantity of meal increased to a quart per day, (it need not be sifted after they are weaned) and continue so until they are turned out to pasture.

The spring they are a year old, in addition to the above, they should at all times be securely sheltered from the cold, have access to water at all times, have good pasture during the summer, plenty of good hay in the winter, and a little salt mixed with sulphur occasionally, to prevent their becoming lousy. "Ah," says an old-style stock raiser, "calves at such a rate will not pay." Try it. If they will not pay when they are well fed, they certainly will not when they are only half fed. If they are well fed and cared for, it will not be necessary for a boy to go round in the morning to lift them up, but on the contrary they will be able to help themselves, and each one will be worth more than any three raised dish-water fashion. M. GARNSEY.

ON THE MANAGEMENT OF BARN-YARD FOWLS.

FARMERS are generally too apt to neglect their poultry department, taking good care of their other stock, but leaving their barn-yard fowls to care for themselves. Like everything else that is worth caring for *at all*, it is to the owners' advantage to take care of them *well*.

They should be provided with a commodious, clean, well ventilated house to lay and roost in; the apartments for these purposes separated by a partition. The nests should be large, and made of clean straw—renewed every spring—as hay is more inclined to breed vermin. In the winter they should be *regularly* fed with corn, twice a day, in the morning and evening, and an occasional meal of boiled potatoes, meat, old bread soaked in warm water, &c., will be highly relished, and add to the number of eggs. Lime and gravel should be always within their reach. When the ground is covered with snow they should be fed in the poultry-house.

In the spring when the weather has become settled, those hens that wish to set should be provided with from ten to fifteen eggs each—according to the size of the hen. When the chicks are two or three days' old, they may be removed, with the hen, to a

coop with a *board floor*; as roosting on the damp ground is a prolific source of disease, and hundreds of young chickens die annually for the want of a little care in this respect. The coop may be placed in any convenient situation in the yard, where the chicks may run in and out at pleasure, to catch the flies and insects, so numerous at this season of the year. They should be fed *regularly*, twice a day—early in the morning and about four o'clock in the evening—with corn meal well mixed with water; and the hen should be supplied with a little shelled corn every day.

When the chicks are about a week old, they may be permitted to roam at large with the hen, when the dew has dried off the grass, and on pleasant days; but must be returned to the coop every evening at feeding time, as they should always be fed where the older fowls cannot deprive them of their allowance. Fresh water should be supplied them every morning in a shallow vessel.

When five or six weeks old, they may be considered out of danger, and left at liberty to roam with the other fowls. I neglected to state that the poultry must have a constant supply of *fresh* water, as it is indispensable to their health and productiveness.

As the farmer who adopts this plan will have many fowls to dispose of annually, he should always keep those which incline to lay and roost, in the hen-house, and one cock to every twelve or fifteen hens will be sufficient. Hens which roost about the barn or other out-buildings, and steal their nests in some secret place, cause more trouble than they are worth, and should be the first to be parted with.

By feeding in the manner recommended, they will be in good order for the table at all times.

Salem, Ohio.

DAVID STREET.

ON THE CULTIVATION AND MANAGEMENT OF TOBACCO.

BEFORE any one undertakes to cultivate tobacco, he should consider well whether he is so situated that he can make it profitable. And to arrive at a sure conclusion, he should understand thoroughly the whole *modus operandi*, for there is no crop that requires such constant attention, nor any that suffers more from neglect.

BEST SOIL FOR TOBACCO.—New land is the best for tobacco, not only that it is more free from cut worms and weeds, but the soil is not liable to bake, but remains loose, no matter how much rain falls. I always prefer oak land to the bottoms, for though it does not produce as heavy tobacco, it will bring a finer article, and is much easier handled without injury.

PREPARING THE SEED BEDS.—When clearing the land, it is best to pile some very large brush heaps to be burned as soon as the frost is out of the ground, and it becomes sufficiently dry. Care should be taken to have plenty of them, for they are for plant beds, and better have five times too many plants than to be lacking. When these heaps are burned to ashes, dig the ground, ashes and all together; rake and pulverize thoroughly; mark it off in equal distances, that you may sow your seed as evenly as possible; then sow about one table spoonful of seed to thirty feet square. The seed should be mixed with dry ashes, that they may be more equally dis-

tributed. Now press the bed all over with the feet. This presses the seed sufficiently deep in the ground. Cover the beds with brush as a protection from late frosts; and after the plants are up, if the weather is dry, water occasionally with water in which good manure has been soaked. It is desirable to have the plants large enough to set as soon as possible, otherwise a season may be lost, as has been the case here this year.

PREPARING THE LAND AND SETTING OUT THE PLANTS.—As soon as the ground is in plowing order, the tobacco ground should be broke. Then about the first of June or earlier, if the plants say so, cross-plow, and do it well; then harrow completely; the ground should be put in the best possible order. It should next be laid off, or what is better, two furrows thrown together, forming a ridge. These furrows or ridges should be three and a half feet apart. The crop will be easier managed if the ground is marked off the other way, as it then can be plowed each way.

The first good season should be made use of after the leaves of the plants are the size of a dollar. The plants are to be set on the ridges, taking care to press the earth well to the roots. It is better to have hands enough to set all the ground prepared, at once, than to depend on future seasons. After the plants are set, all that is necessary is to keep the ground clean until they have shown ten or twelve leaves.

TOPPING THE PLANTS.—Now the cultivator must begin to use his best judgment, for the plants must be topped, and if topped too low there is waste; if too high there is danger of their growing too long and being caught by frost; but, as a general rule, after breaking off a few of the bottom leaves, which is called priming, pinch out the top or bud just above the tenth leaf. With a little practice it will not be difficult to determine where to top. It will be necessary to go over the patch several times before the process is completed, as the plants are not all the same size. When the top is broken out the suckers start, and show themselves directly at the butt of every leaf. These should be pinched out, and the patch should be gone over every week for this purpose.

In about three or four weeks after topping, the tobacco will become of a lighter hue, and somewhat spotted. The time to cut can be ascertained by doubling a small portion of the leaf; if it breaks it will be found to be ripe.

CUTTING, HOUSING AND CURING.—Now we have got through with the cultivation of the weed, but what we have done is almost nothing. Now comes the tug, the cutting, housing and curing. If the tobacco is generally ripe it is better to cut all clean as we go, than to have unripe plants for another cutting. Great care should be taken in handling not to bruise the plants, as every bruise will show when cured. When cut it should be laid with the butt to the sun, and as soon as wilted it should be drawn to the barn, where the hands are ready to stick and harg. The speediest way is to have one end of the stick sharpened, that an iron spear with a socket may be put upon it, the other end to be put in a large auger hole at a proper height. The plant can now be run on the stick over the spear quite fast. Ten or twelve large plants will be enough for a four feet stick. When a quantity of sticks are filled, they should be hung. Begin at one side and fill from top to bottom,

putting the sticks tolerably close, say six inches apart. When the barn is filled much depends upon the state of the atmosphere; if warm and clear, it is not so difficult as when rainy, or even damp and cloudy. In a day or two, if the weather is fine, the tobacco will be considerably yellowed. Small fires should be built all over the barn, under the tobacco. This hastens the colouring. When the ends of the leaf begin to curl, the heat must be increased gradually. It is impossible to give a certain time in which to increase the heat, as all depends upon the colour of the tobacco. Experience is necessary here, for if the heat is raised too soon the tobacco will be of a greenish colour; if too late it will be red. Mottled or yellow sells best. But after hot fires are under it, keep the house as near one heat as possible until the ribs and stems are dried; you may then slacken the fires, for now there is danger of burning it up; but do not take the fire entirely away until the stalk is dried; if you do, the leaf will change colour and become red.

Now, whenever there comes a damp spell of weather through the winter or spring, the tobacco will become soft and may be stripped from the stalk, and about ten leavds tied together, by wrapping them tightly around the butt end with another leaf. This is tying them in hands. These hands should be kept smooth and straight. While stripping it should be the business of one man to sort or separate the tobacco, making first, second and lugs. The tobacco should now be hung up again, unless it is required to be taken away soon, in which case it should be put in bulk, and should be bulked at least a foot above the ground, and in a part of the barn where it cannot get wet. When the stems will break one half way up the leaf, it is in good order to bulk down, provided the weather is not too cold. If it has to stay in this condition long it must be noticed often, for it may get too high in case, and spoil directly. It is now ready for the manufacturer, and the quicker you get the money for it the better for all concerned.

W. D. M.

Pinoak, Warren Co., Mo.

ON THE BEST MEANS OF ESCAPING INJURY FROM DROUTH.

DRAIN your land of all surface water; keep it in a high state of fertility; work it only when it is dry; plow your manure under, *on heavy soils*, in an unfermented state; but on *light sand* when it is well rotted; plough as early in the spring as the land is dry enough. If you have a green sod to turn under, all the better. Keep all hoed crops and fallows free from weeds, by destroying them as soon as they are visible; stir the surface of the soil frequently during a drouth, whether there any weeds or not. On all high land apply plaster early in the spring to clover, peas and barley, and to buckwheat, and all hoed crops as soon as the plants are up.

In order to have a second crop of grass on meadows, either for seed or pasture, the first crop should be mowed early, as the ripening of grass seeds draws from the earth a great amount of moisture, and it is admitted by chemists that after grass has attained its size it loses by delay in cutting, and makes hay of poorer quality as it grows riper, and the injury done to the soil for the time being is easily shown by the following experiment: Mow one part of a field of

clover as soon as the first blossoms begin to turn, and let the remainder stand until most of the heads are black; then mow it, and note the growth that each will make in a certain time after it is mowed; and if showers and other circumstances are alike favorable, the part mowed first will have as good an after growth in two weeks as the last part will in four.

W. S.

Canada West, Aug. 25th, 1857.

ON THE BENEFITS TO BE DERIVED FROM COMPETITION FOR THE PREMIUMS OFFERED FOR SHORT ESSAYS BY THE GENESEE FARMER.

It brings out much valuable information which might otherwise remain unknown, and scatters it broadcast over the land. It enables us to profit by the experience of those who have established facts by actual experiment. For instance, there is a point in dispute between two farmers in regard to manuring corn. One contends that it is much the better way to manure it in the hill, while the other declares that it is not as good nor as expeditious a method as it is to spread the manure on the land and then plow it under. But neither of them knows to a certainty, as they have not experimented carefully, and then as carefully compared results. Both being slightly prejudiced, each recommends his own method. In the meantime, some more enterprising farmer, and one who does not do business by guess, has experimented, for his own satisfaction, upon the subject in dispute. He has weighed and measured accurately; kept debt and credit carefully, and as there was a premium offered for an essay on that very subject, he has given us the whole *modus operandi*, with its result. Thus the theory of one or the other of the disputants is forever exploded; the facts in the case established, and placed at the disposal of thousands of other agriculturists.

Competition for premiums bring out Essays which afford us ample evidence that although agricultural science has for ages been wrapped in the serpent-like coils of Ignorance and prejudice, it has at length burst its bonds assunder, and is traversing our fair domain with giant strides, to the joy and admiration of those who appreciate its value, but to the terror and dismay of old fogyism and all its votaries. Notwithstanding the clamorous outcry made by some farmers against science, in its application to agriculture, or "book farming," as they term it, the Essays with which we are favored through the medium of the *Genesee Farmer*, prove beyond all reasonable doubt, that it is possible to establish a rule of action which would apply generally to every branch of agriculture. And that it is in fact a science to properly cultivate a field of wheat, or to rear a domestic animal, as well as it is to measure the distances to the planets, or to calculate the period when eclipses will occur. Agricultural science has indeed enabled us to unlock the earth as it were, and thereby placed within our reach priceless and inexhaustible treasures.

Competition for premiums tend to increase confidence in agricultural literature, and thereby to promote the circulation of agricultural journals. Much of the agricultural matter in circulation has emanated from the pens of men who possessed unlimited means; men who could build upon an extensive scale; lay out and adorn pleasure grounds; plant and train ornamental trees; cultivate a great variety

of fruit, &c., without any regard to expense. The writings (and may we have more of them) of such men have given birth to expressions like the following: "It is all well enough for rich men to take agricultural papers and to write for them. If I was able to follow out their plans, and do as they do, I should like it well; but since I cannot, I must be content with doing the best my means will allow." The great expense attending the operations of the former so obscures the mental visions of the latter, that he does not discover that the same principle which enables the man of wealth to rear five hundred beautiful and profitable trees, will enable him to rear five. So he consoles himself for the deficiency, with the idea "I must be content with doing as well as my means will allow." But soon he discovers that some of his neighbors, whose means are as limited as his own, have deviated from that "good old way." One is rearing much better stock than formerly; another is underdraining; a third is subsoiling, and making various other improvements, which he never considered his means would allow him to make, and in fact never saw the propriety of making. He sees the wonderful effect of these "new notions," and his curiosity is so much aroused, that he determines to ascertain where his neighbors obtained them. Consequently, one fine morning he walks over to where neighbor B. is plowing with two teams. One of the teams turns a furrow in the usual manner, only a little deeper. B. follows with the other one, a subsoil plow, loosening up the earth in the bottom of the common furrow to the depth of one foot. After the usual salutations, A. says, in rather a depreciating tone,

"You appear to have some curious ideas in regard to farming; where did you get them?"

"O, I take the *Genesee Farmer*; I have taken it nearly three years. It contains many short Essays, written by common farmers, like you and me. These Essays are written in competition for prizes, and treat of a great variety of subjects, subsoiling among the rest."

A. almost says "fudge," but restrains himself, and asks, "Do you expect your crop will repay you for all this extra trouble and expense?"

"I have no doubt of it. You know Mr. C. has experimented two seasons with the subsoil plow. Two years ago he planted two acres with corn; treated it all precisely alike, except that one acre was plowed in the usual manner, and the other was subsoiled (the subsoil being a gravelly hard-pan.) The result was, the heavy rains which came on just after planting, deluged the corn upon the acre which was not subsoiled, while the loosened subsoil upon the other acre drank in the water, leaving the corn to grow and come to maturity, without any interruption."

"Well, I do not know but it would be a good plan in a wet season."

"Yes, and in a dry one, too. Last season Mr. H. experimented in the same manner and to the same extent. The season, you recollect, was extremely dry. The corn upon the subsoil land struck its roots deep into the moist, pulverized earth, and seemed to bid defiance to the scorching rays of the sun, while that upon the other acre drooped and withered so much that it proved a total failure, with the exception of a few puny stalks, and a little unsound corn."

A. feels the force of such reasoning, and mentally

determines to subscribe for that paper, and read for himself. How often is the paper of which you speak issued, and what does it cost?

"It is published monthly, and costs fifty cents a year."

A. starts for home with some new idea working upon his brain. He begins to believe that if Mr. B. can subsoil, he can too. He traces many of the "new notions," which he finds among his neighbors, to their origin, and ascertains that they were derived from that little paper which costs but fifty cents a year, and contains so many prize Essays. Consequently he improves the first opportunity to become a subscriber, and is now zealous in recommending it to others. He has also come to the conclusion that "doing as well as my means will allow," is doing much better than he formerly supposed it to be.

The prizes competed for should not be passed over in silence. It may safely be presumed that very few farmers would take the pains to write Essays in competition for the prizes offered, were the mere value of such prizes, in dollars and cents, the only consideration. But their character is such as to render them worthy an effort by every farmer who wishes to make additions to his library of such works as may throw much light upon the various branches of his occupation. In many a time of need, they will prove to be his true and steadfast friends; friends which no enemy can alienate, and which he may safely introduce and recommend to the rising generation.

M. GARNSEY.

Middleburgh, N. Y.

HOW CAN FATHERS RENDER FARM LIFE ATTRACTIVE TO THEIR SONS!

STANDING on the dividing line between childhood and manhood—with the joys and sorrows of the first still fresh in my memory, and the strong hopes of the second firmly rooted in my heart, I claim a hearing in this important matter.

First of all I say "remember;" remember your own boyish days, with their lights and shades, their days of toil and of relaxation; remember your own thoughts and feelings as a "son," toward your father. Ponder well *his* system of farming and also of government, and then, after having added the weight of experience which the years since gone have given you, study diligently to know whether his plan can be improved, whether your own homestead cannot be made still pleasanter than the one your memory calls "home." How few that have reached the position of father, but can recollect distinctly some periods in their minority when the parental will clashed with their own—when in their heart they said "he is unreasonable." Now, when the youthful fire has departed, and calmer, maturer years have come instead, is the time calmly to review those scenes and pass judgment. If the father was right, then, as a father, follow his footsteps; but if still the voice of judgment says "I was right," then be careful never to place your own son in the same or like predicament.

I speak candidly when I say that the aged are quite apt to cling to ideas cherished in younger years, even though science and experience teach somewhat differently. Many a son who reads in an agricultural paper of some new and valuable discovery in the vegetable kingdom, or some rare improve-

ment in the animal, or some hint thrown out for experiment, get only a "humph" for his pains when he submits it for consideration to his parent.

"I had rather have fifty more than fifty less," says old uncle P., when his reading, reflecting boy, "Jim," had been telling him of the products of certain acres, devoted to the cultivation of grapes, cranberries, rhubarb, hops, &c.; and so the old gentleman and "Jim" still toil on, on their hundred odd acres, trying in vain to keep the endless rods of fence in repair, the countless upturned stones picked off, the thistles kept subdued, and the crops gathered in proper season. Man, it is true, was made with reason far above the brutes: with powers astonishing. But *one* man cannot do everything; *two* cannot, and he is not implanting a love of farming in the hearts of his sons, who renders them slaves to "work."

There is no use in the farmers grumbling that "boys don't like to work." Few of us really like to work, merely for the "fun of the thing." The lawyer, laboring night and day to clear a client—the physician riding miles in a storm to visit the sick—the mechanic and artisan, each and every one labor for a reward. It may be money, or it may be an equivalent in some other form, but still a reward. So the farmer works early and late that he may produce grain, meat, and all things necessary for the sustenance of himself and family. So boys, if they are not, should be presented with some inducement to be steady, active and useful. Make men of your boys; tell them your plans of improvement; tell them how much you are in debt, if any, and ask them to help with a long pull, a strong pull, and a pull altogether, to remove the incumbrance. If they have a taste for the beautiful, assist them to use it in a proper manner; if a love of fruit, grant them space to plant their grape vine, dwarf trees, strawberry bed, &c., &c.; you will not regret the time, no, never. Is it from the neat, shaded house, with its noble trees in front, its well swept walk, lined with fruits and papers, and its open window, displaying a table loaded with books and papers, that the "boys run away?" I answer, no! Is it the boy who has been sent to school and advised to get knowledge, and, furthermore, has been assisted in this pursuit at home, that gets discontented with that home? Again I say no. But the boy who is *jawed* at by his father for every accident—the one who never has a recreation day—the one who never has a cent to call his own—the one who is kept from school except now and then a day—the one who has ever to work with dull tools, milk kicking cows, and drive superannuated horses,—these and many others *do* leave, and oft times with reason. How oft I have remembered with gratitude my own father's habit in regard to an accident. He sometimes enquired how it happened, and volunteered a word of advice, but no threatenings passed his lips; no angry lecture on boys' carelessness and waste. No "government," do you say? I challenge the world to beat it. He was as *firm* as the everlasting hills, but he had the entire control of his temper and his tongue. He knew that a child who has had bad luck feels *bad* enough, and will be more careful of offending a kinder father than a cross one.

Have I been obtuse or lengthy in my statements? Then I will sum up as briefly as possible. Teach your boys by your own example that you are inter-

ested in your business; that a farmer may be a *gentleman*; enlist their efforts with your own; arrange your business in such a manner that each and all may have some time to devote to horticulture, reading, and self improvement; gratify them somewhat if your means will admit, by using a good team and having a pocket book of their own. Laugh if you will, or frown, and say it's the way to ruin them; make them penurious, vain, and all that sort of thing. I say *it is not so*. Who will like farming the best—the young man who has a good horse and carriage to use on a holiday, or the one who is sent to mill with patched breeches, astride a mule, with a grist on behind? Echo answers, who?

McLean, N. Y.

M. D.

WHY IS FARMING CONSIDERED A DEGRADING VOCATION?

AGRICULTURE is, and must ever continue to be, the most important secular employment of man. The very existence of the human race depends upon the labors of those engaged in it. This alone should be sufficient to shield it from the reproach of the term "degrading." But it is of the earliest date, and of the highest origin. We can trace it back to the "Garden of Eden." Its author was the Creator of the Universe. It was in man's state of original integrity, that he was placed in the Garden, "to dress it and to keep it." And it must have been considered by the All-wise, himself, a most honorable employment. How foolish then, nay, how sinful, for man to consider that degrading which God in His infinite wisdom, has instituted for the benefit of His rational creatures. Why, then, is this vocation, of such sacred origin, considered by man degrading? It must be because of the depravity of the human heart. But this shows itself in so many different ways, and is found running in such innumerable channels, that it will be necessary to mention some of the most prominent of them.

Pride, which holds such universal sway over mankind, but especially those whom fortune has loaded with wealth and affluence, makes them despise all who are so much beneath them, as to labor for an honest living. The farmer and his vocation are despised among the other laboring classes.

Indolence, with its long naps, and easy chairs, induces many to consider the labor of a farm life degrading, and entirely below the dignity of a gentleman.

Others, again, are influenced by the love of money, which is the root of all evil. They seek for some employment by which they can speedily gain wealth, and hoard up riches. They despise the slow and steady gains of the farmer, and consider his vocation a degrading one.

Another great reason why many consider farming a degrading vocation, is, because they are ignorant of its true nature and character. There is a true dignity in labor, which they do not appreciate; a secret feeling of pleasure, to which they are strangers. Certainly, no one, who knows and feels the important position it sustains to man—its high and holy origin—its health-promoting qualities, and the happiness it sends home to the heart of the cheerful husbandman, can consider it degrading.

The reasons which induce men to consider farming a degrading vocation are so numerous that it would be entirely out of the question to attempt an enumeration of them all, in such a limited Essay. But I

must beg pardon for mentioning one more reason, which must have a good deal of weight with those disposed to regard the farmer's business as degrading. It is the manner in which farming is conducted by many who are engaged in it. Slovenliness seems to be the order of the day. We find fences old and broken down, and patched only with the natural growth of bushes and briars. We find fields growing poorer with every crop, until the owner can scarcely raise enough of grain from them to remunerate his toil. This is rather hard on the constitution, and often induces a disease called the "West fever." We see the few farm buildings small, badly arranged, and in a very indifferent state of repair. When we come to examine the stock, we shall probably find some of the breed that is used for making baits for the crows and leather for the shoemakers. Fruit culture, too, is much neglected by farmers. We often see, instead of a beautiful, thrifty orchard, loaded with delicious and carefully selected fruit, a few trees, rapidly decaying for want of timely care. The farmer's garden, too, is generally much neglected. That spot of ground, which should receive such particular attention, is often suffered to be sadly defaced by weeds, instead of being decorated with flowers. All these things combined, cannot fail to leave an unfavorable impression upon the mind of one unacquainted with farm life. Let farmers carry on their business with system, neatness and order, and the number who consider their vocation a degrading one will be greatly diminished.

Mahoning, Penn.

W. H. M'CREERY.

HOW MUCH EDUCATION, AND WHAT KIND, DO FARMERS NEED?

THE answer to the first part of this question need be but short. *All they can get*; but the pertinency of this response may perhaps be made more apparent by a proper answer to the last part of the question—"what kind?"—which cannot be so readily told; but, by your leave, I will attempt a concise description of what, to me, seems necessary for the complete farmer to understand. First, the common branches, reading, spelling, writing, and arithmetic, with perhaps geography and grammar as an addenda, depending somewhat upon circumstances. Next in importance, if he is an American, is a full and thorough knowledge of the English language, as this opens at once the doors to all the arts and sciences, and without which these portals remain in a manner closed.

In connection with the foregoing and following, should be pursued and never neglected, a physical education; for the farmer, whether he is to labor with the axe and scythe, or superintend the labor of others, needs the full development of every nerve, bone and muscle, with a full knowledge of the most economical manner of applying their forces in himself, his laborers, and beasts of burden. This physical development, education, and training, need not interfere with any other occupation, for the mind cannot always labor, nor can it ever labor to advantage while the body lacks energy and force. It is this physical development which gives to the sons of farmers their superiority in every station of life. It is a true saying that "you can make anything of a farmer's son, but you can make a farmer of nothing else." Since the decline of the Roman empire the

value of muscular strength and agility has been unappreciated, but the next generation must and will restore its popularity.

With these foundations to rest upon, he is prepared, if he be able to purchase or borrow books, even independent of teachers, to enter upon the studies of the more abstruse sciences, not essential, it is true, to a laborer, but deeply essential to a director of his own power and that of others, to the economical employment of time, strength, and money. He should study Botany, for a great share of his business is the rearing of shrubs and plants, the nature, habits, classes, and descriptions of which are essential. He should study Zoology, for another part of his business is the rearing or employment of animals, the natures, habits and peculiarities of which he should understand. He should study Entomology, for he will have myriads of insects to contend with, and unless he combats them with that skill and discretion which a knowledge of their habits alone can give, his victory over them is at least doubtful. He should study Geology. It gives him a knowledge of the raw material, upon which he must work diligently and understandingly would he win success. He should study Meteorology and Climatology, for there are adverse as well as genial winds, rains, snows, hails and frosts for him to counteract, or apply to his aid. He should study Chemistry, animal, vegetable, and mineral, for there are constant changes around him, in every kingdom of nature, for him to seize upon for his benefit, or turn to his advantage. Physiology, both animal and vegetable, is important as a study for him, for he must have a care for the health and prosperity of his beasts and plants, and a knowledge of their structures, and the the functions of their parts is indispensable. Philosophy, as applied to his implements, carriages and machinery, comes also advantageously into use. Does any one say that my standard is too high, that it is unattainable by any one who labors on a farm, and earns his bread? I reply that there is no institution so well adapted to the study of the higher branches as home; no teacher so faithful, impartial, thorough, and successful as ones self; no halls so well adapted to study in as the broad vault of Heaven, and the chimney corner; and no place where the education of the body and mind can be so conveniently and profitably alternated as on the farm. Do you wish to study Botany, here are the plants in bloom in your very path. Do you wish to study Zoology, here are the animals, your daily companions. If you would study Entomology, the insects swarm around you, and their habits cannot be a matter of indifference. Does Geology entice you, here is mother earth at your feet, inviting you to an acquaintance. Would you study Meteorology and Climatology, your farm has its observatories; what better place would you have? If Physiology interests you, every animal you slay for domestic use or for the market, is a subject for dissection. Would you study Philosophy, remember that Newton's first lessons were taken in a solitary *siesta* under an apple tree. Would you hold communion with your own thoughts; would you reflect upon and digest what you have read, take hold of the plow, the hoe, or the scythe, and your mind will be the more clear for your bodily exercise. It is not necessary to study, that the book should be always in hand; the broad book of Nature is always open before you,

and he who sows and reaps, as well as "he who runs, may read." Do you say that these studies are unnecessary to successful farming? Remember that the cultivated portions of the earth are fast losing their fertility, under the old traditional system of farming, and that science alone, aided by experiment, perseverance and economy, bring them up to, and even above, their early standard. The farmer who discards science as unnecessary, must emigrate to the newer portions of the earth, and be content with the society and the luxuries they afford; while he who would be surrounded by all the comforts and improvements of the age, must remain where they flourish, and should add his mite of mind and talent for their promotion.

S. B. PECK.
Gorham, N. Y.

HOW CAN SETTING HENS BE TAUGHT TO FORSAKE THE LAZY HABIT?

MAKE a small open pen, of laths, or some similar material, in one corner of your hen house, about eight inches wide, and of any convenient length and height. Let one of the laths or slats be so secured that it may be easily taken out or moved one side, so that a hen may be conveniently passed into or taken out of the pen. On the bottom of this pen, and running lengthwise through it, set up a couple of laths on edge, and fasten them about the same distance from each other and from the sides of the pen. Run a small perch across the pen and the work is done. When a hen wishes to set, put her in there. She will soon find that she can walk leisurely upon the floor, or roost comfortably upon the perch, but she can't set without "riding on a rail," and that, they seem to think, isn't decorous. The length of time for which they will have to be confined will vary somewhat, and in obstinate cases it may be necessary to put a few pegs or tacks into the edges of the laths.

N.

WHY DO SO FEW FARMERS WRITE FOR AGRICULTURAL PAPERS?

BEING a farmer myself, and the son of a farmer, and having always resided among and sympathized with the humble cultivators of the soil, I may be permitted to give some of the reasons why so few farmers write for agricultural papers.

Let me premise, that to be able to express one's ideas with ease, and elegance, and perspicuity, upon paper, requires no inconsiderable mental discipline; and that, in years gone by, when the experienced farmers of to-day were educated, the common school system was not matured as it now is, and they finished their studies without becoming expert and correct writers. In fact, in those days, none but students of the higher schools were taught to express their ideas upon paper, and those but indifferently. The writer of this Essay has found, within a few years, while teaching in Western N. Y., men who refused to permit their children to devote any portion of their time to writing Essays, on the ground that it was a useless expenditure of time among farmers. This class of farmers are usually healthy and muscular, with active and practical minds, and frequently quick to discover any improved process adopted by their neighbors, and ready to investigate and appropriate to their own use any new labor-saving machinery

which they may see or hear of; but they never write for agricultural papers because of their inability to do so with perspicuity and elegance. Our fathers who write for agricultural papers, are mostly those who have not always been practical farmers.

But there are only a few of the younger class of farmers who write for agricultural papers. Why is that? They received, many of them, a better education than their fathers. Some of them at school were polished writers, and close, accurate thinkers. They have been cultivating farms for ten or fifteen years, generally successfully, with profit and pleasure. They study agricultural works, read the periodical literature upon the subject, adopt the improvements of the day, and in fine are industrious, intelligent and wide awake farmers. But they seldom or never write for the press. At first they will plead a want of time. Their farm demands their attention and labor every fair day during the season adapted to the cultivation of the soil. The rainy weather finds them occupied in the barn or the work-shop. Their odd moments are all occupied in reading. They have a farm to pay for; cannot afford to hire their work done or to be idle themselves. During this season they have no time. How is it in colder months? Do not the agricultural journals point out enough "work for the month" to keep the farmer busy each of those cold and dreary months? You, who read so many exchanges, cannot doubt this. Besides, this is the only season of the year which can be devoted to the cultivation of the social virtues. Friends and relatives must be visited; societies attended; social re-unions held; lyceums formed; lectures listened to, and libraries read. The family circle, too, drawing them by the most sacred bonds, demands their attention during the long evenings. Home must be made pleasant and profitable. The bonds of love and friendship cemented more closely. The wife must be relieved from the care of the prattling infant. The husbandman must be a PETER PARLEY in giving amusing instruction to the children, and pleasing, intellectual entertainment must be afforded to the elder sons and daughters. At this season of the year, even, he finds no time to write. It is emphatically true that, commencing with moderate means,

"He, who by the plow would thrive,
 Himself must either hold or drive."

After a few years, if the young farmer succeeds by industry and economy in obtaining a competence, and has more leisure time, he has lost his inclination to write. His muscles have become hard and fixed; his fingers have lost their former pliancy, and the mechanical portion of writing becomes irksome. He even neglects to correspond with his old friends and his aged parents. You would not expect him to write for the press.

Again, farmers are a modest and unassuming class of men. They doubt their ability to impart useful information. They prefer to receive instruction. They look to those who make a business of writing and speaking for their daily supply of mental aid, to the editors of agricultural periodicals to keep them posted up in the agricultural improvements and experiments of the time.

Such are what I conceive to be some of the more prominent reasons why so few farmers write for agricultural papers.

I think it would be better on all hands, were they

to take time to write. It would keep them in the practice of expressing their thoughts upon paper—which is an item of importance to every one—and would be of vast benefit to their brother farmers. Something new can be learned upon every farm, and by studying the ways and means of every farmer, however humble he may be. No farmer can write his experience upon his farm for a month, without adding to the knowledge of and benefitting others. We would say, let it be put down as the indispensable duty of every farmer, that he *must* write; as much as that he must read and labor. Let every farmer fully appreciate its importance, and he will write for *Agricultural Papers*. E. HODGES.

Marion, Olmsted Co., Min. Ter.

ON THE PROPRIETY OF AGRICULTURAL SOCIETIES
OFFERING PREMIUMS TO PRACTICAL
FARMERS FOR THE BEST ESSAYS
ON VARIOUS AGRICULTURAL
SUBJECTS.

It is not only proper, but in our humble opinion it is the duty of Agricultural Societies to offer liberal premiums to practical farmers for Essays on Agricultural subjects. The object of all Agricultural Societies should be to disseminate agricultural knowledge among the masses, which we think would be accomplished to a great extent by offering premiums, which would have a tendency to create a spirit of inquiry among farmers, inducing them to study standard agricultural works. The effect of such offers would undoubtedly be to call out a vast amount of varied talent which now lies dormant, and be the means of giving to the public a great mass of practical agricultural knowledge which is now confined to individuals or localities. If our National, State, County, and Town Societies could be induced to offer liberal premiums to practical farmers for the purposes above indicated, and publish the prize Essays in their Reports and Transactions, it would doubtless do more to advance the science of practical *Agriculture* than all the premiums offered for the finest horses, the best cattle, sheep and hogs, the longest beet, largest pumpkin, and biggest squash, with all the rest of the stereotyped list too numerous to mention. Every farmer knows it to be his interest to raise the best horses, cattle, hogs, crops of all kinds, etc., but how to do it in the best, cheapest, and most economical manner is what every one wishes to learn.

H. H. TAYLOR.

E. Rodman, N. Y.

THE ADVANTAGES OF AGRICULTURAL SCHOOLS.

In whatever business we engage, we feel it our duty to be prepared to enter it. And if the responsibility connected therewith be great, we are led to doubly exert ourselves, in order that we may be fully competent to undertake it.

There are many things connected with farming that require sound judgment. And the farmer ought to possess a good knowledge of all that he is to be engaged in; for he does not wish to be making experiments, when he does not know that they will profit him anything. It is true, good farmers can educate their sons in all that pertains to agriculture. But our future farmers will not be confined to farmer's sons. There are sons of mechanics and professional

men who will not think it below their calling to be addressed with the honorable title of "Farmer." And these must be educated for this station. They can no more enter it unprepared than though it were a "learned profession." Who would think of giving his son to such a profession without educating him? And as we think the farmer's station fully as important as a literary or scientific one, he must also be prepared for it.

Our "Common Schools," at the present day, would come far short of giving the instruction needed in the education of the farmer. Here is the advantage of Agricultural Schools. Those who wish to become farmers may be made thoroughly acquainted with all that is necessary for them to understand. It is hoped that such schools will flourish and spread widely; that our land which yields so bountifully under the blessing of the Great Giver, may never cease to do so for a lack of knowledge to cultivate it properly.

ADDIE E. FISK.

Girard, Pa.

"IS IT DESIRABLE TO PLANT FRUIT TREES IN THE
HIGHWAY?"

If the above question were put in a school-room of boys, there would be but little doubt respecting the answer. But it is not so put, but to the farmer, as a question of profit, or of ornament to the street or highway. On this ground, then, I conceive it should be answered.

It is commonly reported, that in Europe fruit trees are generally planted by the road-side, and the fruit of some of the trees is left to the passers-by. This may be exhibiting a good heart, if not good husbandry. These trees are protected by law, and there may be instances where men of small means are enabled to plant a few more trees than they otherwise would, and reap more benefit. An intelligent German informed the writer, that in his country the government plant cherry trees and English walnuts by the road-side, and that they are under the eyes of a vigilant police.

Perhaps the most ornamental and desirable fruit tree for street planting opposite dwellings, is the cherry, as mentioned above. By the common law of this country, any fruit growing on trees set between the land of the owner and the travelled road, belongs to the abuttor. Hence some farmers have advised the planting of such trees as profitable; while others have done so for the benevolent purpose of giving cherries to the public.

Now cherry trees require considerable care, though not so much as other fruit trees; and for a farmer to plant such trees by the road-side with the prospect of their being mutilated and the fruit stolen, (as would certainly be the case in a thickly settled district) would seem to exhibit a slight redundancy of humanity. Everybody knows of the charge against farmers, that they do not properly attend to the trees planted in their own enclosures. Would it not, then, be requiring too much of them to plant and care for trees by the road-side, where they must lose the fruit, or wage war against pilferers?

On Boston Neck, leading to Roxbury, there is nearly a mile of stately Elms on each side of the broad avenue. Had cherry trees been planted instead of Elms, they would have been abused by the boys, in spite of the extra police; and if, perchance,

they might have escaped this, would any one pretend to say that a vista of hollow-hearted, deformed and antiquated cherry trees would be as great an embellishment to the place, or as desirable to the citizens, as the present graceful forest trees? So of the shade trees on the Western Avenue, or Mill-dam; supplant them by cherry trees, or fruit trees of any kind, and in a few years, comparatively, the place would verge upon the hideous—saying nothing of the premium on truancy. Near the city of Boston I know of no fruit trees planted by the roadside. Every one readily sees the impropriety of it, as orchards and gardens need close watching, and it is nearly impossible to keep even horse-chestnut trees free from the stones and clubs of boys.

Far back in the interior, where the population is very sparse, and where forest trees are seen on every hand, it might be safe to plant fruit trees on the highway—thus giving more numerous tokens of the progress of civilization, and affording to the traveller a happy contrast with the surrounding scenery. In such cases cherry trees would be the most ornamental, but late apple trees would be the most profitable. Wild districts, however, are rare in Massachusetts, though they may not be in Western New York; but in both places they must be growing rarer.

Our native forest trees are beautiful, and merit preservation. They should have a place around our dwellings and along our highways. The Elm, the Maple, the Tulip tree, the Pine and Hemlock, and

"Lord of the woods, the long-surviving Oak,"

are not the least deserving objects for street-planting. Many foreign trees, also, should not be neglected in the highway. Forest trees generally grow with vigor, furnish ample shade, while the blasts of a century will not mar their beauty.

In a thickly settled country, I am of the opinion that good taste would sooner permit ornamental trees to intrude upon the garden, rather than fruit trees upon the street. If we had no valuable forest trees, the case would be far different. Our forests are rapidly disappearing, to make room for the plow, and in a few years their noble representatives will seldom be seen if not in our highways and around our public buildings.

The construction of a highway is a permanent thing, to which we set no limit; and the durability of the trees set upon its borders should be in harmony with this idea—trees that will not perish in half a century, but move their tops in unabated vigor when the hand that planted them shall have been transformed into the elements which give them vitality.

D. W. LOTHROP.

W. Medford, Miss., Aug., 1857.

"SHOULD FARMERS' WIVES BE EDUCATED?"

INDEED they should; and *no man* of a sound and cultivated mind could answer it in the negative. The wives, not only of farmers, but of every other class of men, are the great builders of the nation's character; and its destiny lies within the hands of the wives and mothers, who implant the first seeds in the minds of the embryo men they rear, which must ere long bear good or evil fruits.

They occupy the *most important* station that it is possible for mortals to hold. Keep *woman* in ignorance, and she will rear a race of ignorant, degraded *men*—a scourge to the country, which *generations*

could not remove. On the other hand, educate and refine her, and her influence on all around her—husband, children, friends and neighbors—will not only be pure and holy, but conducive, in the highest degree, to their prosperity and happiness. The station such a woman occupies, as a promoter of the country's prosperity, no language can describe. And *farmer's wives*—the wives of one of the *most useful* classes of society—why should not *they* be educated as well as those of any other class? Their education should indeed be more extended than that of any other class, for her sphere is more extended.

She should understand every branch of house-keeping, for *her* home should be as neatly and taste^{fully} arranged as that of any other individual; and as she has the entire control of the cooking department, is in need of a better knowledge of philosophy, chemistry and physiology, than many of her city friends. She should be refined and polite, that her home may be a happy one; for truly, *ignorance* is a most fruitful cause of misery and trouble.

This is a subject on which little can be said without a repetition of ideas, which may be summed up as follows, viz: In a maternal point of view, it is as useless to argue the importance of a good education as it is to discuss the necessity of virtuous and intelligent men in a prosperous community. The "off-scouring" of the land spring from the hovels of ignorance.

She has as many duties to fulfil as a woman of any other class—and *more* than the generality; and no ignorant wife could conduct the multitude of affairs connected with a thrifty farmer's household. As a companion for her husband, who has the means of enjoying life more than any other man, she should be well educated, and refined in her manners—for what man of any mind and heart would want an "*ignoramus*" for a wife? A well stored mind is an inexhaustible source of true happiness, while ignorance is continually leading astray; and miserable must that farmer be, who has a "*blockhead*" for a wife!

Salem, Ohio.

DAVID STREET.

IS IT PROPER FOR LADIES TO ASSIST IN THE GARDEN?

MANY in our day, and age of the world, have arrived at the determination that it is out of the latitude of a *lady* to help in the garden. Although they may have condescended to assist in the should-be delightful household duties, yet to go into the garden and cultivate vegetables is entirely beneath their dignity.

And why is this so? Surely it is a very healthy occupation; far more so than work which is prepared within doors. Is it because they fear they will perform more than their share of the work? But this should not be, for in the beginning God created woman as a helpmeet for man—a sharer of all his joys and sorrows; and shame on the woman, who, when the man is forced to neglect the garden, will let it run to ruin. But this is equally true with the man who does not deign to assist when convenient in the house; and there is as much accordingly in this sphere for him to do, as there is, on the other hand, for the lady. And the man who despises the woman who is above working in the garden or milking the cows, &c., should, before expressing his dislike, first examine his own habits, and see if there is not as large a beam in his own eye.

Miss S. E. M.

Girard, Erie Co., Pa.



Horticultural Department.

MEETING OF THE WESTERN NEW YORK FRUIT GROWERS' ASSOCIATION.

THE exhibition and meeting of this Society was held in this city September 18th and 19th. There was a fine show of fruits and a fair attendance of fruit growers. The following subjects were recommended for discussion, and adopted:

1. Peaches. Can the cultivation of the Peach extensively for market be recommended as profitable? If profitable, what varieties can be recommended?
2. What is the cause of the cracking of the Pear—and of the leaf blight (so called)? What varieties among our best Pears are most subject to it, and what most exempt?
3. What are the comparative advantages of raising nursery trees on fresh soil, previously unoccupied with the ground, over cultivating them on soil which has been repeatedly occupied with such trees, and the fertility maintained by heavy manuring?
4. Can the Pear on Quince stock be advantageously cultivated on a large scale for market?
5. What form of tree is best for the standard Pear in orchards?
6. Can the Raspberry, Currant and Gooseberry be largely cultivated profitably for market, and in what way? What product per acre could be obtained? In what way prepared for market? What varieties are best?
7. What are the best modes of preserving fruit in cans, jars or bottles, and what sorts are best for the purpose?
8. What age is best for planting Apples and Pears from nurseries to orchards to insure the best success?
9. Can land naturally wet be made suitable for raising fruit? And how? And at what expense per acre?
10. Each member is requested to hand in, in the form of a ballot, a list of twelve best Apples for marketing exclusively—and twelve best Pears and six best Peaches—each member to append his name to his list.

FIRST DAY—Morning Session.

H. P. NORTON, of Brockport, in the Chair.

The subject first taken up for discussion was the leaf blight, and cracking of Pears.

H. E. HOOKER, of Rochester, remarked that some varieties were much more subject to crack than others, under precisely the same circumstances.

W. P. TOWNSEND, of Lockport, said that up to the 6th of the present month, (Sept.) the season had been favorable to the growth and healthy development of both fruit and trees. At that time a change occurred in the atmosphere, and much of the time since, it has been close and damp, causing mildew on the grapes. On the evening of the 6th inst. the leaves of the Beurre Diel, on his grounds, turned black, and soon after, those of the Virgalieu and Oswego Beurre, and the fruit commenced to crack. Other varieties growing in the same rows with these, not affected.

P. BARRY, of Rochester, stated that the Virgalieu was cracking this year on the grounds of Mr. YEOMANS, of Walworth, and in the town of Greece, and in other localities of Western New York. He would, however, state, on the authority of a gentleman present, that Mr. YEOMANS had sold some of these very trees to his neighbors which were entirely free from leaf blight, and the fruit from cracking. He believed the leaf blight and cracking to be caused by the same or analogous causes, and that to be fungi or a fungus. Some varieties suffered badly some seasons, and again others were attacked that had never been before. Why this was, no one had been able to tell, any more than they had why these phenomena occurred at all.

Mr. SMITH, of Geneva, thought it might be an insect, as it appears to spread most rapidly after rain, succeeded by warm weather, which is favorable to the propagation of insects.

Mr. HOOKER said that if he remembered right, the soil of Mr. YEOMANS, in which these trees grow, is a heavy clay, with a hard pan, which has been under-drained, but is not now a good pear soil, and that none but a naturally well drained soil would ever be found to be favorable to a healthy condition of the Pear.

Mr. BARRY would state the Duchesse d'Angouleme as in fine condition on Mr. YEOMANS' grounds.

J. J. THOMAS, of United Springs, had made many observations in reference to this subject, but the more he made the less he thought he knew respecting it; had examined it with powerful microscopes, and believed it to be a fungus. The leaf blight and cracking usually accompany each other, but not always, as sometimes there is leaf blight without cracking of the fruit. A small Virgalieu Pear tree, planted some years since, produced its first crop badly cracked, but ever after it has been fine, and the cause cannot therefore be, as some have thought, the exhaustion of the soil. Thrifty varieties are apt to be exempt, such as Beurre d'Amalis, Osband's Summer, Bartlett, &c. On the contrary, Oswego Beurre sometimes cracked. Ananas d'Été seldom cracks. The whole subject was enshrouded in darkness.

Mr. SMITH, of Geneva, would enquire where the fungus commences its growth?

Mr. THOMAS had examined the rust of wheat, and was satisfied that it was propagated by passing through the sap pores, and that the fungus under consideration was produced in a similar manner, and largely increased by budding and grafting, the seed being much smaller than the pores of the wood.

W. P. TOWNSEND would state that he had a small bed of pear seedlings, through which ran a furrow which was wet, and he noticed that the blight attacked only those stocks standing in the furrow, distinctly marking the water course.

Mr. THOMAS said that several years since many attempts were made by numerous parties, among whom were Mr. HONEY, of Boston, and Mr. ZERA BURR, of Perrinton, to eradicate this disease by the use of various solutions, but all had proved unsuccessful.

Mr. BARRY thought that the practical question was, how this disease was to be avoided? He knew of no way. If any varieties are known to be particularly liable to it, they should not be planted.

The CHAIR would ask if there was any difference in the cracking of the Virgalieu on the Quince and on the Pear stock?

Mr. BERKMANS, of New Jersey, had found that Virgalieu trees that had been subject to this disease, when grafted with other varieties became exempt. With him, Glout Morceau and Vicar of Winkfield had been most apt to blight. For twenty years he had attended to this subject, but the result was unsatisfactory. Cracking was most common in wet seasons. Beurre Die, Chaumontel, and Stevens' Genesee all cracked badly.

The next subject taken up was that in reference to rearing nursery trees on fresh soils previously unoccupied with them.

Mr. DOWNING said that he had had no experience in raising trees on new soils, but knew that very good trees could be raised on old soils.

H. E. HOOKER had seen just as good trees raised on old soils as ever were raised, but believed in a rotation of different sorts of trees.

Mr. THOMAS said that there was much difference in soils; some being able to produce good crops for a long time with good cultivation, while others never were profitable.

Mr. BARRY supposed that no one doubted that trees may be grown a century on the same soil; but the question is, are these trees as good as on new land? His experience is in favor of new land.—The roots of the trees were more fibrous, and consequently the trees could be more easily transplanted; believed that many diseases of trees were owing to vicious cultivation and bad manures.

Mr. HOOKER thought that all the soil was pretty old, and that with proper rotation it could be always cultivated.

Mr. BERKMANS had cropped land in France with trees, and then followed them with potatoes and other root crops, and dressed with potash, and then again raised good crops of trees. This had been done several times in succession.

Mr. TOWNSEND thought that a succession of varieties was desirable, as it is the method pointed out by Nature.

Mr. LANGWORTHY thought that there was a principle in new soils peculiar to itself, and which was not in manures, and could not be applied to old soils.

Mr. SMITH, of Geneva, was in favor of new soils, and thought it impossible to grow good trees twice in succession on the same soil, even with heavy manuring. After a crop of Pear trees he had planted Peach trees, which grew feebly the first season, and were manured the winter following, (last winter) and now were only about two-thirds average size.

The next question taken up was, can the Pear or Quince stock be advantageously cultivated on a large scale for market?

Mr. THOMAS would make a report of an estimate he had made of a quantity of Virgalieu trees on ELLWANGER & BARRY'S grounds, occupying about one half acre of land. The trees were six years from the bud, and now have on them at least sixty bushels of Pears. He thought that the Virgalieu should not be planted largely for market, but would prefer Louise Bonne de Jersey and Duchesse d'Angouleme. The great cause of failure among tree planters is the want of discrimination in reference to the varieties which they plant. Much information is yet also needed on this point.

Mr. YEOMANS, of Walworth, Wayne Co., had an orchard of Pears on Quinces of three thousand trees. Those of Louise Bonne and Duchesse d'An-

gouleme produce from one half to one bushel per tree, but the Virgalieus are badly cracked.

Evening Session.

President THOMAS in the Chair.

The question taken up for this evening was, what form of tree is best for the Standard Pear in orchards?

Mr. BERKMANS thought the limbs should be kept short, and the tree trimmed into the pyramidal form, for the first ten or twelve years, and then allowed to take its own course. The pyramidal form is the one found by experience to be the most practical one. If the limbs are allowed to grow long, the weight of the fruit is apt to break them down. Pear trees are more apt to straggle than Apples. Prof. MAPES' trees are allowed to straggle, and they split up.

Mr. BARRY remarked that there were several considerations in reference to the forms of trees, among the most important of which are the liability of their being affected by high winds, the gathering of the fruit, and the safety of the trunk of the tree. The Standard tree is usually trained with a trunk from four to six feet high. This form is not so well suited to the Pear as to the Apple. The sun in winter is apt to affect the bark of the trunk and seriously injure the tree. Trees trained in the pyramidal form are less affected by high winds, and the fruit can be much more easily gathered; and trees growing in open spaces naturally assume the pyramidal form. He had also found that trees trained in this manner bore earlier than tall ones, and were not liable to as many accidents.

Mr. HOOKER agreed in the main with Mr. BARRY, but thought that trees should be trimmed high enough to cultivate easily about them, and that the shade afforded by the limbs was sufficient to protect the trunk from injury by the sun.

Mr. AINSWORTH, of West Bloomfield, is cultivating trees in both the forms mentioned by the previous speakers, and also in a middle form. Some with limbs commencing five feet from the ground, others about two and a half feet, and lastly, branching from the ground. The trees are now all in bearing; prefers the middle form, because the trees are more easily cultivated. The low limbs protect the trunks from the rays of the sun, and also from reflection from the snow. When trees are injured by the sun, it is always on the north side, and on the under side of the limbs. A year ago last winter his trees received the most injury in this way; and at the same time the faces and hands of the men at work on his grounds were severely blistered by the reflected rays of the sun from the snow. Those of his trees that at that time were protected by the low limbs were not injured. The trees trained four and a half or five feet high he found to be much more affected by high winds. He did not like the pyramidal form, but preferred to keep the head down and make the limbs throw out. Had found the lowest trimmed to bear the earliest.

Mr. BERKMANS had seen one tree in France branched low, so that the limbs on every side braced into the ground and acted as stanchions, so that it was impossible for any wind to move or affect it.

Mr. TOWNSEND'S method was similar to the middle course adopted by Mr. AINSWORTH.

Mr. FISH plants stocky trees, and keeps them trained low.

Mr. BARRY said there was no difficulty in cultiva-

ting clean, underneath low trees at least close enough for all useful purposes. Weeds do not grow when the limbs are low, and it is an injury to the roots of the trees to plow close; thought low training a great reformation. Western people seemed now to understand this point, and all planted low headed trees.

The PRESIDENT remarked that he had found that the extent of the roots of Pear trees corresponded to their height, and a tree about eight feet high, for instance, had a breadth of roots of about eight feet, or four feet on each side, and the trees should not be cultivated so close as to much disturb these roots. He did not regard high trained trees in the light of Sr. PIERRE, who when walking through a grove with a friend, remarked that he thought that it was a beneficent dispensation of Providence that the trees in the grove grew just high enough for people to walk under conveniently, without thinking that the lower branches had been broken off by cattle running underneath, and had decayed and fallen off by being too close.

The next subject discussed was that of the Proper Age for Transplanting Apples and Pears into Orchards.

Mr. MAXWELL stated that nine years ago a neighbor of his, planted some large apple trees, which grew well, and that four or five days after he (Mr. MAXWELL) planted some little whips of the same kind, and in four years they were the largest trees, and bore the most fruit.

C. P. BISSELL, five years ago, planted some large cherry trees, which have done very well; but at the same time he planted some large apple trees and some whips, and the small ones have made the largest trees, and are bearing good crops for their age, while the other trees only show now and then an apple.

Mr. AINSWORTH said a neighbor, some years since, bought a wagon load of large apple trees, and planted them and manured them well; but they never thrived, and have all died out. A few years after the same person planted a quantity of quite small trees, and they have made a fine orchard. Another neighbor, a few years since, bought some very small trees, which have made large, fine trees, fifteen feet high; while a lot of large trees, planted at the same time by another neighbor, have not grown six inches. Large trees have large roots, and when they are transplanted these roots are cut off, and, consequently, the tree is starved to death; on the contrary, small trees have a quantity of fibrous roots, which are nearly all removed when they are transplanted, and the tree scarcely feels the shock.

Mr. BARRY said this subject was a very important one—that it was the first thing usually spoken of by purchasers of trees—they must have large trees, and, in most of these cases, large means *quite* large. He had found that two years was the most favorable time for planting pears, cherries and plums, and three years for apple trees. There are exceptional cases, where large trees are moved only a short distance.

Mr. HOOKER coincided with the remarks of Mr. BARRY.

Mr. BARRY would not cut back yearlings nor two year old trees when transplanted, but would let them remain a year, and then cut back severely.

Mr. AINSWORTH agreed with Mr. BARRY. His advice was not to cut back too far, as the buds at the base of the shoots are small, and will make but a feeble growth.

Mr. HOAG cut back severely some small trees when he planted them, and the first two or three years they made no growth, but have since done well.

Adjourned.

SECOND DAY.—Morning Session.

W. P. TOWNSEND in the Chair.

The subject first discussed this morning was in relation to the Profitable Culture of the Small Fruits.

Raspberries.—Mr. DOWNING stated that the Hudson River Antwerp was found most profitable in his section. It is cultivated there in fields, like corn.

Mr. HOOKER sold this year, off from one-tenth of an acre of the Hudson River Antwerp, to the amount of \$14 80, making the average for an acre about \$140. His neighbor, Mr. BISSELL, found the profits somewhat larger.

Mr. SMITH, of Geneva, said that a party near Geneva realized \$200 per acre from the common Black Cap.

Mr. HOAG preferred Brinckle's Orange. It is a delicious fruit, bears abundantly and long after others have ceased, yet it will not bear carriage as well as the Hudson River Antwerp. It is, however, much hardier than the Hudson River Antwerp, which killed down very badly by the cold.

Mr. ELLWANGER remarked that Brinckle's Orange did well with him, and that he heard very favorable reports from it at the West.

Mr. BARRY thought that the raspberry could, without doubt, be cultivated with profit; but can market be found for it, if cultivated largely? If sufficient market was at hand, it would be found profitable, even at six cents per quart.

Mr. HOOKER remarked that it was impossible to transport raspberries many miles, either in wagons or cars. He preferred, for his own use, the Fastolf, but thought the Hudson River Antwerp preferable for marketing; and another advantage this variety has, is that the berries are all perfect, even to the smallest and last.

N. DRAPER, of Rochester, planted five kinds of raspberries about thirty years ago, but found only two kinds worth preserving, which were the White and Red Antwerp. These bushes, for most of the time, stood under peach trees, and were cut down last spring. The product was usually about fifteen bushels for sixty square rods. They were never manured, but had clean cultivation. Besides what he used in his own family, he sold annually about twenty-five dollars' worth. They could not be profitably transported ten miles.

Mr. HOOKER said that, although raspberries did not want to be starved, yet he had found high manuring to be unproductive.

Mr. DOWNING remarked that where they are cultivated on the Hudson for the New York market, they are carried by land only from one to four miles, and then sent down the river in barges.

Mr. SMITH had sent to Buffalo and Syracuse quite a quantity in two quart baskets. He thought good cultivation necessary, and that the plant preferred a moist soil. He laid the canes down in the fall, and covered only the tops, which he found sufficient.

New Rochelle Blackberry.—C. P. BISSELL, of Rochester, had an acre in cultivation for market. It bears profusely. Must be thoroughly ripe to have a good flavor. The distance he planted was six feet by four, but thought it would be better to

plant eight feet by four. He trained it on wire trellises. It should be cut back in the spring to five feet, and the laterals shortened in. The laterals only bear, and they are apt to break if not shortened in.

Mr. HOOKER said that Mr. CARPENTER advises wire trellises, and that the old cases should be trained on the lowest wires, and the new canes trained up.

Mr. PENFIELD, of Lockport, found that the berries are apt to drop off before they are fairly ripe.

Mr. HOAG planted half an acre a year ago last spring. They were set six feet by four, but they were too close; eight or ten feet by four would be better. He had some fine fruit this year. Recommended cutting back, as the plants bear better. The berries should hang a week after turning black. It is very prolific.

Mr. BISSELL said that this plant fills a vacancy which has long been felt—it comes in between the raspberry and the commencement of the peach season, and when there is a scarcity of fruit. With him, each plant bears from two hundred to four hundred berries.

Mr. HOAG said that his berries were not yet all ripe, but he found them good, when eaten with plenty of sugar.

Mr. FROST stated that he had found great difficulty in telling when they were ripe; that those who cultivated largely about New York, placed straw on the ground between the bushes, and, by jarring the plants, the berries fell on to the straw, and were then gathered.

Mr. SCOTT remarked that when it will fall it is too ripe—it is too sweet, and too soft to be carried to market.

Mr. BARRY thought the Dorchester, or improved High Bush blackberry, a very superior sort, and would advise it in preference to the New Rochelle.

Mr. DOWNING thought the New Rochelle much the best for market, but the Dorchester is the highest flavored, and Newman's Thornless variety had a better flavor than either.

Mr. HOAG said that the New Rochelle made excellent wine.

The subject of Preserving Fruits elicited quite a number of remarks, but nothing decidedly new was brought out, except by

Dr. BRISTOL, of Dansville, who had found much difficulty in preserving fruit so that it would not mould on the top, where there was always a vacancy, caused by the shrinkage during cooling. His method to obviate it is briefly this: He uses a glass bottle, with a cork perforated to admit of a metallic tube, the upper end of which also passes through another cork, fitting into a small vial, which is filled with syrup. The jar is filled with the fruit, and undergoes the usual method of standing in boiling water to exclude the air, when the cork and apparatus just described are applied, and, as the contents of the vessel shrink as they cool, the syrup from the vial runs in, and keeps the jar full. When it is quite cool, the tube is cut with a pair of sharp shears, and, if nicely done, it is quite tight. A little wax on the end of the tube and over the cork completes the operation.

The ballot for a list of the 12 best varieties of apples, and 12 best pears, and 6 best peaches, for market purposes, resulted as follows:

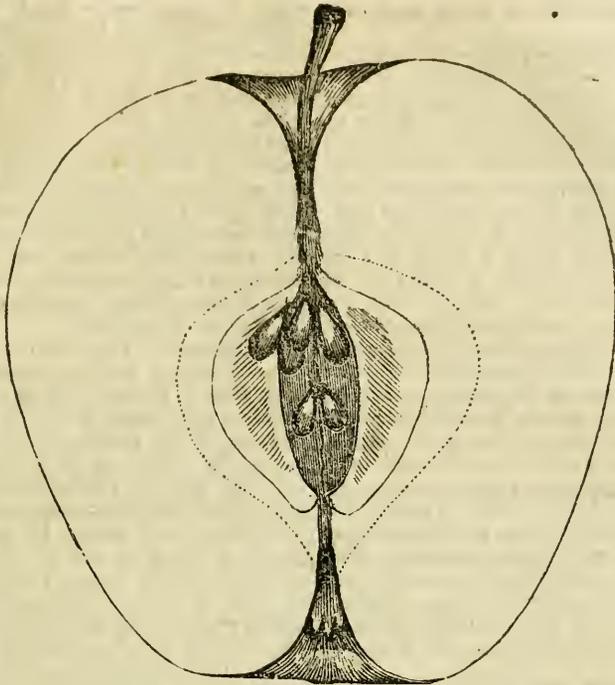
APPLES.—Out of 19 votes cast, the Rhode Island Greening received 19; Baldwin, 18; Roxbury Russett, 17; Red Astracan, 14; Talman Sweet and King of Tompkins Co., each, 13; Northern Spy and Esopus Spitzenburg, each, 12; Fall Pippin, 9; Sweet Bough, 8; Primate and Cayuga Red Streak (20 oz.), each, 7; Golden Sweet, Gravenstein, and Early Harvest, each, 6; Golden Russett and Yellow Be'llflower, each, 4; Swaar, Jonathan, Rambo, and Seek-no-further, each, 3; Cooper's Redling, Duchess of Oldenburgh, Peck's Pleasant, Porter, American Summer Pearmain, and Vandevere, each, 2; Colvert, Early Joe, Early Summer, Hawley, Prince's Harvest, Fall Orange, Sops of Wine, Hill's Sweeting, Green Sweet, Autumn Strawberry, Golden Pippin, Red Canada, Benoin, Melon, Pound Sweet, Wagoner, Jersey Sweet, Newtown Pippin, Ribston Pippin, Mammoth Pippin, Spicy Sweet, Hubbardston Nonsuch, Large Yellow Bough, and Maiden's Blush, each, 1.

PEARS.—Out of 21 votes cast, the Bartlett received 19; the Louise Bonne de Jersey and the Duchesse d'Angouleme, each, 18; White Doyenne, 17; Easter Beurre and Lawrence, each, 16; Vicar of Winkfield, 13; Seckel, 12; Flemish Beauty, 11; Beurre d'Anjou, 9; Beurre Diel and Tyson, each, 8; Sheldon, 6; Buffam and Bell Lucrative, each, 5; Glout Morceau, Beurre Superfine, Urbaniste, Bloodgood, Brandywine, and Beurre Giffard, each, 3; Theodore Van Mons, Beurre Clairgeau, Beurre Bose, Onondaga, Rostiezer, Ananas' Genesee, Osband's Summer, and Ananas d'Ete, each, 2; Howell, Ontario, Dearborn's Seedling, Beurre d'Amalis, Gris d'Hiver, Brown's Autumn, Comstock's Beauty, Comstock's Mammoth, Winter Nelis, Jalouse de Fontenay, Doyenne Boussoch, Nouveau Poiteau, and Bergamotte Lucrative, each, 1.

PEACHES.—Out of 15 votes cast, Crawford's Early received 15; Crawford's Late, 13; Early York (serrate), 11; Old Mixon Free, 10; Morris' White, 5; Coolidges Favorite and Large Early York, each, 4; Honest John, 3; Old Mixon Cling, White Imperial, Red Cheek³ Melocoton, Durock Freestone, George IV., Walter's Early, and Early Barnard, each, 2; Ward's Late Free, Jacques Rareripe, Early Tillotson, Lemon Cling, and Columbia, each, 1.

THE ORTLEY APPLE.

As a general rule, varieties of fruit are best adapted to the locality in which they originate. The Ortley apple seems to be an exception. It is a native of New Jersey, but does not succeed well there, or in the Eastern States, or in New York; but at the West, according to ELLIOTT, on strong, rich soils, "it proves one of the hardiest, most productive, profitable, as well as best known varieties. Mr. ERNST, of Cincinnati, stated at the last meeting of the American Pomological Society, that the Ortley "was a great favorite at the West, where it is cultivated mostly under the name of White Bellefleur." In New York, according to Mr. SAUL, of Newburgh, "it is a miserably mean tree and a poor bearer." Mr. BARRY, of Rochester, N. Y., said "it was fine at the West, but not in this locality." When grown on strong, rich soils at the West, according to ELLIOTT, the fruit is very much larger than when grown at the East. "Skin, smooth; form, oblong, oval, sometimes roundish conical; color, pale yellowish at



THE ORTLEY APPLE.

the North; South it becomes a rich yellow, with specks of dark red, and a vermilion tinge surrounding when exposed to sun; stem, varying from short and stout to long and slender; *cavity*, deep, narrow; *calyx*, small, closed; *basin*, furrowed or plaited from the surrounding angles or ribs that are often apparent in the fruit; *flesh*, yellowish white, tender, crisp, sprightly, mild acid; *core*, large, open; *seeds*, abundant, loose in the capsules. *Season*, January to April."

HORTICULTURAL OPERATIONS FOR OCTOBER.

CAULIFLOWERS.—From the cauliflower and cabbage seed, sown in September, will, by the first of October, be produced some nice plants, for early spring use. About the first week of the month select a nice sheltered and dry piece of ground, some elevated border on the south side of a board fence or wall, is the best situation, with some protection at a short distance on the southwest, as a hedge or buildings, that will break off the southwest winds in the winter—and yet fully exposed to the sun. Mark out the bed six feet wide and twenty or thirty feet long, according to the number of plants wanted. A bed thirty feet long will hold about a hundred. Spread over the surface four to six inches of good rotten manure, and spade it in eighteen inches deep. Now drive down some stakes at the corners, (pieces of 2x4 scantling are as good as anything,) leaving those in front one foot out of the ground, and those at back eighteen inches. This gives a fall to the water on the glass of six inches in six feet. Set more stakes along the sides, if necessary, according to the length of the boards. Now nail on old boards or thick plank, making it as tight as possible, to exclude cold wind, and frost, and mice. Now throw up a bank

of earth eighteen inches thick, and to the top of the boards all round; make the bank solid, and pat it smooth, to throw off the rain. This frame is to be covered with close boards, or shutters, or what is still better, glass sashes. In a week or ten days as soon as the bed has settled, it will be time to plant. Take up the best plants carefully, with a ball of earth, and without breaking their roots, if possible, and plant in the new bed, eighteen inches apart each way, up to their leaves, first breaking off any decayed leaves that may be on them; press the earth firmly to their roots with the hands, and give a good watering if dry weather, and shade a little at first if necessary. Between the rows may be planted some hardy kind of lettuce, as Green Hammersmith or Brown Dutch, &c. Those of the tender varieties are apt to damp. They will come into use during the winter and spring, before the cauliflowers spread much. Cover up in rainy and stormy days and cold nights, but give air on all mild and favorable opportunities. As soon as the weather begins to set in severely, the whole frame must be covered over eighteen or twenty inches thick with littery straw, and kept on night and day in very severe weather. In bright and mild days the covering must be taken off, and air given, so as to keep them hardy and prevent their spindling up and damping off. All decayed leaves must be picked off, and mice destroyed, should any appear. These will come in for use in the spring and early summer, and may be the finest of the season. In spring, in mild weather, the covering must be taken wholly off and put on in cold nights. Some Early York cabbage may be managed in the same way, only planted one foot apart each way. Some young plants may also be kept in this way for planting out in the open ground, for the second early summer's crop. They must be kept dry

all winter, but in dry weather in spring must have plenty of water.

WINTERING THE CROPS.—BEETS.—Towards the end of the month, or just before frosty nights are expected, will be time to take up the beets and pack them away for winter use. They must be taken up carefully, in a dry day, without breaking or bruising them, and their tops cut or twisted off just above the crown, so as to prevent their bleeding. They must then be taken to the cellars or cave, and packed away in sand or dry earth. If there be a large quantity of them, a good way is to square up a few boards in the corner of the cellar, forming a sort of bin, to keep up the sand or fine earth; if only a few, they may be packed in barrels or dry goods boxes, with the sand or earth between them. First lay two layers of roots on the floor, as you would lay stove wood, as close as they can be packed, close up to the boards, with their crowns toward the boards and wall, and their heels meeting in the middle. Then spread on fine dry earth or sand enough to fill up all the spaces between the roots; then two more layers of roots and a layer of sand. Parsneps and carrots, and salsify may be kept in the same way. But salsify is better set upright in boxes well filled with sand, because of their roots being so thin; they keep better and are more easily got at. Salsify is very hardy, and a portion of the crop should be left out in the open ground until spring. The same with parsneps.

ONIONS.—By the first week in the month, onions will be all ripe and their tops dead. They should be pulled up and left on the ground a day or two to dry, if fine weather; then carried to a dry, airy room or loft, and spread out to dry still more, that they may be thoroughly ripened, or they will not keep. In wet days, when you can only work in doors, their tops should be braided together, forming a rope of onions two or three feet long, and hung up in a dry, airy place, where it will not freeze.

Proceed carefully with the earthing of the Celery, as directed. Keep the leaves straight and the earth out of their hearts. Earth up about three or four inches at a time, and at intervals of two or three weeks. Do the earthing when the leaves are dry and clean, and the earth in nice working order.

JOSIAH SALTER.

MUSHROOM CULTURE.

LOUDON, an authority upon all subjects of this character, describes the mushroom (*Agaricus campestris*) cultivated in gardens for edible purposes, as "a well known native vegetable, springing up in open pastures in August and September. It is most readily distinguished, when of middle size, by its fine pink or flesh-colored gills and pleasant smell. In a more advanced stage, the gills become of chocolate color, and it is then more apt to be confounded with other kinds of dubious qualities; but that species which more nearly resembles it, is slimy to the touch, and destitute of the fine odor, having rather a disagreeable smell; further, the noxious kind grows in woods, while the true mushroom springs up chiefly in open pastures, and should be gathered only in such places."

The spawn or seed by which the mushroom is propagated, resembles pieces of fine white thread, and is collected in old pastures, or other places

where the *agaricus* is found. Seedsmen have a method of making it for supplying gardeners as follows:—Fresh horse dung mixed with short litter is composted with one-third part of cow dung, and a small portion of garden loam. This is cut up into bricks, and half dried by frequent turning from one edge to the other,—at this stage, in a couple of holes made by a dibble, small pieces of spawn, walnut-size, are placed. When the bricks are dry, they are piled upon a layer of dry horse dung, six inches thick, and covered with sufficient fresh dung to produce a gentle heat through the whole. The spawn will spread through the bricks, which may be stored in a dry place, where they will preserve their vegetative power a long time.

A mushroom bed is formed in the following manner:—Procure a sufficient quantity of good horse dung, heap it up and turn frequently, in order to induce regular fermentation, and to get rid of the rankness of the manure. This will require about two weeks. Shake up the dung well with the fork and build the bed, perpendicular, a foot high; then slope toward the centre at an angle of thirty degrees, like the roof of a house. Let each forkful be well beaten in its place, and the bed be of neat and regular form, and then cover the whole with straw or litter to induce heating, which will be at the proper stage at from ten to fourteen days. Remove the covering and lay an inch of fine loam over the dung. On this plant the spawn in small pieces, six inches apart each way, and cover with another inch of loam. Beat smooth with the spade, and replace the covering of straw. Protect the bed, if in the open air, from extremes of heat and cold, drouth and moisture, keeping the temperature at about 60°. If the mould appears too dry, sprinkle with tepid water mornings, leaving the covering off for about an hour after the application.

Good beds, rightly managed, will produce young mushrooms in six weeks' time, but it is often longer. Sometimes extra heat and moisture will bring on a good growth; again, too great heat and moisture destroys the vegetative power of the spawn. Proper care will generally secure a fine supply of this delicious vegetable fungus. In gathering, take up to the bottom, and fill the hole with earth. If the stump is left it becomes a nursery of maggots, very injurious to the succeeding growth. Perhaps some other correspondent will give C. of C. W. the information he desires in regard to obtaining spawn, and its price. We here furnish full directions for its culture, and some notice of the original sources whence it is obtained.

P. A. S.

CULTIVATION OF ONIONS.

MESSRS. EDITORS:—I have raised 38 bushels of onions on 8 rods of ground, some of the onions measuring 16½ inches in circumference. My method of culture is as follows:—I plow the ground deep, in the fall, and manure very high. In the spring plow the ground again, and then harrow and rake the ground smooth. Gravelly ground is the best. I rake off all of the largest stones; then sow in drills, about 14 inches apart; sow quite thick, and thin out. They should be weeded as soon as they are big enough. I think that the first of April is the best time for sowing the seed.

NATHAN KENYON.

Little Genesee, N. Y.

Ladies' Department.

HOW SHALL WE SPEND OUR WINTER EVENINGS?

THE question, how shall farmers and their families spend their winter evenings profitably, and at the same time pleasantly? has often been asked, and many ways have been proposed, and I presume resorted to in various places, to suit their several localities; but I will tell you how we managed it the past winter. At a social singing party at the house of one of our deacons, our pastor proposed to us to get up a literary society of some sort, for mental, moral, and social improvement. After some discussion, a committee was chosen to draft a constitution and give us a name. It was decided to call it a Polytechnic Society; its officers were President, Secretary, Treasurer, and Editor and Editress. Ten cents constituted any one a member; the funds to be applied to the purchase of paper, ink, and other incidental expenses. To meet once in two weeks. Officers to be chosen by ballot, and changed at every meeting, thus giving every one a chance for an office. Besides the paper, which of course was a written one, and filled from seven to ten sheets of foolscap, the contents of which were, with very few exceptions, original, and of great variety, we had two original essays. At the close of the meeting, the President announced the officers for the ensuing meeting, and himself appointed the essayists; the choice of subject left to the writers.

We met round, as the schoolmasters say, or from house to house, as we were invited. And this reminds me of a peculiar feature of Western life—the capabilities of a small house to accommodate a large company. Our housewives seem to have the knack of making room; for a common observer would hardly think some of our houses large enough to accommodate an ordinary sized family, yet from fifty to sixty persons were comfortably seated, for that was our usual number. New Years afternoon we met at the house of our pastor, with such donations as we had the power to offer, and enjoyed an excellent and bountiful repast prepared by the ladies, and in the evening had our regular meeting.

Perhaps some will say, well, this only took up one evening in two weeks, but it must be remembered that the articles for the paper occupied all the spare time of the members during the two weeks, and the editors had their hands full, I assure you. At any rate, notwithstanding the severity of the winter, we always had a full house, and the winter passed rapidly away; and when the spring came at last, with its usual toils and cares, and we were obliged to adjourn till September, we all felt sorry to give up our Polytechnic; for though it is true the *arts* and *sciences* had not very much advanced under our supervision, we felt that our minds had been improved, and we had become acquainted with each others habits of thought, which years of common intercourse would never have unfolded. Now if any of your subscribers have found a better way, let them name it, and we will try it; if not, let them go and do likewise.

VIOLA.

Clay, Washington Co., Iowa, July 20, 1857.

ORIGINAL DOMESTIC RECEIPTS.

CURING HAMS.—Rub salt all over them as soon as cut and laid on a table; the next day brush it off and pack in a cask; put on a pickle made as follows: 1 quart salt to 1 gallon water; to 6 gallons water $\frac{1}{2}$ gallon molasses and 3 ounces saltpetre. Let the hams remain in six or eight weeks, according to size. Smoke to suit, and pack away in salt in a cask, and put in a cool dry place, and they will keep good all summer.

OYSTER SOUP.—To one quart of oysters with their juice, put two quarts of cold water, half a pint of milk, and a heaping spoonful of salt; let them boil one minute; skim out the oysters; add half a tea cup of crackers rolled fine, half a tea cup of butter, and a little pepper; let it boil again; then pour over the oysters.

EXTEMPORE BUCKWHEAT CAKES.—Three pints buckwheat flour; one tea spoonful carbonate of soda, dissolved in water enough to make a batter with the flour. When mixed, add a tea spoonful of tartaric acid, dissolved in a few spoonfuls of hot water. Stir it in, and bake immediately.

GINGER SNAPS.—One cup molasses; one half cup sugar; one half cup butter; one half cup warm water, the butter melted in it; two table spoons ginger; one tea spoon saleratus. Knead it well with flour enough to make it stiff. Cut it into round cakes; bake in a moderate oven.

BAKED CORN MEAL PUDDING.—To seven heaping table spoonful Indian meal add one quart boiling milk, one cup molasses, a little salt and butter. Stir all well together, and just as it goes into the hot oven, put in a cupful of cold water or milk. Bake three quarters of an hour.

TO CURE HOARSENESS.—Take whites of two eggs, and beat them with two spoonfuls of white sugar; grate in a little nutmeg; then add a pint of luke-warm water. Stir well, and drink often. Repeat the prescription if necessary, and it will cure the most obstinate case of hoarseness in a short time.

PICKLED CABBAGE.—Slice red cabbage very thin; put on it a little coarse salt, and let it rest 24 hours to drain; add sliced onions if you like them. Boil four spoonfuls pepper and four of allspice in a quart of vinegar, and pour it over.

WIPING DISHES.—Much time is wasted by house-keepers in wiping their dishes. If properly washed and drained in a dry sink, with a cloth spread on the bottom, they look better than when wiped, besides the economy in saving time and labor.

TO PREVENT THE SMOKING OF A LAMP.—Soak the wick in strong vinegar, and dry it well before using. It will then burn both sweet and pleasant, giving much satisfaction for the trifling trouble in preparing it.

TO MAKE CRACKER PIE.—Take eight water or butter crackers; break in pieces, and pour on them one quart of boiling water; add a tea spoonful of tartaric acid for two pies. Sweeten and spice to the taste.

CREAM PIE, VERY RICH.—Is made by a rich paste for bottom; then a layer of butter, the thickness of a cent; then one of sugar; then one of flour, the same thickness, and fill up with cream.

TO DESTROY CRICKETS.—Put Scotch snuff upon the hole where they come out.

Editor's Table.

New Advertisements this Month.

Downing's Fruits and Fruit Trees of America.—Wiley & Halsted, New York.

Albany Tile Works—C. & W. McCammon, Albany, N. Y.

Fruit Trees and Fruit.—T. G. Yeomans, Walworth, N. Y.

The Massachusetts White Grape.—B. M. Watson, Plymouth, Mass.

New Rochelle Blackberry.—J. C. Teas, Raysville, Ind.

Young Men, Form a Book Club.—D. M. Dewey, Rochester, N. Y.

Morgan Horse for Sale.—Eliab Yeomans, Walworth, N. Y.

Blackberry Plants by Mail.—C. P. Bissell, Rochester, N. Y.

Family Sewing Machines.—Grover & Baker, New York.

FAIR OF THE UNITED STATES AGRICULTURAL SOCIETY.

The Fifth Annual Fair of the United States Agricultural Society was held at Louisville, Ky., Sept. 1—6. The attendance was very large, the arrangements excellent, and the receipts over \$20,000. The show of Short-horns was not large, but there were several excellent herds represented. There was also a fine show of Herefords. Of Devons, Ayrshires and Alderneys few were exhibited, and those few possessed no very particular excellence. There was a small show of Coarse Woolled Sheep of fair quality, and a few Saxons. The show of Pigs was not what might be expected at a National Exhibition in the heart of the great West. Of Poultry there was no show worth the name. The exhibition of Horses was exceedingly good. The show of Fruit, Vegetables, Seeds, and Agricultural Implements was rather meagre. On the whole, the show was decidedly inferior to those at Philadelphia and Boston.

The following awards have been decreed by the Judges for Implements exhibited at Syracuse in July last:

AWARD FOR REAPERS.

First Premium—To C. H. McCormick, of Chicago, Ill., a gold medal and diploma.

Second Premium—To Walter A. Wood, of Hoosick Falls, N. Y., Manny's patent, a silver medal.

Third Premium—To Warder, Brokaw & Child, of Springfield, Ohio, a bronze medal.

Diploma—To Jonathan Haines, of Pekin, Ill., for Illinois Harvester—a diploma.

AWARDS TO COMBINED MACHINES.

First Premium—To Walter A. Wood, of Hoosick Falls, N. Y., Manny's Patent, a gold medal and diploma.

Second Premium—To D. M. Osborne, of Buffalo, N. Y., a silver medal.

Third Premium—To Warder, Brokaw & Child, of Springfield, Ohio, a bronze medal.

HAY OR COTTON PRESS.

First Premium—To Wm. Deering & Co., of Albany, N. Y., for a Stationary Parallel Hay Press—a silver medal and diploma.

First Premium—To Wm. Deering & Co., of Albany, N. Y., for a Portable Parallel Hay Press—a silver medal and diploma.

GRAIN CRADLES.

First Premium—To H. Robinson, of Lafayette Square, Ontario Co., N. Y.—a bronze medal.

SCYTHE SNATHS.

First Premium—To Frost, Burke & Co., of Springfield, Vt.—a bronze medal.

HAY RAKES.

To John Hatch & Cook, of New York, for superior Hay Rakes—a certificate of merit.

The committee on mowers have not yet agreed upon their verdict.

POTATO ROT.—Potatoes have rotted badly in many parts of the country. DAVID SIGLER, of Lime Mills, Crawford Co., Penn., says potatoes are rotting very badly in that section, especially on those farms where the same seed has been planted for some years. He has fourteen varieties, and there are no signs of rot, except on the old Irish grey, and Pinkeyes. Two years ago he raised 105 bushels of potatoes on 44 square rods of ground, say 382 bushels per acre. He has planted the same ground eight years in succession, and has never been troubled with the rot, except one season. He applies plenty of fine manure on the land in the fall, and plows 14 inches deep, with a double plow. He also applies a large table spoonful of plaster and a tea spoonful of salt in each hill. The soil is a gravelly clay loam, with a hard clay subsoil.

Mr. S. also states that a neighbor of his this spring planted potatoes and corn in alternate rows on seven acres of rich gravelly land, thinking this practice a preventive of the potato rot. The result, however, does not come up to his expectations, as the potatoes are rotted badly, and the corn is only half eared.

WILL WHEAT TURN TO CHESS?—Communications on this "vexed question" flow in upon us from all quarters. We can see no good object to be gained by their publication. Not one of them contains anything new—not a single fact that affords positive proof. One gentleman who has no doubt that wheat will turn to chess, urges "the readers of the *Genesee Farmer* to make experiments for themselves, and they will then be convinced." We are in favor of this proposition, but would ask leave to amend, in one particular. Let the object of the experiments be to turn chess to wheat. It is a poor rule that will not work both ways. If chess is "degenerated wheat," it is not improbable that good culture would restore it back to its original condition. This is an object worthy the ambition of our readers. One hundred dollars has been offered for a process of turning wheat into chess. We will be one of ten gentlemen to offer *One Thousand Dollars* for a cheap and simple process for turning chess into wheat. Let the experiments be commenced this fall.

UNDERDRAINING CLAY LAND.—In the summer of 1856. Mr. CHARLES MEIKS, of Mercer Co., Penn., underdrained eight acres of clay land as follows: The drains were dug parallel with each other, twenty-seven feet apart, thirty inches deep, and about twelve inches wide. Being unable to procure drain tiles, they carted sandstone to the trenches, broken to a proper size, and filled in about twelve inches, and wherever there was a low spot, they cut a cross drain. After it was finished, it was sown to white wheat, and the average yield this harvest was forty-three bushels per acre, and in weighing, it overran two pounds and a half per bushel. Other farmers in the neighborhood think they have a very good crop if they get twenty bushels per acre, while with many it does not exceed fifteen per acre.

CARBONIC ACID IN THE SOIL.—The air found in the interstices of arable soils has been analyzed by BOUSSINGAULT and LEVY, and found to contain from 22 to 23 times as much carbonic acid as the atmosphere, and when they had been recently moistened, 245 times as much.

LIME AND SULPHUR FOR THE CURCULIO.—In the new edition of *Downing's Fruits and Fruit Trees of America*, just published, it is stated that T. W. LUDLOW, JR., of Yonkers, N. Y., has been very successful in destroying the plum curculio by syringing the trees after the fall of the blossoms, with a mixture of whitewash and flowers of sulphur, in the proportion of eighteen double handfuls of sulphur to a barrel of tolerably thick whitewash, made of unslacked lime. The sediment of this mixture will answer for a second and third barrel, merely filled with water and well stirred. Apply the mixture three times a week for four weeks.

The trees to which this mixture was applied, have also been free from knots or black warts.

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A ROSE ON AN APPLE TREE.—A correspondent of the *Maine Farmer* gives us an account of a natural curiosity which he saw in the garden of Mr. WINSLOW HALL, of letter H. Plantation, Aroostook on the 21st ult. *This was a full blown rose, upon an apple tree.* The tree blossomed at the usual time, and, when seen by the narrator, had many apples upon it. The blossom was nearly two inches across the surface, perfectly white, and resembled in all respects the common white rose, having as many leaves, and being as large and full otherwise.

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LARGE CURRANTS.—The *Deseret News* of August 5, a Mormon paper published at Great Salt Lake City, says: "Br. L. C. HEMEWAY, of the 4th ward, presented us on the 3d inst. with liberal specimens of the black, reddish, and yellow varieties of what are called Mountain Currants. They were the largest, and finest flavored currants we have ever seen; some of them were larger than ounce bullets. They were raised from seed gathered on the plains east of Laramie."

•••••
TO KILL ANGLE WORMS.—Sow salt at the rate of seven bushels to the acre as soon as the frost is out of the ground in the spring, and, my word for it, the salt and worms will make a good dressing of manure. Twenty years ago my garden became so hard from the working of angle worms that I thought I must abandon it; but since the above application it has been free from worms, and as mellow as ground could be. S. N. FRANKLIN.

Ledyard, N. Y.

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TO PROTECT CUCUMBER VINES FROM BUGS.—A "farmer's wife" writes us that she has found the following an efficacious method of protecting cucumber vines from bugs: "Take a large barrel, and fill it half full of hen droppings, and then fill it up with water. Let it stand till well soaked. Then take a bunch of broom corn and sprinkle the vines every few days."

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PRIZE ESSAYS.—The Premium Essays will be found in this number. The respective writers will please inform us what book or books they wish of the value of \$1, and they shall be immediately sent, prepaid, by mail.

Next month we shall offer premiums for more Essays, and hope our readers will name subjects.

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BOOK CLUBS.—We call attention to Mr. DEWEY'S advertisement relating to Book Clubs. Such organizations are of great use to the young, especially.

HAILSTORMS IN ENGLAND.—Hailstorms have been unusually destructive the past season, not only in many parts of this country, but also in England. A correspondent of the *Mark Lane Express* writes from Reading: "By this storm two or three gentlemen have been completely ruined." One poor fellow said, with tears in his eyes, that "he was beggared, for all his barley was destroyed." Another from Basingstoke states: "I am sorry to say I never witnessed such destruction before in my life. On Wednesday (five days after the storm) I saw 20 cart loads of hailstones, *all whole*; and I heard several people say that over 200 loads were floated down into a corner near Lord ASHBURTON'S Park. Such a storm was never before witnessed." A third writes from Alesford: "On the 15th (of August) I measured a drift of ice (I could not call them hailstones) across the turnpike road, and found it *four feet in depth.*" A fourth, from Cirencester, says: "There are many persons here that have lost the whole of their crops, *roots and all*; and the ice is lying about the fields now, (Tues lay) although the storm took place last Friday." In Hampshire, the ice on the barley that was uncut, was, in some places, four feet deep.

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THICK AND THIN SEEDING.—A correspondent of the *Mark Lane Express* sowed "three acres of the very best land" on his farm with wheat, using one and a half bushels of seed per acre. On ten acres adjoining he sowed three bushels per acre (the usual quantity in his part of England.) The result was that the thin seeding gave 20 bushels and the thick seeding 32 bushels per acre.

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LARGE HAIL STONES.—Mr. JOHN L. TALLMAN, of Tatumseh, Mich., writes us that on the 31st of July that vicinity was visited with a hailstorm, which was very destructive to crops. "In some places the smallest hailstones were as large as a hen's egg, and from that up to 1½ inches in circumference."

••••• Notices of New Books, Periodicals, &c.

THE FRUITS AND FRUIT TREES OF AMERICA: or the culture, propagation and management, in the garden and orchard, of fruit trees generally, with descriptions of all the finest varieties of fruit, native and foreign, cultivated in this country. By A. J. DOWNING. Revised and corrected by CHARLES DOWNING. New York: WILEY & HALSTED. 1857.

"Downing's Fruits and Fruit Trees" occupies the very first rank among the numerous treatises on American Pomology. Its easy and graceful style; the clear, concise, and yet copious descriptions of fruit, together with the admirable remarks on the preparation of the soil, planting, pruning, and general management of fruit trees, render it one of the most interesting and valuable works ever written on this subject. Since its appearance in 1845, American Horticulture has advanced with gigantic strides. An immense number of new and valuable varieties have been added to our list of fruits, which it was desirable should be noticed in this standard work. A new and enlarged edition was much needed at the present time, and no one was so well fitted for the task as the brother of the lamented author. The work has appeared, and will be hailed with pleasure by all fruit growers. It contains 760 pages, or 166 pages more than the former edition. The classification of fruits has been changed. In the former edition, varieties were classed under the head of Summer, Autumn and

Winter; and a § was affixed to those varieties particularly recommended by the author. In the new edition the classification according to the season is rejected, and all the varieties are arranged under classes 1, 2, and 3, corresponding to the "best," "very good," and "good," of the American Pomological Society. We think it would have been an improvement if the season classification had been retained, and the quality indicated under sub-heads.

The other alterations in the work are confined principally to the lists of fruit, which are judiciously revised and enlarged. The *cultural* portions of the work are almost entirely the same as in the former edition. We observe two changes: The recommendation to apply salt to the soil beneath plum trees to kill the curculio, has been left out. This is well, for in the majority of cases, at least, salt has had no effect on the curculio. The other alteration is, in our opinion, less judicious. In speaking of the cause of failure of many sorts of Pears and Apples in certain parts of the country, the new edition says: "All along the sea coast, where the soil is light, and has been exhausted, by long cultivation, of lime, potash and phosphates, the *inorganic elements absolutely necessary to the production of fine pears*, many varieties that once flourished well are now feeble, and the fruit is often blighted." The italicised words are new. That the idea here hinted at is correct we very much doubt. If the soil was exhausted of "lime, potash and phosphates," the trees would not grow at all in it. The trees may be enfeebled and the fruit blighted, owing to a deficiency of lime, potash and phosphates, but the same is also true of all the twelve ingredients of plant food, and why these three should have been selected out we cannot understand. If to render some soils fertile, all that is necessary is to supply them with the lime, potash and phosphates, which plants require, the labor and expense of renovating worn out soils would be much less than is generally found to be the case.

A TREATISE ON THE HISTORY AND MANAGEMENT OF ORNAMENTAL AND DOMESTIC POULTRY. By Rev. EDMUND SAUL DIXON, A. M., Rector of Intwood-with-Kenswick, Norfolk, with large additions by J. J. KERR, M. D. Illustrated with sixty-five original Portraits, engraved expressly for this work. Fourth edition, revised. New York: A. O. MOORE, (late SAXTON & Co.), 140 Fulton street, New York.

This is one of the very best poultry books, and we are glad to see that a new edition is called for. The work appeared originally as a series of articles in the *Gardeners' Chronicle*. These were collected, and published in book form in 1848. In 1851 a second edition appeared, with numerous additions. In the same year this second edition was re-published in this country, edited by Dr. KERR. There have been no additions made to the work since that time.

SORGHO AND IMPHEE, THE CHINESE AND AFRICAN SUGAR CANES: A treatise upon their origin, varieties and culture; their value as a forage crop; and the manufacture of sugar, syrup, alcohol, wines, beer, elder, vinegar, starch and dye-stuffs; with a paper by LEONARD WRAY, Esq., of Caffraria, and a description of his patented process for crystallizing the juice of the Imphee. To which are added copious translations of valuable French pamphlets. By HENRY S. OLCOTT. Fully illustrated with drawings of the best machinery. New York: A. O. MOORE, Agricultural Book Publisher, 140 Fulton street. 1857.

The contents of this work are fully set forth in the above title page. It will prove valuable to all interested in the culture of the Chinese sugar cane. It will be sent, postage paid, to any address, for \$1.00.

THE AMERICAN FARMER'S ENCYCLOPEDIA: Embracing all the recent discoveries in Agricultural Chemistry, and the use of Mineral, Vegetable and Animal Manures, with descriptions and figures of American Insects injurious to vegetation. Being a complete guide for the cultivation of every variety of Garden and Field Crops. Illustrated by numerous engravings of Grasses, Grains, Animals, Implements, Insects, &c. By GOVERNUR EMERSON, of Philadelphia, upon the basis of JOHNSON'S Farmer's Encyclopedia. New York: A. O. MOORE, Agricultural Book Publisher. 1853.

This is the only Farmer's Encyclopedia published in this country. It is in many respects an able and valuable work, and one which we have frequently commended. When we received this work from the enterprising publisher, we were in hopes that it was a revised edition. But this is not the case. It has not been in any way altered since it was first published in 1843. Still, it is a useful publication, and worthy of a place in every farmer's library; though it would be much better if it contained "all the recent discoveries in Agricultural Chemistry."

Inquiries and Answers.

"HOW MUCH MANURE IS DESIRABLE FOR A GARDEN?"—(A. D.) We cannot answer this question definitely. For nearly all vegetables except potatoes, it is not easy to make the soil too rich. Five ordinary barrow-fuls of rotted manure to the square rod would be a heavy dressing, but it is not too much, provided it is intimately mixed with the soil a foot deep. For asparagus, strawberries, and other deep-rooted plants, which remain on the same bed for several years, double this quantity may be used with great advantage. The soil should be trenched two feet deep, and the lower spit mixed with as much manure as can be dug in. Subsoil manuring for such plants is very beneficial.

BUCKWHEAT STRAW AS A MANURE.—In answer to W. L., in the July number, I would say that I have tried buckwheat straw, and think it as valuable as any other straw, if not more so, as a manure. Let it be spread early in the spring on the meadow, and the beneficial effects are quite palpable; but much more so if used for litter,—its absorbing properties retaining the liquid, &c. J. F.—*Liberty, Tioga Co., Pa.*

RINGBONE.—The knife in the hand of a skilful operator, when taken in time, is the best remedy, and no risk further than in altering a colt. It is done by opening the skin above the hoof and tying it back; then pass the knife betwixt the object and the bone. Why not try the recipe copied from the *London Field*, in the July number, page 228, and let us know the result through the *Farmer*? J. F.—*Liberty, Tioga Co., Pa.*

WHITE MARL.—(O. L. BAER, Milford, Ind.) If the white marl is composed principally of carbonate of lime, as from your description we should judge to be the case, it would be better to burn it, and thus convert it into quick lime. It is quite probable, however, that it will have a good effect in its natural state, applied in large quantities.

AGRICULTURAL SCHOOL.—(G. A. G., Eminence, Ky.) We believe the only Agricultural School in this State is that kept by Messrs. OLCOTT & VAIL, at Mount Vernon, Westchester Co., N. Y. You will obtain full information by addressing them.

HEAVY HORSES.—Do not keep this kind of stock, believing as I do, that prevention is better than cure. Attention in haying, grooming and driving, and we shall hear no more of heavy horses. Smart weed administered as follows is said to effect a cure:—Steep the weed in boiling water; give the horse one quart of the liquid every day for eight or ten days, giving grain or cut feed, wet. J. F.—*Liberty, Tioga Co., Pa.*

TO DESTROY CANADA THISTLES.—In reply to your correspondent "S.," I would say, keep the thistles from going to seed this fall, if possible. Then, next summer, mow them close in July, before they go to seed; then, in a few weeks, put a little salt right upon the crown or tip of each sprout, when the stalk will wilt and the root die, W. L. M.—*Yorktown, N. Y.*

ADVERTISEMENTS,

To secure insertion in the FARMER, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. TERMS—Two Dollars for every hundred words, each insertion, PAID IN ADVANCE.

WILEY & HALSTED,

351 BROADWAY, NEW YORK.

Have now ready

DOWNING'S FRUITS AND FRUIT TREES OF AMERICA,

THOROUGHLY REVISED, with very large additions, especially in Apples and Pears, with many new cuts of new fruits. Edited by CHARLES DOWNING, Esq., brother of the late A. J. Downing. 1 vol., 12mo., containing 750 pages. Cloth, \$1.50.

The reputation of Mr. Charles Downing as a Horticulturist, in connection with the general popularity of this work, leads us to anticipate a large and immediate sale for this edition.

Orders from the Trade and Dealers in Agricultural Works are solicited, and will be attended to with promptitude. No copies will be forwarded without orders.

NOTICES OF FORMER EDITIONS.

"Nothing compared with it on the subject of Pomology has yet been published in the United States. Unquestionably the standard pomological work of this country."—*Amer. Agriculturist.*

"A deliberate examination of the work enables us to say, without hesitation, that it is by far the greatest acquisition placed within the reach of American cultivators of fruit which has ever appeared."—*Cultivator.*

* Copies will be mailed to any address, and prepaid, on the receipt of the price.

CLUBS AND SOCIETIES will be supplied with the work for Premiums, at a discount. October 1.—1t.

THE MASSACHUSETTS WHITE.

THIS NEW EARLY AMERICAN GRAPE, with long, oval, white berries, is sufficiently early to ripen its crop fully in New England, and in all the Northern and Western States, being in eating with the Concord, or several weeks earlier than the Diana or Isabella. Its unmixed native origin, its unequalled hardiness, and its extraordinary beauty of color and form, render the Massachusetts White the most desirable Grape in cultivation for the Private Garden, or for the Vineyard.

Plants of the Rebecca, Delaware, Clara, Wyman, Union Village, Canadian Chief, Raabe, Brinckle, Emily, Perkins, Graham, Concord and Diana, and other new Grapes, are now ready, at the lowest rates.

A full descriptive priced Catalogue of the above new Grapes, and of all Plants and Trees required for the Nursery, Greenhouse, Vinery, Garden, Lawn or Orchard, will be sent on application.

Carriage of all packages paid to New York and Boston. B. M. WATSON, Oct. 1, 1857.—8t. Old Colony Nurseries, Plymouth, Mass.

YOUNG MEN, FORM A BOOK CLUB

FOR YOUR TOWN. Get twenty or thirty genes and ladies, and, by a simple organization, you may have a Course of Lectures, and also have all the popular Books of the day for circulation in the Club, at little or no expense to each member. By-Laws, and full printed directions for forming Book Clubs, will be sent to any address, on application by mail, enclosing a stamp. Address D. M. DEWEY, Rochester, N. Y.

October 1.—2t.



ALBANY TILE WORKS,

Corner of Patroon and Knox Streets, Albany, N. Y.

THE subscribers, being the most extensive manufacturers of Draining Tile in the United States, have on hand, in large or small quantities for Land Draining, the following descriptions, warranted superior to any made in this country, hard burned. On orders for 10,000 or more, a small discount will be made.

HORSE-SHOE TILE CUT 14 INCHES LONG—PIECES.

2 1/2 inches rise,	\$12 per 1000
3 1/2 " " "	15 " "
4 1/2 " " "	18 " "
5 1/2 " " "	20 " "
6 1/2 " " "	20 " "
8 " " "	30 " "

SOLE TILE CUT 14 INCHES LONG—PIECES.

2 inches rise,	\$12 per 1000
3 " " "	18 " "
4 " " "	20 " "
5 " " "	20 " "
6 " " "	30 " "

Also on hand, 6-inch calibre Octagon Pipe, \$20 per 100, and 8-inch calibre Round Pipe, \$30 per 100, for large drains. Cornice Brick, of the pattern used in the city of Washington, also on hand. Orders solicited. Cartage free. C. & W. McCAMMON, (Late BARCOCK & VAN VECHTEN,) Albany, N. Y.

RICH'D H. PEASE, Agent,

Excelsior Ag. Works, Warehouse and Seed Store,

October 1.—2t. 359 and 371 Broadway, Albany, N. Y.

FRUIT TREES AND FRUIT.

THE subscriber being extensively engaged in the Nursery business, and having planted over 100 acres of Orchard, embracing more than 10,000 Trees, enabling him to test and compare varieties and propagate only those of real value, is prepared to furnish Trees in large quantity, at prices heretofore unknown to the Tree trade.

The present stock embraces about 300,000 Apple Trees, of various sizes among which is an abundant supply of Baldwins and Greenings. 15,000 Cherry Trees, one and two years old. 4 to 12 feet. 20,000 Peach Trees, of best market sorts. 45,000 two years old, and 100,000 one year old, Dwarf Pear Trees, of very superior quality; the former are believed to be the best lot in the United States, and warranted equal to the best.

Also, a general assortment of other Fruit and Ornamental Trees and Plants, at low prices.

Persons visiting the grounds before October, can see several hundred Dwarf Pear Trees in full bearing; and any who doubt their success for orchard culture, are especially invited to examine them. T. G. YEOMANS,

October 1.—1t. Walworth, Wayne Co., N. Y.

MORGAN HORSE FOR SALE.

GENERAL GIFFORD, Jr. This beautiful Horse is three years old past. Color, chestnut, with no marks. Is 15 1/2 hands, and weighs over 1,000 lbs. Is thought by good judges to be in no way inferior, and in many respects superior, to his splendid sire, General Gifford. For pedigree, see cut. For further particulars, address ELIAB YEOMANS, Walworth, Wayne Co., N. Y.

NEW ROCHELLE BLACKBERRY.

GENUINE.

25 CENTS each, \$2.50 per dozen, \$16 per hundred, with discount to the trade. Also, Fruit and Ornamental Trees, Stocks, &c. &c. Address J. C. TEAS, Raysville, Ind. October 1.—1t*

IMPORTANT NOTICE TO NURSERYMEN.

QUINCE STOCKS FOR SALE.

WE have on hand a large stock of the best Angers and Paris or Fontenay Quince Stocks, raised by ourselves from Stocks and from Cuttings, both of which we will sell on more reasonable terms than they can be imported. Early orders are solicited.

H. E. HOOKER & CO., Commercial Nurseries, Rochester, N. Y. July 1.—4t.

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THE subscribers offer for sale, of their own raising, 100,000 Quince Stocks (Angers and Fontenay) at \$15 per 1000. 200,000 Apple Seedlings, at \$5 " 10,000 Peach Trees, Lockport, N. Y., Sept.—2t* PENFIELD, BURRELL & CO.

GENESEE VALLEY NURSERIES.

FRUIT TREES, ORNAMENTAL TREES, SHRUBS, ROSES, &c. &c.

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The assortment of **ROSES** is very extensive, and embraces all varieties which could be obtained, and which are considered worthy of cultivation. Our collection of **HYBRID PERPETUALS** is the most complete in the country.

The **GREEN-HOUSE DEPARTMENT** receives particular attention, and the stock of **Fuchsias, Geraniums, and other Green-house Plants,** is large and varied. In the

FRUIT DEPARTMENT,
OUR STOCK CONSISTS OF

- APPLES,** of the leading varieties, Dwarf and Standard.
- PEARS,** of all desirable varieties, on Quince and Pear Stocks.
- PLUMS**—A choice selection of well grown trees, of popular sorts.
- CHERRIES**—All the popular sorts, Dwarf and Standard.
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- NECTARINES, APRICOTS and QUINCES,** in variety.
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SMALL FRUITS.

CURRENTS—Twenty-five choice sorts, including many new varieties.

RASPBERRIES, GOOSEBERRIES, BLACKBERRIES and STRAWBERRIES, of all new and approved varieties.

We have, for the accommodation of **NURSEYMEN, STOCKS and SEEDLINGS,** including **APPLE, PEAR, PLUM, CHERRY, QUINCE, &c. &c.** Also, **SEEDLINGS OF EVERGREEN TREES,** including **Norway Spruce, Balsam Fir, Scotch Pine, Austrian Pine, Larch and Hedge Plants.**

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The stock of **Ornamental Trees and Shrubs,** both **Deciduous and Evergreen,** will be found to embrace all that is desirable among **LAWN and STREET TREES and SHRUBS.**

ROSES—Consisting of **Hybrid Perpetual and Summer Roses, Moss, Bourbon, Noisette, Tea, Bengal or China, and Climbing or Prairie Roses.**

HARDY HERBACEOUS or BORDER PLANTS, and BULBOUS FLOWER ROOTS—An extensive assortment.

All the above will be disposed of at low rates, and on advantageous terms. For further details, we refer to our full set of Catalogues, which will be mailed to applicants who enclose a one cent stamp for each.

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Amateurs and others interested in Horticulture, are respectfully invited to visit our Show Grounds and Green houses, at 153 South Sophia street, a short distance from the central part of the city.

All communications to be addressed to
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Sept. 1.—3t. Genesee Valley Nurseries, Rochester, N. Y.

J. DONNELLAN & CO.,

OF THE

ROCHESTER AND LAKE AVENUE COMMERCIAL NURSERIES,

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WISH to inform their friends and customers that they have on hand for Fall Sales the following select assortment of **Standard and Dwarf Fruit Trees, Evergreen and Weeping Ornamental Deciduous and Climbing Shrubs, A numerous variety of select French and Domestic Roses, Paeonies, Phloxes, &c. &c., Hardy Herbaceous and Hedge Plants, Bulbous Roots, Double Dahlias, &c., &c.,** which they will sell in quantities to suit purchasers, and on moderate terms.

- 10,000 3 and 4 year old Apple Trees, choicest kinds,
- 140,000 2 " " " " "
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- 10,000 1 " " " " "
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with an equal quantity of **Pears, Plums, Cherries, &c.**
We have also **100,000 Manetta Stocks for Roses, first quality, 50,000 extra 2 year old Apple Stocks, 40,000 " Mazzard Cherry " 5,000 1 and 2 year old Horse Chestnut Seedlings.**
Descriptive and Price Catalogues furnished gratis.
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THE subscribers offer this season a more extensive assortment than usual of **DUTCH BULBOUS ROOTS,** imported from the best Flower Nurseries of Europe, in the finest condition, and all first class bulbs—embracing every desirable variety of

- DOUBLE AND SINGLE HYACINTHS,** adapted for house or out-door flowering,
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- POLYANTHUS NARCISSUS,**
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- CROWN IMPERIALS,**
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with numerous other sorts of approved tested value.
CATALOGUES of the above, with descriptions and directions for planting and managing, will be mailed to applicants enclosing a stamp.
HYACINTH GLASSES, FANCY CROCUS POTS, &c.
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TO PLANTERS AND DEALERS IN TREES.

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ISAAC PULLEN,
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VEGETABLE AND AGRICULTURAL SEEDS, DUTCH BULBOS ROOTS, DOUBLE DANIELS, &c., for the fall of 1857, is just published, and will be mailed to dealers and others requiring seeds in quantities, enclosing a stamp for return postage.

This year's seeds, so far as harvested, are of prime quality, generally abundant, and prices correspondingly moderate.

J. M. THORBURN & CO., SEEDSMEN, &c.,

September 1.—8t.

15 John st., New York.

Prices of Agricultural Products at the Principal Markets in the United States, Canada and England.

	NEW YORK, Sept. 23d.	PHILADELPHIA, Sept. 19th.	ROCHESTER, Sept. 17th.	CHICAGO, Sept. 17th.	TORONTO, Sept. 20th.	LONDON, ENG., Sept. 7th.
Beef per 100 lbs.			\$5.75 @ \$6.00		\$5.50 @ \$6.50	\$8.25 @ \$13.00
do mess, per bbl.,	\$16.00					
Pork, per 100 lbs.			8.00 9.00			10 50 15.00
do mess, per bbl.,	20.00 @ \$25.75		25.00 23.50			
Lard, per lb.,	.14 .15		.15 1/2			.18 .17
Butter, do	.15 .22		.14 .20	\$0.18 @ \$0.22	.20 .30	.18 .26
Cheese, do	.08 .09 1/2		.08 1/2	.06 .07	.09 1/2 .12	.11 .17
Flour, per bbl.,	5.40 8.00	\$5.50 @ \$6.00	6.00 7.50	4.25	5.00 6.25	7.20 8.16
Wheat, per bush.,	1.05 1.50	1.13 1.40	1.45 1.50	.80 1.20	.75 1.33	1.29 1.80
Corn, shelled, per bu.,	.80 .85	.74 .75	.87	.52 .55	.85	1.03 1.17
Rye, do	.80 .86	.75		.55 .60	.70 .80	.90 1.14
Oats, do	.36	.38	.38	.26 .30	.50 .55	.60 1.02
Barley, do	.75 .95		.80	.75 .80	.50 .80	1.11 1.35
Clover Seed, do		7.37	6.50 7.00			
Timothy Seed, do		3.10 3.25	3.50 4.50	2.25		
Flax Seed, do	1.75 1.87					1.80 2.07
Hay, per ton,	12.00 16.00		7.00 11.00	6.00 10.00	16.00 20.00	
Wool, per lb.,			.30 .40		.32	
Wood, hard, per cord,			4.50 5.00			

Contents of this Number.

How can we most Economically Increase the Fertility of the Soil? 297

Study the Mechanical Qualities of the Soil, 298

Items Suggested by the September Number, 299

Notes for the Month, by S. W., 299

Good Sheep the Most Profitable, 300

"The Manure Question," 301

Butter from Prairie Hay, 301

Underdraining, 301

Preserving Butter, 301

Breaking Prairie Land in the Fall, 302

Take Care of Your Tools, Fodder, &c., 302

On the Management of Young Stocks, 303

Plowing in Green Corn for Manure, 303

Will Rye Turn to Chess? 303

National Wealth, 303

General Gifford, Jr., 304

Turnips and Carrots, 304

Management of Milch Cows, 304

Pumpkins, 304

GENESEE FARMER PRIZE ESSAYS.

On the Best Method of Seeding Land to Timothy or Herd's Grass, 305

On the Management of Calves, 305

On the Management of Barn-yard Fowls, 306

On the Cultivation and Management of Tobacco, 307

On the Best Means of Escaping Injury from Drouth, 308

On the Benefits to be derived from Competition for the Premiums offered for Short Essays by the Genesee Farmer, 308

How can Fathers render Farm Life Attractive to their Sons? 309

Why is Faming considered a Degrading Vocation? 310

How much Education, and what kind, do Farmers need? 311

How can Settling Heus be Taught to Forsake the Lazy Habit? 312

Why do so few Farmers Write for Agricultural Papers? 312

On the Propriety of Agricultural Societies offering Premiums to Practical Farmers for the Best Essays on various Agricultural Subjects, 313

On the Advantages of Agricultural Schools, 313

Is it Desirable to Plant Fruit Trees in the Highway? 313

Should Farmers' Wives be Educated? 314

Is it Proper for Ladies to Assist in the Garden? 314

HORTICULTURAL DEPARTMENT.

Meeting of the Western New York Fruit Growers' Association, 315

The Oritley Apple, 318

Horticultural Operations for October, 319

Mushroom Culture, 320

Cultivation of Onions, 320

LADIES' DEPARTMENT.

How Shall we Spend our Winter Evenings? 321

Original Domestic Receipts, 321

EDITOR'S TABLE.

Fair of the United States Agricultural Society, 322

Potato Rot, 322

Will Wheat Turn to Chess? 322

Underdraining Clay Land, 322

Carbonic Acid in the Soil, 322

Lime and Sulphur for the Curculio, 323

A Rose on an Apple Tree, 323

Large Currants, 323

To Kill Angle Worms, 323

To Protect Cucumber Vines from Bugs, 323

Prize Essays, 323

Book Clubs, 323

Hail Storms in England, 323

Thick and Thin Seeding, 323

Large Hail Stones, 323

Notices of New Books, Periodicals, &c., 323

Inquiries and Answers, 324

ILLUSTRATIONS.

General Gifford, Jr., 304

The Oritley Apple, 319

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October 1.—31.

BLACKBERRY PLANTS BY MAIL.

(FOR SETTING OUT THIS FALL.)

BESIDE my very large Plants to be sent by Express, I have a few New Rochelle (or Lawton) Blackberry Plants of suitable size to be sent by Post, which I will forward, prepaid, to any part of the United States, with full directions as to culture, on receipt of \$2 per dozen, or \$1 per half dozen. Address C. P. BISSELL, Rochester, N. Y.

October 1.—11.

The Practical and Scientific Farmer's Own Paper.

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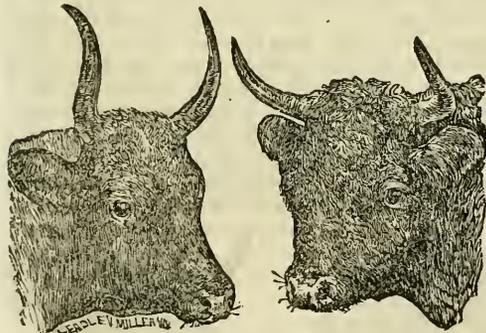
June, 1857.



THE BRITISH BREEDS OF CATTLE.

The most distinguishing characteristic in all animals is the head, and we have thought that correct portraits of some of the more prominent breeds of British cattle would not be without interest to our readers.

WEST HIGHLAND.—Any one who has visited Smithfield Market, must have been struck with the number and excellence of the West Highland or Kyloes cattle. Their beef is of fair quality, and commands a higher price per pound than that of any other breed. They are well adapted to the peculiar climate and herbage of the Highlands. They are somewhat slow in arriving at maturity, but are contented with the coarsest pasturage, and will ultimately fatten where the daintier Durham would barely subsist. The cows yield a rich milk, but give lit-

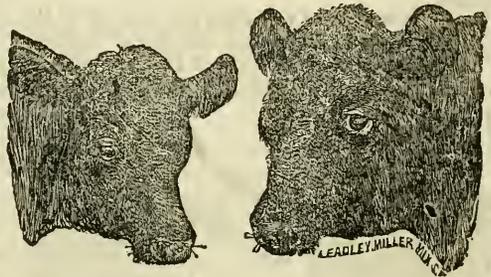


WEST HIGHLAND.

tle of it, and soon go dry. Their skin is thick but mellow, and closely covered with shaggy hair. They are exceedingly hardy, and would probably prove a useful breed in the hill districts of the Northern and Eastern States. We are not aware that this breed has been imported either into this country or Canada.

GALLOWAYS.—Closely allied to the West Highland or Kyloe is the Galloway breed. He is in fact, a large Kyloe without horns. He is more docile, with a greater aptitude to fatten when once his frame is matured, and he is a special favorite with graziers and butchers, from the fact that the parts of his carcass used for roasting, are largely developed. In rich pastures, he cannot compete with the Short-horn for early maturity or fattening properties; and for the dairy he has been supplanted in his native district by the Ayrshires; but in those districts where the rearing of grazing cattle is found the more suit-

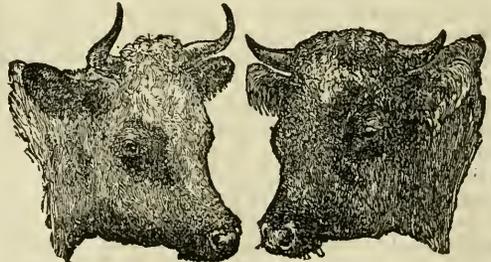
able practice, the Galloways still reign unrivalled. They are not quite so hardy as the West Highland, but much more so than the Short-horn, Hereford, Ayrshire, or the Devon. They are good handlers, but are covered with long, black, shaggy hair, and



GALLOWAYS.

their hides would make superior substitutes for buffalo robes. They have been imported into Canada, and will no doubt prove an acquisition. They should be kept as a distinct breed.

AYRSHIRES.—The peculiar function of this breed is the dairy, for which, on medium soils, it cannot be surpassed. For this purpose it is worthy of more extensive introduction into the dairy districts of this country. The Ayrshire has little aptitude to fatten,

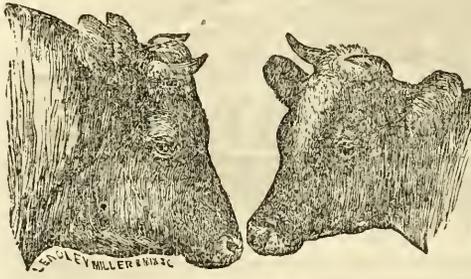


AYRSHIRES.

and the beef is rather coarse. A cross with the Short-horn, however, makes a useful grazing animal. In the west of Scotland this cross is resorted to on a large scale, with great success.

ALDERNEY OR JERSEY.—In appearance this breed somewhat resembles the Ayrshire, and it is conjectured that the latter are indebted to it for their milk-producing qualities. The chief difference between them is, that the forte of the Ayrshires lies in the abundance of their milk; that of the Alderneys in

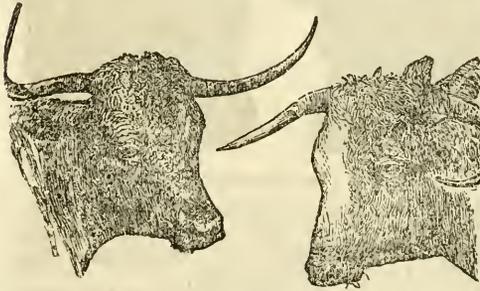
the richness of its quality. They are much sought after by wealthy gentlemen, who desire rich milk, without regard to cost. For ordinary dairy purpo-



ALDERNYS.

ses they are inferior to the Ayrshires. For beef they are utterly valueless. This breed has been extensively introduced into the vicinity of Boston, Philadelphia, and other large cities in this country. At the United States Fair at Boston, in 1855, there was a finer show of Alderneys than we ever saw in Great Britain.

LONG-HORNS—Time was when this was one of the principal breeds in the midland counties of England, as they still are in some parts of Ireland; but notwithstanding this wide diffusion, and the compara-



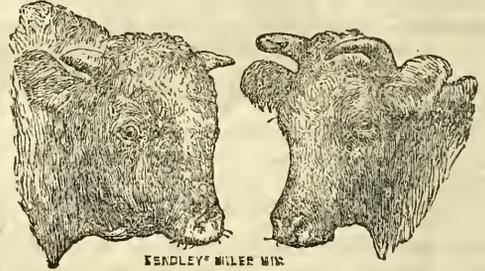
LONG-HORNS.

tive excellence to which they were brought by the genius of BAKWELL, they are so unquestionably inferior to the Short-horns, that they have rapidly given place to them even in those districts in which they have been brought to the greatest perfection.

SHORT HORNS OR DURHAMS.—The "improved Short-horn" originated on the banks of the Tees some seventy years ago. The cattle of this district were large, coarse and ungainly, generally deficient in the fore-quarters with strong shoulders; they fattened slowly, and the meat was coarse to the palate and uninviting to the eye. The brothers CHARLES and ROBERT COLLINGS, undertook the task of improving them. It is to their patient skill in selecting, and perseverance in breeding, and to their famous bull "Hnbback," calved in 1777, and bought out of a by-lane for \$40, that the present breed of Short-horns owe their great and just celebrity. Such was the great improvement produced by these breeders, that at CHARLES COLLINGS' sale in 1810 his herd of 47 animals brought £7115.17, say \$35 579, or \$767 each; and at ROBERT COLLINGS' sale in 1817, his herd of 61 animals brought £7858.4, say \$39,291, or \$644 each. So much for persevering and judicious breeding.

These two sales dispersed the improved Short-horns, and at the present time there are some five or

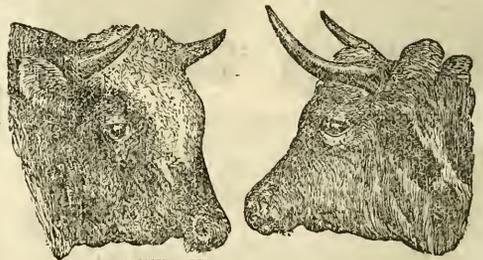
six hundred herds in Great Britain, and from six to seven thousand head registered every alternate year in the Herd Book. Pure blood animals of this breed are now found in nearly every country of continental Europe. In Canada and California, in New Zealand and New Brunswick, in America and Australia, the Short-horn quietly crops the luxuriant herbage, and furnishes "the roast beef of old England" to the inhabitants of every clime. The influence of this

KENDLEY MILLER M.D.C.
SHORT-HORNS.

breed it is hardly possible to overestimate. In the language of a high authority, "the Short-horns improve every breed they cross with."

The most remarkable characteristic of the Short-horns is the rapidity with which they mature. In England vast numbers are now slaughtered at two years old and under, weighing from 800 lbs. to 1,000 lbs. On rich soils no breed can compete with them in this respect.

HEREFORDS.—The general characteristic of this breed as regards color, is light or dark red, with a white face—frequently with white marks on the neck and along the back, and also the under parts of the body. It is supposed that at no very remote period the breed was for the most part self-colored, like the Devon. The white faces are said to have been introduced by the importation of some cows of that color from Flanders, and with them commenced the improvements of the breed which for so many years gave it the first rank among the grazing cattle of England. It is now generally admitted, however, that the Short-horns mature earlier, and they have, to a considerable extent, driven the Herefords out

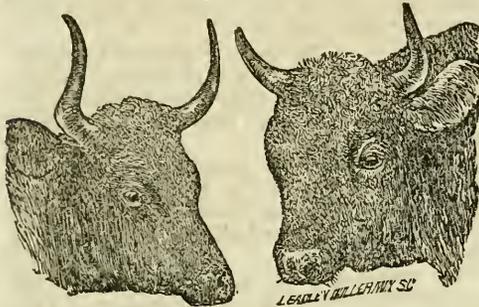


HEREFORDS.

of their native districts. In the rich meadows on the banks of the Severn they are still numerous, and are highly esteemed by graziers, and it is undoubtedly true that to buy (not to rear) is undoubtedly true that to buy (not to rear) after fattening, they are the most profitable breed. They are better "handlers" than the Short-horns, and afford more first quality beef. In England, both Herefords and Short-horns have been so long bred exclusively for the butcher, that they are ordinarily but indifferent milkers; but in both breeds there are some

strains which possess excellent milking qualities. An animal that has a great tendency to fatten, however, is seldom a good milker.

DEVONS.—The Devons, or more correctly the *North Devons*, constitute an original breed of, perhaps, the longest standing of any distinct breed of cattle in England. It is recorded as having been esteemed for its good qualities for centuries. There is scarcely any breed of cattle so rich and mellow in its touch, so silky and fine in its hair, or so handsome in appearance. It is said that "they have a greater proportion of weight in the most valuable joints, and less in the coarse, than any other breed, and also consume less in its production." As working oxen they generally surpass any other breed. They are excellent walkers, and perfectly docile. An English



NORTH DEVON.

author says, "As milkers they are about the same as most other breeds, the general average of a dairy of cows being about one pound of butter per day from each cow during the summer months; although in some instances the very best bred cows give a great deal more." For general purposes—for the yoke, the dairy and the butcher combined, they are probably the most profitable breed of cattle for poor and medium soils. On the rich soils of the West they cannot compete with the Short-horns for beef; neither can they compete with the Ayrshires for exclusively dairy purposes; but on the poor soils of New England, for ordinary farm purposes, they are unsurpassed by any other breed at present introduced. Where known, the Devon is justly admired for his pleasing color, elegant form, agile gait, and gentle temper.

THE PRACTICAL UTILITY OF SOIL ANALYSES.

FRIEND HARRIS:—You may well thank me for a "friendly criticism," which has given you so fair an opportunity to present your views of "the practical utility of soil analyses," in an able manner, to the readers of your paper. While conceding the ability with which you discuss the subject, I still think there is too much of a partisan spirit in the positive manner in which you write, as though perfection had been reached in this branch of science, and all progress therein were utterly hopeless. (A) Analytical chemistry in its application to the study of soils is too young to be justly condemned for the little it has already done in that behalf. All that I have asked, was the proper cultivation of this department of useful knowledge, believing that it will yet bring forth most valuable fruit. If I understand your meaning, it is a sweeping condemnation of soil analyses as of "no practical utility." (B) Privately by

letters, and publicly through the *Genesee Farmer*, you discourage researches into the sources of fertility, and the causes of infertility in soils, by competent chemists. You appear to believe that *truth* and fair dealing demand this course at your hands. You say, "If it is *true* that soil analyses are of no practical utility, the fact should be known. The cause of agricultural chemistry cannot be promoted by the suppression of truth, nor by unfounded pretensions. It is a good cause, and *truth* cannot hurt it." In the point and justice of the above remarks, I entirely concur. But is it "*true* that soil analyses are of no practical utility?" I think it is not *true*, and for the following among other reasons:

All intelligent persons will admit that it is exceedingly desirable to learn all we can know of the properties, composition, and intrinsic value of the soils we own, or may cultivate. (C) In searching for the philosopher's stone, which was reported to change base metals, like lead and iron, into gold and silver, great benefits incidentally accrued to chemistry, mineralogy, and the art of reducing the most refractory ores. Men at length learned to separate the valuable from the valueless, and thus literally transformed coal, iron and copper into coined silver and gold. (D) Your *error* consists in assuming that a chemist is compelled, by the force of circumstances, to encumber his analyses of the elements of fertility in soils with the millions of pounds of flint sand, alumina, oxide of iron, and vegetable mould in an acre of ground, and within seven inches of its surface. This is not separating fine gold from quartz rock, but simply taking the whole granite mountain in mass. (E) When I said in a former letter, "Destroy the value of chemistry in its application to the organic and inorganic food of plants in the soil, and you virtually damage it to an equal extent in its application to these substances when organized in the bodies of all living beings," I had no idea of troubling the analyst with the millions of pounds of common sand and clay in an acre of land, but would confine his researches to those substances which rain water dissolves out of the ground, and conveys into the roots of plants to nourish them. The available food of plants, both organic and inorganic, may be less than one per cent. of the soil; and its study differs very little from that of plants themselves, and still less from the study of manures. Some manures are more soluble in rain water than others; and such is the fact in reference to the elements of crops in all tillable land. Nature takes from three to five months in our climate to extract the food of a crop of corn from the soil in which it grows. A student of Nature will act wisely if he imitates her example in this respect—carefully leaching as many cubic feet of earth as a farmer allows to a hill of corn, say from nine to twenty. (H) The investigation of the soluble elements of soils, both organic and inorganic, presents a wide field for chemical research that differs materially from the "soil analyses" to which you refer. (G) Nor can I believe that you will knowingly throw any obstacle in the way of such analyses. If a soil, perchance, abounds in salts of iron, or alumina, to an injurious extent, the fact will be disclosed; and if those of potash, soda, lime, or magnesia, be present in *mere traces*, in hundred pounds of earth, such information will add to our present knowledge on the subject. The way to increase our present defective knowledge of the true sources of fruitful-

ness in the ground we cultivate, is not to write down the application of analytical chemistry to the study of soils, but direct it into a more promising line of research, where its powers will disclose new facts, and the most important relations that really subsist between plants and the earth in which they grow. These relations are not now so well understood as they ought to be, and will be, if farmers wisely foster the critical study of their calling. No man has a more cordial contempt for quackery, of whatever kind, than the writer; but in rebuking mere pretension, one should be careful not to depress an earnest desire for more light in the science of agriculture. In no department of this science is light more needed than in that which relates to the fertility and barrenness of land. Let chemists, then, extend their researches in this direction, and not be discouraged by the agricultural press. (H) D. LEE.
Athens, Ga., Sept. 30, 1857.

REMARKS.—(A) We have never presumed to say that analytical chemistry, at some future day, will not be able to afford useful information in regard to the composition and value of soils. Our remarks referred to the present state of the science.

(B) This is a fair deduction from our remarks, and if the facts which we have adduced do not sustain it, we can bring forward many others which we think cannot fail to convince all candid minds that the analyses of soils which have hitherto been made, or can be made by the best chemists at the present time, are of no direct practical utility to the farmer.

(C) All knowledge is "desirable," but all knowledge is not, necessarily, of practical utility.

(D) We have no doubt that the analyses of soils, like the search for the "philosopher's stone," may at some future day lead to valuable results. But this is not the question. The chemist has no right to take money from the farmer, under the pretext that an analysis of his soil will afford him definite information of great practical value—information which will enable him to raise larger crops at less cost—and then in lieu of this information, tell him that he did not know but what he might have stumbled upon some fact that would prove valuable. The labors of the alchemists incidentally led to the development of many new chemical laws, and so may soil analyses. But the alchemist of the dark ages differed at least in one respect from the advocates of soil analyses in the nineteenth century. He did not profess to be in possession of the philosopher's stone, and advertise to convert base metals into gold. The chemist who asks the farmer to send him a sample of his soil, (with a check for \$25) does not profess to be seeking the philosopher's stone, but to have already found it.

(E) In analyzing a soil it is usual to separate from it the organic matter, sand and clay, before determining the quantity and relative proportion of the more important constituents of plant-food. Our remarks in regard to the inability of the chemist to determine the quantity of these substances with sufficient accuracy for practical purposes, referred to the very best processes at present known. If Dr. LEE has discovered a process that affords more accurate results, we hope he will lose no time in communicating it to the world.

(F) With all due respect we would say that this is dodging the question. Who ever before heard of

a chemist asking for half a ton of the soil? Where has it been stated that it would be necessary to leach half a ton of the soil for six months before commencing the analysis proper? The chemist who analyzed Mr. PELL's soil, and found in it more potash, soda and lime after a summer's drought, than in the spring, probably never dreamed of such a process—certainly he nor no other man ever adopted it. Dr. LEE is too well acquainted with agricultural literature not to know that what is usually understood by analyzing a soil is a very different process from that which he now alludes to. We very much doubt whether this new process of leaching half a ton of soil would afford any more accurate results, but this is not the point under discussion.

(G) To show what has hitherto been meant by "soil analyses," we may be allowed to quote from an article, written by Dr. LEE himself, in the *Genesee Farmer* for 1846, page 57:

"The editor of this paper is prepared to analyze soils in the most critical and satisfactory manner. He has incurred a large expense for apparatus, and devoted, first and last, not a little time to the investigation of the subject."

"Specimens of soil—a pound or so of earth is enough—can be sent, done up in a strong paper, to the office of the *Genesee Farmer*. An analysis of the surface soil, and the subsoil, will be made at five dollars."

"The following is the analysis of General HARMON's soil, which we made in the laboratory of Pro EMMONS, in Albany, not long since:"

SURFACE SOIL.

After the soil had been well dried in a warm room for many days, 100 grains had:

Water of absorption.....	4.50	grains.
Organic matter.....	8.00	"
Silica.....	75.67	"
Carbonate of lime.....	1.96	"
Oxide of iron.....	4.63	"
Magnesia (phosphate).....	1.00	"
Sulphate of lime (gypsum).....	1.55	"
Alumina.....	2.47	"
Potash and Soda.....	traces	"
Loss.....	.37	"
	100.00	"

SUB-SOIL.

Water of absorption.....	4.00	"
Organic matter.....	3.40	"
Silica.....	78.29	"
Alumina and oxide of iron.....	13.08	"
Carbonate of lime.....	0.95	"
Loss.....	0.28	"
	100.00	"

"The above analyses are highly valuable in the cultivation of the soil referred to. First, they reveal the important fact that the soil of Gen. H.'s farm contains a plenty of *magnesia, lime, gypsum and iron*. Secondly, that it lacks *potash, soda*, and to some extent *phosphoric acid*."

Dr. LEE says that his *half-ton analysis* "differs materially from the 'soil analyses' to which you (the *Genesee Farmer*) refer." Such an analysis (providing it ever has been, or ever shall be made) also "differs materially from the soil analyses" made by Dr. LEE, as given above, and which are pronounced "highly valuable." When farmers are urged to have their soils analyzed, it is understood that such analyses as those given above are referred to. Dr. LEE has never informed the agricultural public that there has been any change in his views on this subject

since the above article was written; and when we state that soil analyses are of no practical utility, we refer to such as have been made, and to such as are now made, by the best chemists. In the article, quoted above, Dr. LEE says "*a pound or so of earth is enough*," and when we show from facts and figures that such analyses are utterly worthless, our friend gravely tells us that we ought to analyze from "*nine to twenty cubic feet*," say from 800 to 1800 lbs! Dr. LEE has evidently changed his position, and it is fair to infer from his remarks that he now regards ordinary analyses—made from a pound of soil, and which he formerly considered "highly valuable"—of no practical utility. This is all that we have claimed, and it affords us great pleasure to find so able a writer as Dr. LEE agreeing with us in this respect, though we should be glad to see him take a more definite position, and lend the aid of his powerful pen to correct the many errors entertained on this subject.

(H) We entirely agree with Dr. LEE that it is desirable to direct analytical chemistry "into a more promising line of research." We have no wish to discourage *investigations* into the nature and action of the food of plants in soils. Such investigations may lead to valuable results. But such investigations are very different from ordinary soil analyses. In the one case the chemist is *searching for scientific truth*; in the other he professes, for from \$5 to \$50, to furnish information of a definite nature that is of great practical value to the cultivator of the soil. We assert that he cannot furnish such information, and think he ought not to make unfounded pretensions, for the purpose either of getting money from the farmer, or from the hope that he may discover some new and important truth. In this case, as in all others, "honesty is the best policy." Let the intelligent agriculturists and horticulturists of America know the truth in regard to the present position of chemistry as applied to agriculture. Let them know in what direction it is desirable to make researches, and we have no hesitation in saying that they will not withhold either their sympathies or their money. The "agricultural press" will not "discourage" such investigations. It has no wish to "depress an earnest desire for more light in the science of agriculture." On the contrary, it will cheerfully lend its aid in supporting those who are endeavoring to search out the hidden laws of vegetable growth and animal nutrition. American farmers would gladly support an institution in which scientific investigations could be carried on conjointly in the field and in the laboratory, could they be assured that it would not be controlled by mere politicians. Unfortunately, the immense sums of money which have been appropriated for the encouragement of agricultural science, have not afforded results at all commensurate with the just expectations of the public. Nearly all the money has gone into the hands of wire pulling politicians, and the cause of agricultural science has been retarded rather than advanced by these liberal appropriations. Let scientific men be candid; let the agricultural press be honest; let us not resort to doubtful expedients; let us fearlessly declare the *truth*, and the boastful pretenders of science, falsely so called, will hide their diminished heads, and the sincere searcher after scientific truths will no longer have occasion to complain of the want of sympathy and support from the generous tillers of the soil.

FAIR OF THE NEW YORK STATE AGRICULTURAL SOCIETY.

THE New York State Fair at Buffalo was a great success—the weather delightful, the show intrinsically good, the attendance large, and the receipts (\$16,000) greater than at any previous Fair of the Society.

The show of Shorthorns was large, but not quite equal in quality to some former fairs. T. BETTS exhibited seven head, just imported, which attracted much attention. These two yearling heifers are beautiful. Considering that they are just off ship-board they are astonishingly fat. They are for sale. Price \$1,700 a head! JAMES O. SHELDON of Geneva, shows five head, all good. This cow is a great beauty, but very fat. E. MARKS, Camillus, T. GOULD, Aurora, C. P. WOODS, Auburn and many other well known breeders exhibited good Shorthorns. There was a fair show of Devons. Herefords were better represented than at any previous fair. M. C. REMINGTON showed 16 head of very superior animals, S. M. ELY, Ripley, GEO. CLARKE, Springfield, A. & H. BOWEN, Medina, and E. CORNING JR., Albany, also showed good Herefords. The show of Ayrshires was small. PATRICK, HUNGERFORD & BRODIE, Rural Hill, Jefferson Co., showed some very superior animals, as did also O. HOWLAND of Auburn. The only Alderneys exhibited were owned by JAMES O. SHELDON of Geneva. They are beautiful animals. Here is a Shetland cow—a decided curiosity. She is nine years old, and only *thirty inches high*. She is not as large as a good Cotswold sheep. She gives three quarts of milk at a time. One of her calves five years old, a cross with the Devon, was also exhibited. She is much larger, but is not improved in symmetry, or in milking and handling properties. The beef of the Shetland cattle is said to surpass all other breeds in delicacy of fibre and richness of flavor. They are owned by E. RICKETTS, of Aurora, Erie Co. N. Y.

There was a good show of fine woolled sheep. WM. CHAMBERLIN of Red Hook, Duchess Co. N. Y. and W. H. LADD of Ohio, showed their beautiful Silesians—the former 40 head, the latter 34 head. There were some good Saxons, but we heard a lady observe of one pen "these were brought here because they were so *thin*, I suppose." She had just been looking at the magnificent Leicesters of Messrs PATRICK, HUNGERFORD and BRODIE, who showed 41 head. These Saxons probably belonged to the same flock of which an Englishman, just arrived in this country, observed to a companion, "I had heard that your *rabbits* were as big as our hares, but I had no idea they were so much larger, or so plentiful and tame." He probably was a relative of the gentleman who returned a flock of sheep his bailif had purchased *because they had lost all their front teeth in the upper jaw*. These are facts! Seriously, some animals would look quite as well at home as on the show ground, and some persons that talk so wisely on agricultural matters would do well to say less till they know more about the subject. There was a fine show of Spanish and French Merinos. These four South Down rams, bred by SAMUEL THORNE of Thornedale, Duchess Co., N. Y., are the *best we have ever seen*. THOMAS M. BETTS shows a fine lot of Hampshire and Sussex Downs recently imported. A. BRIGGS of Warren, Herkimer Co., N. Y., shows some useful mutton sheep. They were obtained by crossing common ewes with a Leicester ram, and

continuing to use Leicester rams with the cross-bred ewes.

There was a superior show of swine but nothing calling for particular notice.

We understand that there was a very fine show of horses, but they were all *locked up* in their stalls when we were there.

Here we are among the machinery, and there is the Prince of Agricultural Implement Makers, HORACE L. EMERY, of Albany. He is posted on his celebrated R. R. Horse Power distributing pamphlets by the thousand. Now he is showing the efficacy of his Hand Cider Mill in grinding and pressing apples.—Now, to test the strength of the machine he puts it to its utmost speed and then drops a stone in, to demonstrate its strength and power. There is but a meagre show of plows, and less than the usual number of hay and cornstalk cutters, with nothing new that we observed. Here is a cultivator similar to ordinary corn cultivators but seven feet wide and used for putting in wheat. This machine for husking and shelling corn will admit of considerable improvement, before it comes into general use.

It is useless to attempt to *examine* the products of horticultural skill exhibited in "Floral Hall," but we will take a hasty glance at them. Here are eleven varieties of out door grapes, grown by J. B. FAY, Salem Cross Roads, Chautauque Co. N. Y., who has nine acres devoted to grape culture. These Isabellas are truly magnificent. The bunches and berries are nearly as large as ordinary Black Hamburgs, weighing, it is said, 13oz. It *pays* to raise such grapes. Mr. F. has just sold 500lbs in Buffalo at 15 cents per lb. That they are productive is evident from a stem exhibited, eighteen inches long bearing eleven bunches which would average nearly half a lb each. They are grown on a ridge of gravelly sand, on five feet wire trellises, the plants set out 8 feet by 10. There is an unusually large exhibition of pears and apples, the Rochester, Syracuse and Boston nurseries being well represented. Amateur exhibitors are not numerous. W. R. PRINCE is descending loudly on the extraordinary merits of the Dioscorea, or Chinese potato. Listen: "It is infinitely the best vegetable which the great Creator has caused to grow upon the earth. It is the only vegetable which is a substitute for animal food. It will prove the greatest of blessings to the poor man. It is the only plant which *combines nitrogen with vegetable matter* [what nonsense.] Man can live on it alone. This is true of no other vegetable. It will be the only potato cultivated in a few years." Such statements are ill calculated to increase the reputation of the Dioscorea with intelligent, thinking men. Here are some stalks of the Chinese Sugar Cane 13 feet high, grown at Orange, Ill.

PROVINCIAL EXHIBITION OF CANADA WEST.

THE twelfth annual exhibition of the Agricultural Association of Upper Canada was held at Brantford Sep. 29th to Oct. 2nd. Owing to unpleasant weather the attendance was not as large as usual, but the exhibition itself was every way excellent, and a credit to the farmers of the Province. Over twelve thousand dollars were offered in premiums. Let us take a hasty walk round the show ground and see what our Canadian brethren are doing in the way of

agricultural improvement. As it rains, let us first go into the "grain and vegetable Hall." What a jam. It is next to impossible to see, let alone examine any of the many fine products on exhibition. In Canada, as in Western New York, the wheat has suffered considerably this year from the rust and midge, but there is nevertheless a magnificent show of wheat. The "Canada Company" offer an annual prize of £30 for the best 25 bushels of wheat—the prize wheat to be given to the company for distribution.—There are *twenty* lots of 25 bushels each entered for this prize. Never have we seen such a fine show of wheat in the "States." For the prize offered for the best *Two* Bushels of Wheat there are *forty eight* entries. Here is the prize wheat, grown by J. H. Anderson of Flamboro West. It is a long and plump berry, of a somewhat dark color, and weighs 66 lbs. per bushel. Name of the variety not given. Probably a mixture. Looks somewhat like the bluestem. What a magnificent show of roots. We have never seen it equaled except at the exhibition of the Royal Agricultural Society of England. Here is a monstrous Squash. There are several that weigh from 130 to 160 lbs., but this one casts all the others into the shade. It must weigh at least 250 lbs. This old gentleman here, says that some cottonwick was tied round the stem and placed in a vessel of water, and that the fruit absorbed the water from the wick and hence increased prodigiously in size, but he apprehends not in solid matter. These Cauliflowers are very fine—some of the heads are 15 inches in diameter—white, compact and beautiful.

The show of fruit is not very good. The ubiquitous Ellwanger & Barry of Rochester, N. Y., exhibit a good collection of pears. Hon. John Young of Montreal shows 20 varieties of pears. These Bartlett's are not as large as some Seckels grown in Rochester this season. Judge CAMPBELL of Niagara, as usual, shows a good collection of peaches, pears, apples, &c., and takes a number of prizes. Charles ARNOLD of Paris exhibits a collection of pears, which proves that as good pears can be grown in Canada West as any where else.

There is an excellent show of cattle and sheep, in number and quality. The list of entries are as follows. Shorthorns, 117; Devons, 91; Ayrshires, 23; Galloway, 30; Herefords, 6; Grade 60; Fat cattle, 16; Working oxen, 38 yoke. Of sheep the entries were: Leicesters, 193; South Downs, 88; Cotswold, 45; Cheviots, 16; Merinos and Saxons, 28; Long Wools—not pure Leicesters, Cotswolds or Cheviots, 62; Fat sheep, 20. The shorthorns, or as they appear to be more generally called in Canada, the Durhams, are evidently the favorite breed, though the Devons are gaining ground. Last year, at the Provincial Fair at Kingston there were 88 entries of Durhams and only 15 of Devons. This year there are 117 Durhams and 91 Devons. This increase in the number of Devons exhibited is the more remarkable when we consider that the Devons are usually considered better adapted to the severer climate of the North; and the Durhams to the rich lands which abound in the western part of the Province.

We have so often given the names of the principal breeders in Canada, and our space is so limited, that we cannot now particularize. The quality of the Durham stock is rapidly improving in Canada. Large importations have been made within the last few years, and the rule adopted by the Society five

or six years ago to award premiums only to such animals as could show a satisfactory Herd book pedigree have tended to produce this result. The show of Devons is magnificent. The exhibition of Galloways is a pleasing feature of these shows. The Ayrshires are generally good, and some few quite superior. The Herefords are nowhere.

The show of Leicester sheep is truly magnificent. There are 40 two year old rams, and 24 one year old rams, nearly all good, and some every way superior. We cannot help thinking, however, that many of them might have been very appropriately entered in the class of "Longwools, not pure Leicesters, Cotswolds or Cheviots." The show of South Downs is large, but there are many of but indifferent quality. Here are a few Hampshire Down ewes, perfect beauties, and this three year old Hampshire Down ram weighing 300 lbs. is a model. They all belong to JOHN SRENCER of Whitby. Here are a few Crossbred Downs and Cotswolds—Down ewes and Cotswold ram—they partake most of the Cotswold character and are fine matton sheep. The show of Cheviots is good. That ewe belonging to R. MIDDLEMAST of North Dumfries is a great beauty—the best we have ever seen. Merinos and Saxons are at a discount in Canada.

The show of pigs is not large. They are divided into two classes—Large and Small breed. Of the former there were 23 entries, of the latter 55. In the former, the most conspicuous is a Yorkshire boar, of good symmetry, great length, perfectly white and weighing 1019 lbs. In the latter class there are some good Suffolks and Essex.

The exhibition of horses is very large and good. There are 109 entries of stallions, 84 of mares and colts, 71 of matched horses, 58 single horses in harness and 16 saddle horses. The horses are generally large and heavy, well adapted for all agricultural purposes. The stallions are mostly descended from "Old Clyde." They are large, active and handsome, of a beautiful iron grey color, and in every way a desirable breed of farm horses.

There are 168 entries of poultry, but we see nothing particularly worthy of mention.

The show of agricultural implements, machines &c. is very good. Here is the celebrated Howard Plow, made entirely of iron and undoubtedly the best of all the English plows. The English and Scotch form of plows generally prevails. Many of the implements and machines are of excellent finish and all of them of Canadian Manufacture. There is scarcely any implements or machines from the states.

Meetings for Agricultural Discussions were held on Wednesday and Thursday evening. They were occupied in discussing the propriety of fixing the Annual Exhibitions of the Society at three points—say Kingston, Toronto and London. There is a strong feeling in favor of permanent location. Some gentlemen present argued—and justly we think—that, though there would be many advantages in having permanent buildings,—though it would afford greater convenience to exhibitors, yet that the exhibitions would become comparatively local in their character and lose much of their interest. No definite action was taken.

The Annual Address was delivered by the President, GEORGE ALEXANDER, Esq., of Woodstock, and was an able and practical production.

The fair is to be held at Toronto next year.

ITEMS SUGGESTED BY THE OCTOBER NUMBER.

OCTOBER comes in with a heavy rain, giving us leisure (if it were not for the many things one can do about the barn) for perusing the *Farmer* for the month—one of the best numbers of the volume. It opens well, on an important question, "How can we most economically

INCREASE THE FERTILITY OF THE SOIL?"—It must be done. And we farmers are learning that under-draining "begins at the beginning" of the great work, though as yet the expense of the improvement deters us in most cases from it. You must "keep it before the people," and remind them again and again of the value of manure, of the best modes of manufacturing, preserving and applying it. But you need no homily from me upon the subject of your duties.

KING PHILIP CORN.—As a general thing, my King Philip Corn ripens no earlier this year than the eight rowed yellow we have planted these many years, and the yield is considerably less. Last year it matured two weeks sooner, though planted a week later. This year it was planted at the same time—the last week in May. S. W.'s seems earlier—in part, no doubt, from earlier planting.

POTATOES.—S. W.'s "Blue Mercers are yet un-ripe, with dead vines." So are mine, and I noticed, last year, that they made the bulk of their growth after the middle of September. They are small and somewhat rotten, but the Mexicans and Yellow Kidneys have suffered the worst. The Flukes and Early Junes escaped entirely in my garden.

SAVE ALL THE FODDER.—It is a well put caution, given by D. of Gates, that we should save all the fodder. The surplus product of this favorable season will not overbalance the old hay consumed "to the last" in the spring, and, as he says, we have the same (or a greater) amount of stock to feed. I do not anticipate any remarkable cheapness of hay next spring, or great surplus remaining unconsumed.

TURNIPS AND TURNIP GROWING.—I thought I should have a fine crop of turnips, but some six weeks ago a cinnamon-colored fly attacked them, and injured them seriously. The variety was "Sutton's Purple topped Yellow hybrid," a good one, when well grown, for stock or the table. My River's Stubble promise well. I agree with friend SANFIELD that turnips need especial manuring and care to succeed, and I shall give up trying to grow them without, hereafter. This year I manured as for other garden crops, but turnips need more.

SEEDING TO TIMOTHY.—I should like to hear from Western New York on this subject, but can only give partially successful experiments for my share. Perhaps I will speak of these in a separate article, hereafter.

MANAGEMENT OF CALVES.—If Mr. GARNSEY can raise better calves than ours, which for the last three months have been fed only on sour milk, I should be glad to see them. A farmer from an adjoining county thought our calves must be of a superior breed, and get unusual feed, or they would not be so much better than his, (one as heavy as three, he said) and was much surprised when I told him they were our common stock, fed only on sour milk, with the run of the orchard pasture. My yearlings, which never had a peck of grain in their lives, show that my system is one to succeed, without meal or bran,

without sweet milk, save for the first six or eight weeks of their lives, and with only sour milk, good pasture, shelter, and good hay in winter.

COMPETITION FOR THE PREMIUMS.—Your offer of prizes for short Essays has drawn out a mass of information, enabling you to make the *Genesee Farmer* the best practical Agricultural paper published—one which is read with the greatest interest by farmers, and from which they derive the greatest amount of information which they can and do use in their business.

FARMERS' SONS—Will thank M. D. for his well written Essay on making farm life attractive. Farmers will gain much by heeding the advice it contains, and remembering the days when they were boys themselves, and what best suited their boyish inclinations. Teach them in some measure to depend upon themselves—to think and act as will prepare them to stand up *as men* hereafter.

Niagara Co., N. Y.

B.

NOTES FOR THE MONTH.—BY S. W.

THE STATE FAIR AT BUFFALO.—If the first State Fair at Buffalo was the cap sheaf up to that date, it may truly be said that the late fair was the largest and best of all. Only to think of \$16,000 receipts, at a time when money has deserted not only every Bank, but every pocket, save that of the self-denying farmer; and the reason why farmers have more cash than others, is not that they earn or receive more, but only that they are more economical and have fewer artificial wants; and I trust that at this time of monetary tribulation, no farmer, or farmer's wife, son or daughter, will covet either the present or prospective condition of the fast and fashionable classes of our young America.

Buffalo is called a commercial city, but if we may judge from the great number and variety and excellence of the agricultural and domestic articles contributed by her industrial interests to this fair, she is also a great manufacturing town. One thousand dollar looking glass stood, 13½ feet high in its gilded frame, in Domestic Hall. It was made to the order of a Bank President, for his daughter. How significant of the times that were. It took half an hour on the third day to elbow through Domestic Hall, alone, such was the jam of men and women of all nations; but good humor was forbearing, and crowned all. Words of admiration were heard in German as well as in English, with now and then an exclamation of delight from the lively little Canadian demoiselle, with her patois *icit* for *ici*.

Great credit is due to the officers of the Society and the City Police, for the order preserved in the great and heterogeneous throng. The orders of Col. PATRICK, the superintendent general, himself a martinet, were executed by his subs with that rapid but noiseless efficiency which brought to my mind early recollections of man-of-war discipline! I could have sympathized with Secretary JOHNSON in his unremitting labors had he needed it; but the quiet grace with which he gave the go by to incessant bores, without remitting his labors either of head or hands for a moment, convinced me that of all other men, he was the man for the arduous task his office required continually.

The location of the fair ground was matchless; with the picturesquely wooded Canadian shore on

the right; the broad lake, with its sail craft and busy tugs, in front; the city, and harbor, filled with steamers, propellers, square and fore-and-aft rigged vessels on the left. It only needed the ocean swell breaking in snowy wreaths on outer ledge and headland rock, to realize the best views at Newport, R. I., my native town.

COLD GRAPERIES.—HORACE WILLIAMS, on the bank of Buffalo Creek, in the 13th ward, has just completed the longest if not the largest cold grapery in the United States. It is 670 feet long, running on the N. W. and S. E. line of his lot on the north; it is 12½ feet high, and tightly boarded on the N. W. side, with glazed sash on the sloping, S. E. side; width at bottom 13 feet; ventilated at top and bottom. The house now contains nearly 400 vines, which are from 7 to 12 feet long, and very thrifty. Before building, he excavated, 24 feet wide and two feet deep, the whole 670 feet; then filled in with lime from glue vats, sods, refuse of glue stock, stable manure, and tan bark saturated with the same. This was thoroughly worked over with the soil, and the whole plot covered and raised a little with the excavated alluvium. Under the whole drain tile is laid, to take off surplus water, and the same trench holds bored scantling, through which water is brought from an elevated reservoir, into which it is pumped by horse power from the creek at the glue factory. On this alluvial formation all sorts of fruit succeeds well. He has more than 500 pear trees, principally dwarfs, some of which have borne fruit this second year from the nursery.

THE SEASON AND THE CROPS.—SORGHUM.—One extraordinary feature of this season is the frequency, not of showers, but of long continued drenching rains. This has added much to the earth's herbage. Pastures never yielded more in one season; but the corn and barley crop has been diminished by it, and potatoes have suffered from premature decay. Garden crops generally are good, particularly onions and cabbages, but Lima beans were late and do not at all ripen; and although frost has kept off to the middle of October, tomatoes lie green on the ground, and no better when suspended and exposed to the direct rays of the autumn sun. Sorghum now stands over thirteen feet high; the main stalks when suckered, are one and one fourth inches in diameter, and are full of sugar, but the seed, though plump, is poor in farina, and refuses to ripen. But when full grown tomatoes hang in bushels on the vines for weeks together, without ripening, owing to the continued cold and wet surface at their roots, we cannot expect sorghum to ripen its seed. But it is a good foraging plant, and contains all the sugar even in this climate that has been claimed for it South. Four stalks cut up in small pieces will fill a pail, and give a cow a much richer slop than the same bulk of watery turnips, to say nothing of the fat forming sugar, so necessary to still slop fed cows, to enrich their milk.

RETURNING FROM KANSAS.—That indomitable young matron referred to in other notes, has returned from Kansas to the old fashioned hills of Chatauque, with a now daily shake of the ague; but, woman-like, she lays all the blame to her husband. When the intermittent took him, he had no romance to fall back on,—the promise of returning vernal blossoms to the prairie, the early berries and wild plums of another summer, nor even the substantial promise of the present corn crop, could amuse him a moment, much less

compensate for the loss of his health and strength in a billious climate. Hence he sold his stock, crops and chattels, left his farm deserted, and returned to the high hills he had left. But *apropos* of those shakes, always more severe in a stimulating atmosphere than in the region of fever and ague proper, Nature is kind to those who obey her laws of acclimation; but when they distrust her, and take fever and ague to an uncongenial region, they will only shake the harder for the time being, though they sup on blue pills and breakfast on quinine. S. W.

Waterloo, Oct. 14th, 1857.

CRYSTALIZED SUGAR FROM THE CHINESE SUGAR CANE.*

As the season for making syrup and sugar from the *Sorghum Saccharatum* is later at the North than in this quarter of the Union, it occurs to me that our experiments with the juice of this new plant, and experience in sugar making, may be useful to persons cultivating the Chinese Cane in colder localities; and, therefore, I send for publication a few facts derived from personal observation.

Hitherto some doubt has existed whether the Chinese Cane yields any other sugar than that of fruits, and my first investigations were directed to this point, the results of which are thus stated in the *Augusta Chronicle & Sentinel* of the 9th of September:

"SUGAR FROM THE CHINESE SUGAR CANE.—DR. D. LEE, of the *Southern Cultivator*, has shown us a sample of one or two pounds of well-granulated and well tasted Sugar, made by him at the plantation of Mr. W. J. EVE, of this city, as the result of his first experiment with the juice of the Chinese Sugar Cane. This result is the more interesting from the fact, that scientific gentlemen in Boston have expressed the opinion that this plant contains no cane sugar, but grape or fruit sugar only. Dr. LEE's knowledge of chemistry has enabled him to correct this error, and demonstrate that the Chinese Cane is nearly as rich in crystalizable Sugar as that of the best cane grown in Louisiana."

The sugar above referred to was defecated by the use of a little cream of lime, four table spoonfuls to three gallons of the recently expressed juice of the Cane, put in while the juice was cold; but which was immediately heated nearly to the boiling point, to form a thick scum. This being removed by a skimmer, the liquid was filtered or strained through a cloth bag into another pan or boiler, to separate fine particles not removable by the skimmer. Knowing that the juice of this plant contains a good deal of green coloring matter, (*chlorophylle*) glucose and caseine, and the usual amount of albumen and mucilage, all of which ought to be removed, I took extra pains in clarifying the syrup before attempting to crystalize sugar from it. The caseine is the most difficult of removal, whether in the true sugar cane of Louisiana, or in the Sorghum. Dr. EVANS, in his *Sugar Planters' Manual*, recommends a solution of nut galls (*tannic acid*). Another gentleman uses a little vinegar to coagulate the curd-like matter. I have not tested either sufficiently to warrant me in recommending them; yet I name them, because, in skilful hands, both attain the end sought. Where a whole plant is crushed to express its sugar, the latter

is necessarily far more contaminated with other substances than is the limpid sap of the sugar maple. Hence any one, even Indians, can make fair sugar from the saccharine liquid obtained by tapping the sugar tree of the Northern and Middle States; but sugar making from beet roots, and canes of whatever kind, is a more complicated process. It will, therefore, take some little time for farmers to learn the best ways and means to produce good sugar from either the Chinese or African Cane. Of the latter Mr. PETERS has 40 acres, and 70 of the former, which I have recently seen. The African seed was latest planted, and the crop is not ready to grind; it is much more like the true tropical cane than is the Sorghum. And I saw at Gov. HAMMOND's, a few days since, two vigorous plants growing from the two separate joints of the cane which had been cut off from the parent root, and planted precisely as cane joints are planted in Florida. This fact goes far to prove a close relationship between the two sugar-bearing plants, and Gov. H. regards them as one species. The accident of not bearing seed, but blossoms only, in the Florida cane, is ascribed to the long practice, in India and China, of cutting off the heads of the true cane early, to increase the sugar in the stems below. Both starch and sugar are largely consumed in plants while forming their numerous seeds. Gov. HAMMOND commences operations this week on a crop of 110 acres, which is late, owing to the late arrival of Mr. WRAY, who has a very complete apparatus for making sugar in a small way. Mr. W. has a patent for his process for making syrup and sugar from whatever plants saccharine juice may be extracted. The practical value of his plan has yet to be tested in this country. Messrs. HAMMOND and PETERS will soon put into the market over sixty thousand gallons of good syrup, while there are many whose crops range from ten to one hundred barrels. Where the syrup is properly manufactured, it sells as high as STUART's best. After deciding to my own satisfaction, the best way to clarify syrup for making sugar, or pure syrup, I will write you the particulars. D. LEE.

Athens, Ga.

DOMESTIC PIGEONS.

Of all the feathered race, Domestic Pigeons have always been great favorites of man: In every age, and in every country, even back to our earliest records. Noah, we have every reason to believe, rejoiced more in this bird, when it returned with the olive branch, than in all his *Arked miscellany* besides.

The pigeon is also famed in classic lore. Aristo tells us that the death of Orillo was made known to all Egypt by the Carrier Pigeon in a few hours. We also read that when Brutus was beset in Modena, he, by these birds, kept up an uninterrupted correspondence with Hirtius without, Anthony failing in every stratagem to stop these winged couriers; luckily for those poor birds, powder and shot were not then in use.

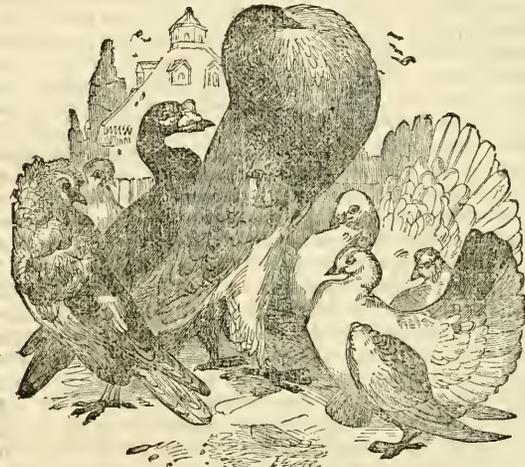
The Messenger or Carrier pigeons have been bred and trained to such perfection, that they will readily return from the principal cities, and the wonder is no longer at the birds return, but at the surprising swiftness and exactness with which instinct has endowed them to direct their course, so that the reduction of

*The above interesting article from Professor LEE was intended for the October number, but did not reach us in time.—Eds.

time is as much an object of ambition to the fanciers as an extension of distance. But, thanks to science, their "occupation's gone;" the Electric telegraph, which annihilates space, throws the Carrier pigeon entirely in the back ground.

To describe or particularise all the varieties known, would require a volume in itself; as, in addition to the permanent races, or those which, when kept pure, transmit their likenesses to their offspring, there are intermediate castes produced by particular crosses between individuals belonging to the different varieties, and which, though highly prized in the first generation, are not considered worthy of further extension; as their progeny cannot be depended upon, but are found to degenerate, and are liable to run into still more distant and less valued races.

The group in the annexed illustration comprises the most conspicuous varieties of the Domestic



Pigeon. All these birds, except the Carrier, the Pointer, and the Tumbler, are very similar in their habits, and need no description.

For the last two or three thousand years at least, certain pigeons have been kept by man as domestic creatures, with the object of making them fulfil a rather varied round of characters. Their office has been to afford a ready supply of food, convenient to have at hand in hot weather, when animal food must be eaten almost as soon as it is killed; to furnish manure, for the cultivation of vegetables—the melon, and the cucumber—to render efficient and ready services as messengers under circumstances of extremest difficulty—and to be pampered at home as domestic pets, whose value lies in their docility, their beauty, or even in their strange and anomalous peculiarities.

A few pigeons may be kept about any cottage, for they cause but little trouble; they take care of their own young ones, and they do not scratch or do any other mischief in the garden. They require to be fed with corn, peas, oats or wheat screenings. They are also fond of buckwheat. To begin keeping them, they must not have *flown at large* before you get them. It is necessary to keep them for two or three days shut up into the place which is to be their home, and then they may be let out, and will never leave the premises as long as they can get proper food, and are undisturbed by vermin or unannoyed by lice.

The common house pigeons are the best to keep,

for they breed oftenest and feed their young ones best. They are also the most hardy. They begin to breed at about nine months old, and if well kept they will give you eight or nine pair in the year. Any little place—a shelf in the shed, a board or two under the eaves of the barn, or in short, any place under cover, even on the ground-floor, they will hatch and breed up their young ones. It is not supposed that there could be much profit attached to them; but they are of this use:—they are very pretty creatures, very interesting in their manners; they are an object of delight to children, and to give them the early habit of fondness for animals and of *setting a value* on them, which as we have often had to observe is a very great thing. A considerable part of all the property of a nation consists of animals. Of course a proportionate part of these cares and labors of a people appertain to the breeding and bringing to perfection those animals; and if we consult our experience, we will find that a laborer is generally speaking of value in proportion as he is worthy of being entrusted with the care of animals. The most careless fellow cannot hurt a fence or ditch, but to trust him with a team or the flock is another matter. And mind for the *man* to be trustworthy in this respect, the *boy* must have been in the *habit* of being kind and considerate towards animals; and nothing is so likely to give him that excellent habit, as his seeing from his very birth, animals taken great care of, and treated with great kindness by his parents, and now and then having something to *call his own*.

C. N. BEMENT.

Springside, Po'keepsie, N. Y.

CROPS IN SENECA COUNTY, &c.

AN INTERESTING LETTER FROM MR. JOHNSTON.

MESSRS. EDITORS:—I plead guilty in not writing you at harvest, respecting the crops, &c. In the first place my wheat crop was the worst I ever raised, perhaps 1828 and '31 excepted, as I have not all thrashed, and none cleaned, except what we sowed. I can tell the failure was mainly owing to the great drought last fall. My wheat, and many others, came up very badly, and I am sure that two-thirds of it never came up until May. Now, any wheat-grower knows that it is impossible to get a crop of winter wheat when it does not vegetate until spring. The reason why even those who were favored with showers last fall to bring up the wheat, had inferior crops, was the excess of rain in June. No man ever saw a good crop of wheat when there was a great excess of rain in summer. I believe it is the same in all countries—at least such has been my experience. I noticed last year, on an adjoining farm, where the wheat was drilled, it came up very much better than mine. In fact, it came up right. I could not account for it at the time, as my land was in as good a state of cultivation as his, and both sown at the same time. His is a good crop for this season, and far above an average crop for this county for some years past. It never occurred to me until this season, that it was owing to his wheat being drilled in, and to mine being sown broadcast. This season we both sowed at the beginning of September, and my land being fallowed, that never was excelled by anything I ever saw. A drought set in at the time of sowing. His drilled wheat came up luxuriantly,

while mine was exceedingly thin. On examining I found that none of mine vegetated except that deepest in the ground. Then it at once struck me that if I had drilled, the year previous, it would in all probability have gained me 500 or 600 bushels of wheat. However, this year we have had plenty of rain since the 18th ult., and my wheat is all right, and I prophecy a good crop next season. But I will drill in wheat after this. Old as I am, I still learn. I expect my wheat will yield about 12 bushels per acre. When at Canandaigua last week, I found many farmers who said Ontario county would not average six bushels per acre.

The barley crops are very unequal, many won't give over 10 bushels per acre. Where the land was drained and otherwise well managed, it has given from 25 to 30 bushels per acre, and I know in one instance, where the land was summer fallowed and sown with barley in the spring, 40 bushels per acre were obtained. The owner said he thoroughly underdrained the land. I know of another instance of 40 bushels of winter barley being raised to the acre. The land was partially (not fully) underdrained, and was thoroughly fallowed, and sown early in September.

Oats gave a large crop where not drowned out. One farmer, 14 miles south of this, told me that he had a field of oats, one half of which was drained, (not near thoroughly); the drained part gave 25 bushels more per acre than the undrained, and those on the drained land weighing 7 lbs. more per bushel than those on the undrained. He said, "JOHNSTON, we don't need you now to tell us draining will pay, as we now have proof positive, by our own experience." He said almost every farmer around there was doing something at draining, and if he only could borrow the money he would have all his farm drained in two years.

Our corn crop is mostly all ripe, and not a bad crop. The grubs thinned mine very much, but the ears are fine. JOHN JOHNSTON.

Near Geneva, N. Y., Oct. 6, '57.

TOPPING VS. CUTTING UP CORN.

YESTERDAY, when going to town to take out some friends who have been visiting us, we passed several fields of corn which had been topped, i. e., the stalks cut off just above the ear, bound, and stacked. Some of the party inquired "why that was done," but I could hardly find reasons for the practice. I said I supposed it caused the corn to ripen sooner, and that the part of the stalks saved, escaped injury from frost, and hence were more valuable for fodder. It was less labor, also, to secure the corn fodder, as there was less of it, and a large bulk of the portion left was fit only for manure. These were about all the reasons I could mention in the favor of topping, and I propose now to leave it to the advocacy of those who practice it, and say why I always cut up my corn.

When corn is fairly glazed, it is then fit to cut up at the root, and thus all the fodder is secured, that portion "only fit for manure" included, but it is in its place, along with the other manure, and of some value there, which can hardly be said of it when it stands as topped until plowed under. If a severe frost comes before corn glazes, the sooner it is cut up the better, but a slight frost often occurs of little

injury to the fodder during the time of glazing. As long as the stalks are full of juice, the leaves perform their functions, and the corn remains unripe, the latter receives additional supplies from the former, whether standing on the hill or cut up and placed in the stack,—hence topping injures the perfection of the crop, and hence my second reason for cutting up is, that I get *more and better corn*.

Another reason for cutting up is, that it leaves the field ready for the plow and the succeeding crop. Such stalks as we raise would totally prevent fall plowing, and spring plowing would be difficult unless some means were taken to remove the stalks, were the corn only topped above the ears.

The labor of securing corn fodder—indeed, that of harvesting the entire crop, is rather hard, but as much so in the case of topping as of cutting up, nearly. We cut two rows at a time, placing about six hills together on the ground, to be taken up by the binder following, and tied with a wisp of straw. These bundles are afterwards placed in stooks of from five to eight bundles, and bound with two bands, a single and a double one, and are then prepared to cure in good order, or even to stand for months, if necessary. But as soon as dry, we husk out, replacing the bundles in the stooks until finished, and then storing them in the barn or stacking near the barnyard. It is very poor farming to feed them out around the field, in lanes or back yards, where they will be wasted as manure.

I have noticed that corn fairly ripened on the stalks was heavier than that husked before it became properly dry, and that there was some gain in grain, though accompanied with a loss in the value of the fodder, when the corn was well dried in the hill, before cutting. But my story is already too long, so I will close with a caution about stacking corn-stalks. Put them up in small stacks. They keep better; are fed out more conveniently, and are less exposed to injury from storms after the stack is opened for feeding. A. S. B.

Niagara Co., N. Y. Oct., 1857.

NOTES FROM INDIANA.

MESSRS. EDITORS:—I do not think that "B," of Niagara, and "S. W.," of Waterloo, have read my article in the September number understandingly. The idea I wished to convey was this, that it is a good plan for the improvement of land to sow turnips among corn after the last plowing, and leave them to be eaten off by stock (*sheep especially*) during the winter. I said *nothing* about "growing turnips successfully among corn" as a crop to be gathered, but I say now that I have raised good turnips in this manner, and have now among my corn as good a prospect for a good crop as where they are sowed by themselves in a soil four feet deep, of vegetable mould, mixed with sand composed principally of lime, with some quartz and silica, and perhaps felspar and mica. So "S. W." will know by this that our soil is alluvion, a sort of detritus washed in, and deposited from both granite and limestone formations. All the rock we have hereabout are boulders, here and there on the prairies; on the north side of the hills or bluffs, and along the river. There is no limestone, as such near the surface, nearer than the Wabash. I would respectfully ask S. W. if he knows what he means by the "coarse wild grass of

the prairies?" I don't, and very much doubt if he or any other man does. His much vaunted *red clover* is about as *coarse* a grass as we have here, (I have measured stalks of four feet in length,) and he does not think that a bad article for cows. There are so many varieties of grass here that I doubt very much if all have been described. That which I call the wire grass is the only worthless grass for pasturage we have here, but is a very different article from either the *Poa Compressa* or *Poa Serotina*, both of which are called wire grass, and are among the most nourishing of grasses, and grow abundantly hereabout. The *Poa Pratensis* (probably his *agrostis*) is also abundant here; but as I am incompetent to give a description of our different varieties of grass, will say no more on the subject than to renew my query, as to what he means by the coarse prairie grass? If "more than one woman from the fertile plains of Kansas" was well acquainted with the territory, she would know there of such natural meadows of red clover as she never saw equalled in New York or Massachusetts.

I made two quarts of first rate syrup of the Sorghum last Thursday, from seventy stalks. The stalks averaged nearly thirteen feet in length. They grew in the orchard of Mr. ALLEN NIXON, near town. We crushed the canes in the crushing machine of the cider mill. Lost full half of the juice; saved sixteen quarts, and made therefrom two quarts syrup. First strained the juice; put one half in a kettle; when warm put in a table spoonful of cream of lime, then the white of an egg, well beat up; brought to boil quickly; as soon as boiling, removed from fire; let settle; skimmed; strained again through flannel; reduced to syrup of golden color, good flavor, and nearly as thick as ordinary strained honey. The other half was served in the same way, except that it was let boil about two minutes previously to being skimmed. The consequence was, it was of much darker color, though equally good in other respects.

E. HODGES is right about prairie grass, horses, cows and "milk fever," as he calls it. To be sure it is not universal in prairie countries, except as to their universal exemption from it. They only claim it in the timbered portions of the country.

If my friend from Duanesburgh will drop his ditch from one to three feet deeper, I think he will have a ditch better in every respect.

Does D. W. LOTHROP really think the apple and pear short lived trees? I think he must be joking when he intimates that the elm, maple, tulip, pine and hemlock are more desirable because more durable. Commend to me the fruit trees. Let every man plant them, and his children will take good care they are not injured.

I am glad to see that a new edition of DOWNING'S "Fruit and Fruit Trees" has appeared. We need it.

CHAS. BRACKETT.

Rochester, Fulton Co., Ind.

ON THE MANAGEMENT OF CORN FOR FEEDING CATTLE.

MESSRS. EDITORS:—As the time is now near at hand when we farmers of Indiana and many other parts of the world, will be (and perhaps some are now) engaged in cutting up our corn, and as I have seen many articles on the subject, I will give to your readers a few remarks on the management of corn

for feeding stock as we do it in Indiana, Illinois, Iowa and many other places. Many of our farmers keep from fifty to two or three hundred head of cattle through the winter. This every person who has had any experience in stock raising knows, requires no small amount of feed and labor. It would be useless for us to think of housing a sufficient amount of feed for that amount of stock. Some of us have as good barns as we have ever seen in any country, and we have them filled with hay, (not with prairie hay, as perhaps some of your correspondents might suppose, but with the very best quality of hay,) and many of us have from ten to fifty fine stacks in our meadows, yet this is not sufficient for our stock. Many of us want to stall-feed quite a number of cattle, and in order to do this, we are under the necessity of cutting up a large amount of corn.

The mode generally practiced here is about as follows: Immediately after the first heavy frost, the farmers who have cattle to feed, raise all the force they can, and commence cutting up their corn, which is shocked in the following manner: We bend the tops of four hills, two hills from a row, together, and tie them, and so on at proper distances through the whole length of the field. This is a very good support to commence the shocks against. We then set up from twelve to sixteen hills square in a shock, in good order, and tie well, either with a band of straw, or corn stalks tied together. We shock our corn immediately after it is cut, without laying it down to wilt or dry. We have no difficulty in saving our corn sound and good in this way. The fodder is also as nice and bright in the spring as when put up, if rightly managed. But I am compelled to differ with some of your correspondents, in reference to shock corn being heavier than that left to ripen on the hill. As a general thing our shocked corn is not quite as heavy as that on the hill, yet it will keep as sound and good as any way it can be managed rightly.

ELIJAH THOMAS.]

Independence, Warren Co., Ind.

AGRICULTURE IN VIRGINIA.

"P." of "Western New York," tells us that "a mere census return, which rates New York land many dollars an acre more than that of Virginia, may yet not show that New York tillage is therefore proportionately the more profitable. The high price of land is not always the symbol of prosperity or thrift." And yet, in one of his "good examples," the price of the land raised, in eight years, from "about" fourteen to "over" forty dollars per acre, showing that, after all, P. considers the rise in the price of the land as a symbol of prosperity.

Virginia has 26,000,000 acres of land "in farms," and New York has 19,000,000; but New York has 12,000,000 acres of her's "improved," while Virginia has only 10,000,000, hence the average cash value per acre in Virginia is \$8.27, while in New York it is \$29. According to P., the crops raised in Virginia are quite as good as those of New York. But New York raises, annually, nearly 2,000,000 bushels of wheat, 3,500,000 of rye, 16,000,000 of oats, nearly 8,000,000 pounds of wool, 14,000,000 bushels of potatoes, 3,500,000 of bushels of barley, nearly 3,000,000 of bushels of buckwheat, 68,000,000 lbs. of butter, 49,000,000 pounds of cheese, 3,000,000 tons of hay, 2,500,000 pounds of hops, 9,000,000

pounds of maple sugar, and 1,000,000 pounds of beeswax more than Virginia does of the same articles. New York also produces a greater number of horses, cows, working oxen, other cattle, and sheep; the greatest value of orchard and garden products, &c., while Virginia produces the greatest number of asses, mules and swine; the greatest number of bushels of Indian corn, the most tobacco, rice, cotton, sweet potatoes, hemp, flax, and the greatest value of home manufactures. If anything can be proved by the figures of the census tables, these figures prove that the agriculture of New York is far ahead of that of Virginia,—because they make it evident that though she has seven millions of acres more land in farms than New York, yet she falls short of producing an equal amount of all the staple products (except corn and tobacco) by millions.

Dryden, N. Y.

H. C.

EXPERIMENTS WITH THE CHINESE SUGAR CANE;

EDS. GENESEE FARMER:—As this plant (*Sorghum Saccharatum*) is now, and has been for the last year, attracting considerable attention among the farming community, and others who have a desire to test its merits, either as a forage crop or for the manufacture of sugar, I give below some experiments made by myself this season, on rather a small scale, however, yet we can judge from it what its more extensive culture would do subjected to the same treatment, and under a similar season. I procured seed from the office of the *Genesee Farmer*; planted about the 25th of May; made some experiments about the 15th of September. The yield of juice far exceeds our most sanguine expectation, though when suffered to stand a week or two longer, there seems to be a more solid sweetness to it. My mill is simply two hard wood rollers, (beech) fifteen inches in diameter, and turned perfectly smooth. They were then fitted closely in a frame, the upper one adjusted upon movable boxes, and so arranged as to admit of its being keyed close upon the lower one, or loosened, to admit the larger canes. I get a yield of about four quarts of juice to twenty-five average canes, and I think there might be nearly a third more juice extracted could the cane be pressed with a screw press after passing a second time between the rollers. By experiment, I find that corn stalk yields a very small quantity of juice or of the saccharine matter, compared with the sorghum, having taken twenty-five lbs. weight of each and subjected both to a like treatment. The stalk gave a yield of about one-fourth the quantity of juice that the cane did, and when boiled to syrup was of a very inferior quality.

Flushing, Mich.

W. N. CHAPIN.

LAYING DOWN BUTTER FOR WINTER.—It may not be uninteresting to some of your readers to know my mode of laying down butter for winter and spring use. I rinse the milk out of the butter until the water is perfectly clear; salt it; then set in the cellar for 24 hours; then work nicely, taking care not to spoil the grain; after which I add a little salt and a table spoonful of pulverized loaf sugar to about four pounds; then pack in stone jars. I commenced laying down butter in September, 1856, and used the last of a four gallon jar in July, and it was said by good judges to be preferable to fresh made butter.

Clarence, Erie Co., N. Y.

N. C.

PLANTING SUGAR CANE INSTEAD OF SEED.

MESSRS. EDITORS.—I have watched with interest the discussion of the merits of the Chinese Sugar Cane, and the different methods of cultivating and manufacturing it; and I am quite surprised that all talk of planting the seeds, and nothing is said about planting the canes.

In Louisiana the canes are used for seed, three crops being grown from one planting, each successive crop being richer in sugar for three years, when the ground is again plowed and planted. The planting commences in January and continues till April. It is done as follows: The ground being plowed in "beds," a furrow is made in each, and the canes are placed in the furrow in such a manner that the joints are from four to six inches apart, when they are covered about three inches with hoes. The hoeing is done by the first of August; and about the middle of September, as much as is needed for the next year's planting is cut and put up in "ricks or stacks." The general cutting begins in October. (See OLMDEN'S Seaboard Slave States.) It has been stated also that the Chinese bury their canes for seed, during the winter, the better to preserve them. It might be necessary in this climate to plant each year, but it strikes me as quite probable that the juice of canes raised from canes might be more easily made into sugar than that produced directly from seed. Let us have the opinions of your correspondents on the subject, and let experiments be made by those who have opportunity to do so.

Dryden, N. Y.

H. C.

GOOD MANAGEMENT OF BUSINESS AFFAIRS. BUYING, SELLING, &c.

THE farmer is a commercialist—he endeavors to shirk the responsibility. If he consume all that he produces, and no more, or sells and buys nothing, or carries on no exchange whatever, then is he simply a farmer. But every farmer exports and imports more or less. Hence skilful farm management requires an education giving a practical knowledge of exchange.

He has to understand not only cost of production, but cost of transportation. He needs to have as full a knowledge of business affairs as the merchant. He has to contract—he should understand contracts, and know when legal and safe. He has to transfer—he should know what constitutes a legal transfer. In short, the farmer should understand the minutiae of business affairs.

Farmers are sometimes over-reached or victimized. In such cases, remedy lies in the reparation he may gain from the legal profession. Prevention is safer than cure. Business knowledge is prevention.

The business man keeps his business in a settled state. He records the business events of the day, ready for the morrow—its events and changes. The farmer has no time for this. Why? Because he is busy; he keeps his accounts in his head, and trusts memory. A poor accountant in the hour of death.

In buying, the farmer consults his own interests, as he should do. If intelligent, he understands where to buy; if a good judge, he knows what and when to buy, with the value of the article. He is generally caught by a "sharper" but once, and shuns afterward the fire which scorched him. The farmer

should be as much of an adept in purchasing as the merchant. He cannot shirk the duty of being a full business man, without individual loss.

In selling, the farmer needs to know the probable demand—the extent of supply, and the probable range of price. The price obtained governs his success. He should never seek to obtain an extortionate price, and should use equal care not to sell below price. "Honesty is his best policy."

He should always seek to sell in large quantities, and not be giving many small credits, which are hardly worth collecting. A large price per bushel dwindles to a small one when time has to be given to the collection of item debts. That farmer who manages his business well, will read the papers carefully—note the statistics—and calculate the result. No farmer should be the satellite of any other business man. Be your *own man*. Be a man. Own your own voice—your own mind—your own thoughts—your own out-spoken words—fawn only when you see truth bow to error. Strive to make Agriculture the pillar reaching from earth to heaven, around which the arts and sciences shall cling and twine!

Homer, N. Y.

JNO. SANFIELD.

MIND YOUR BUSINESS.

SOVEREIGN FARMER! inside your own line fences you are a Prince, by possession, treaty and conquest; an absolute ruler and worker with your Maker. You are the intelligence, the director and governor of your kingdom. Your adaptness is shown by your labor—your worth by your success. If a full man, men know it—if a great man, your government will show it.

Mind your business. Let it be conducted after the teachings of that Great Volume of International Law, given by your Maker. "Seest thou a man diligent in his business, he shall stand before kings; he shall not stand before mean men."

If you act up fully to the teachings of this Book you will be constantly occupied; it contains the counsel of our Heavenly Father, and was given us by Him, when by sin we had been driven from His beautiful garden. Our loss was great, but our gain may be infinite.

If you mind your business, you will be interested; you will find no time to be unhappy; your name will be added to the catalogue of the industrious.

There is much in the proverb of SOLOMON:—"Go to the ant thou sluggard, consider her ways and be wise." The ant and the bee mind their business.

If you mind closely your business, you will cultivate your mind—you will study the habits of mischievous depredators upon your possessions—you will look carefully after the interests, and study the necessities of your subjects—you will look to your common interest in the school—you will, to this end, *do what you can*. Roads and bridges will receive your care, and you will look closely to your every public interest.

If you mind your own business, your Agricultural Society will not be engineered by lawyers, nor your best cow named by doctors, nor your annual addresses be buncombe speeches by ambitious attorneys.

If you mind your own business, it will support you—you will be a man of worth to your country in example and precept—you will be where duty calls,

shoulder to shoulder with your fellows, or on your farm. You will perform duty with your whole might—will act, will fill manhood's place, the full, willing man.

If you mind your own business you will be loved, respected, looked up to, and honored by those who do not—will love and respect others. You will be useful, an honored ruler, and enjoy sunshine in life. Your conquests will be peaceful—laurels enduring—victories undisputed—statutes upheld—name lustrous, and your golden crown CONTENTMENT.

Homer, N. Y.

JNO. SANFIELD.

AGRICULTURE IN WESTERN NEW YORK, AS DESCRIBED BY AN INTELLIGENT SCOTCH FARMER.

IN 1853, ROBERT RUSSELL, Esq., an intelligent Scotch farmer, visited this country for the purpose of studying our agriculture, more especially in reference to the influence of climate in determining the best systems of rotation, &c. The result of his observations are recorded in a work entitled "North America, its Agriculture and Climate," published at Edinburgh. The following extract will give some idea of the nature of the work, and will be interesting, as indicating the impressions which a hasty glance at our agricultural practices leave on the mind of a practical and scientific Scotch farmer:

"In company with Mr. HARRIS, editor of the '*Genesee Farmer*,' from whom I received much kindness, I drove about twelve miles to the west of Rochester, N. Y., to visit some farms in the township of Riga. The sowing of wheat was going on very briskly on many of the farms that we passed, and on some it was already finely braided. Wheat is put in very early throughout Canada and the United States, and the plants tiller and are well rooted before the winter sets in. In this part of the country the farm horses are a superior class of animals, having a good deal of breeding, and being similar in figure and size to our carriage horses. They are very active, and a good team will sometimes plough $2\frac{1}{2}$ acres of light land in a day. It is common to put three horses abreast in the plough, and to make a furrow from 8 to 10 inches in depth and from 14 to 18 inches in breadth.

"The system of cultivation which is pursued is interesting. The land does not strike one as being particularly fertile, but rather of middling quality. It consists of a light-coloured sandy loam of considerable depth, and having some boulders strewed over it. But this soil seems to be as suitable to the growth of red clover as the limestone gravels of Ireland are to the growth of grasses, and hence its fertility is maintained by clover as our fields in Scotland used to be by grass. The rotation that is followed is usually clover one year and wheat the next. There are few or no soils in Britain upon which clover would grow with vigour every second year; but were it not for this property of many of the American soils, much less wheat would be raised than at present. On the light soils in this region, I was astonished at the fine healthy plants of clover in the wheat stubbles. When the autumn is somewhat moist, a considerable growth of clover takes place before winter; but the farmers do not like to pasture it too close. An intelligent farmer informed me that the common clover would last for ten or fifteen years on these soils if it was cut early in the season and not allowed to seed. By the system at present pursued, the farmers in this district cannot keep a large herd of stock, and the clover fields are worth little money, being chiefly of use in renovating the land.

"The clover fields are prepared for wheat by being deeply ploughed in June, and the surface being afterwards worked by the harrow and the scarifier to destroy the weeds. Though this system sacrifices a vast quantity of valuable forage, yet, in the circumstances, it is perhaps the best that can be followed, for it admits of the wheat crop being frequently repeated, and involves but a small amount of manual labour, which is the element that determines the agricultural systems of America.

"The farmers in the Riga district sow about one-third of the whole extent of their possessions with wheat every year. It is the best paying crop, and every one endeavors to have as great a breadth of it as possible. The ploughing up of the clover sod and the cultivation of the surface is called "fallowing," which is a less expensive system than what goes under the same name at home. The winters are very severe, and field labour is then entirely interrupted; but the short season for labouring and cleaning the land is more than compensated by the powerful influence which the hot summer weather has in destroying the perennial grasses and weeds. These are readily killed by being ploughed up at that season and having their roots exposed to the heat and drought. In this way is the land kept clean by the best farmers in the north western part of the State of New York, which is perhaps the most productive region for wheat in North America. No clean fallows nor any expensive fallow crops, such as turnips, are necessary to keep the land in good condition and free from weeds.

"On one of the Riga farms which we visited, extending to 230 acres, we found 80 acres in wheat, 11½ in barley, 14 Indian corn, 25 woods, the rest pasture and clover. In 1853, the crops of wheat averaged 40 bushels to the acre; in 1854, only 25 bushels. As indicating the natural capabilities of the land, we were shown a field on which a heavy crop of Indian corn had grown in 1852; it was sown next spring with barley, which produced 50 bushels to the acre; then sown with wheat in autumn, and this year it had yielded 40 bushels per acre. On this farm a field of clover was in course of being ploughed up and sown with wheat; it had been in wheat this year, but the farmer was complaining that the plant of clover was bad, while in our opinion it was a most excellent one. Mr. HARRIS remarked that this was surely a mere excuse for getting a little more sown with wheat, while the prices were good. 100 sheep are kept on this farm, besides 10 or 15 cattle, which are reared and sold when two years old.

"On another farm of 208 acres there were 40 in woods, 12 permanent pasture, 7 Indian corn, 12 oats, 10 peas, 65 wheat, the rest in clover. About 1000 bushels of wheat were thrashed this year, 500 last, and 2000 the year before. The seasons appear to influence the yield of wheat far more than they do in Britain. The flock of sheep yielded 400 dollars last year. Leicester sheep do not seem to thrive well where so much of the land is cleared, for frequently the whole flock are seen during the heat of the day standing crowded together with their heads all down.

"It is almost the universal practice to sow clover among the wheat in spring, and at the same time to give the field a dressing of 100 lbs. of gypsum, which has a wonderful effect on some crops. The clover is benefited more than any other plant; though peas, potatoes, and Indian corn have often new life imparted to them by a light dressing of this substance, which is almost the only artificial manure used in the Western States. The manure of the farm is applied to Indian corn, which is perhaps more grateful than any other crop for liberal treatment."

IMPROVE YOUR STOCK OF FOWLS.

Now is the time to examine your stock of fowls, and to carefully select out the hens and roosters designed to be kept for breeding next year. The fecundity of hens affords the breeder great facilities for improving his fowls. By careful and judicious selection, it is easy to correct deficiencies, and increase the good qualities of any ordinary stock of hens. This matter should be attended to before winter sets in, as the fowls which may be rejected are now in good condition, and it is unadvisable to keep more fowls in winter than can readily be furnished with abundance of food. A few hens, well fed, will always lay more eggs than twice the number, half-starved, during a few months of the year, even though they may have a superabundance of food at other times. See, too, that the hen house is warm and *dry*. Hens, like sheep, can stand anything better than damp places. Let it be thoroughly cleaned out now, and regularly supplied, during winter, with clean, dry straw.

In selecting out hens to keep for another year, choose those under four years of age, having reference particularly to a healthy and vigorous constitution, large, well formed bodies, and rather small legs and feet, bright eyes and pendant combs. Early maturity and good laying qualities must not be forgotten. The form is a good indication of the former, and also, to a certain extent, of the latter. If early maturity, beauty of form and refinement are carried too far, the tendency to lay eggs is supposed to be diminished. If a hen is known to be of an uneasy disposition, or a poor layer, on no account keep her.

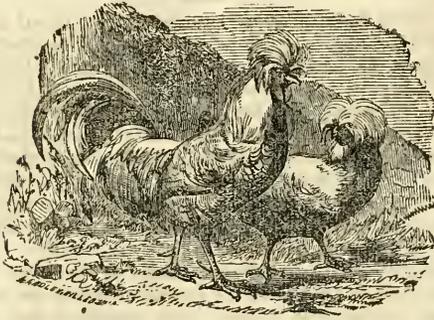
If you design to change one or more of your roosters, now is the time to do it. They will thus have abundant time to get acquainted with their partners before spring. In selecting a rooster we should not look so much to beauty of outline, as to a vigorous and valiant demeanor, strong, muscular thighs, full breast, and plump, heavy body, having more muscle than fat. Color is a mere matter of fancy. White fowls are supposed by some to be delicate; but this has not proved so in our experience, though it is probable, as a general thing, that colored fowls are the hardiest. White or bluish legged fowls are the favorites with some, from the whiteness and apparent delicacy of the meat; but it is admitted that the yellow legged are the richest and most highly flavored.

If a little flesh meat can be cheaply obtained during the winter the fowls will be all the better for it. It is a tolerably good substitute for the worms and insects they obtain in warmer latitudes. Be very careful, however, not to give them any salt meat, as it always proves injurious and sometimes fatal. They must have access to fresh water, and if they cannot find food enough from the scatterings of the barn-yard, must be fed as the judgment of the farmer dictates.

The following brief description of some of the principal breeds of fowls is condensed from an excellent article written for our *Rural Annual*, by C. N. BEMENT. To our numerous readers who have not seen that work, it will prove interesting:

"The Black Poland fowls are among the most *prolific* layers, and their flesh is particularly fine and delicious. They are plump, square, full breasted and short-legged. They bear the restraints of a yard well, laying abundantly, of large-sized eggs, and are slow to sit; indeed, mostly "everlasting layers," but

less invariably so than some other breeds. SONNINI tells us that in Egypt they are in great request for

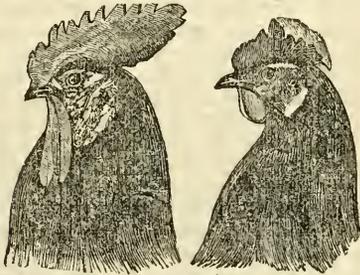


POLISH TOP-KNOT COCK AND HEN.

the table, and our own experience confirms the preference.

"The Spanish Fowl, the heads of which are to be seen in the annexed cut, is of medium size, and the hens are notorious as abundant layers, and their eggs are very large and very white, very thick at both ends, yet tapering off a little at each, and weigh from one and a half to three ounces each. Their flesh is delicately white, tender and juicy.

"Like the Black Poland, the plumage of the Spanish fowls is of a glossy, sable color, except glancing greenish tints on some feathers. This, with its quality of being one of the *everlasting layers*, makes it a favorite, where eggs only are wanted. Some persons complain that the hens are far better layers



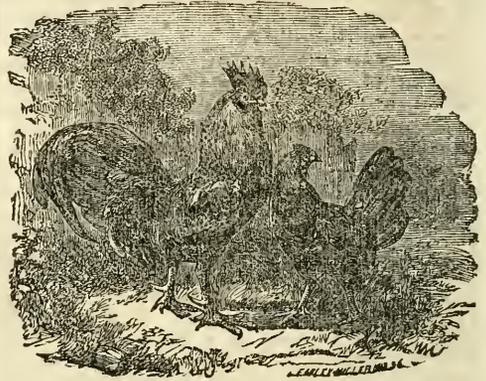
HEADS OF SPANISH FOWLS.

than sitters. Their peculiar disinclination to sit, is regarded as their most valuable characteristic; for in our experience, we have been exceedingly annoyed by the constant propensity which some other hens have manifested in this respect.

"The Dorkings are remarkable as having been recorded in ancient poultry-books, more than two thousand years ago. In size they rank next to the Asiatic tribe. They are short-legged, large bodied, and readily accumulate flesh, which is of good quality. The weight of the Dorking at maturity varies from five to eight pounds, and full-grown capons have been known to weigh from ten to twelve.

"The original Dorkings are represented as being of an ivory white, and as having uniformly five toes or claws on each foot. Among the early importations of pure blooded Dorkings into this country, white more or less prevailed; but in later importations the speckled and brown colored—a stronger, larger, and better constitution fowl—has been introduced. At the Monroe Co. (N. Y.) fair, held at Spencerport in 1855, we noticed one cock and five

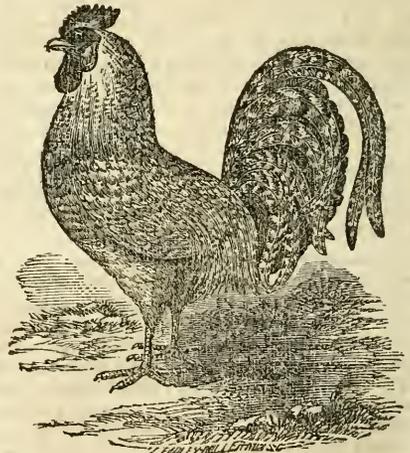
pullets, of the speckled Dorkings, which were decidedly the best we had ever seen. In England, at the present time, they are great favorites, and bring the best prices there, both among the breeders and in the market. They are good though not great layers, capital mothers, and come early to maturity; but they seem to bear breeding "in-and-in" worse than any other variety. It is considered, therefore, desi-



DORKING COCK AND HEN.

nable to change the cock every year, or every two years at most, if the stock is to be kept pure and in high vigor.

"There is another breed or variety, to be found in almost every poultry-yard, whose merits we would particularly recommend, as they possess some traits not found in the Poland or Spanish. We allude to the Dominique fowl, represented in our engraving, which are good layers, good sitters, and good mothers. They are healthy, hardy in constitution, easy to keep, sn all bon, and plump in their make; flesh

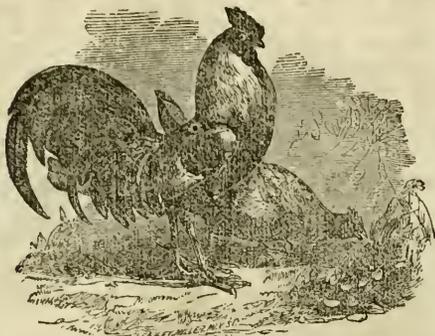


DOMINIQUE COCK.

tender, juicy, and of delicate flavor; besides, they are of beautiful plumage, and in all respects a valuable fowl.

"For those who do not wish to give much attention to fowls, there is, according to our opinion, no breed equal to the Game. They are hardier, less liable to disease, keep fat with less feed, and raise more chicks with less care than any other kind. They are not so great layers as some, but full equa-

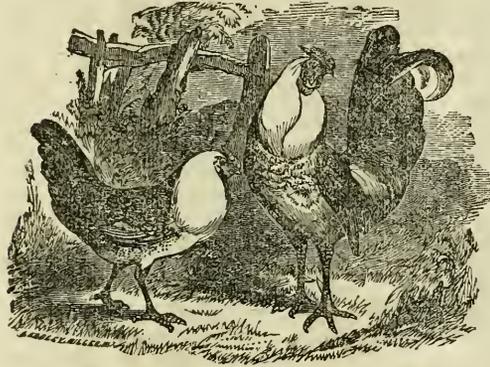
to the average. They are an extremely valuable breed, both on account of their beautiful form and



GAME COCK AND HEN.

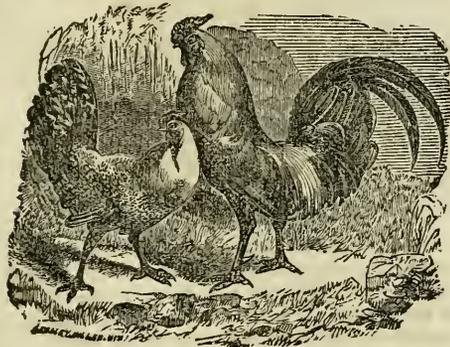
plumage, and their usefulness. They branch out into numerous varieties, of which the black-breasted reds and the duck-winged grays are considered as the best. Both their flesh and their eggs are of first rate quality for the table, though neither attain the bulk of some other breeds.

"There are several varieties of the family of Ham-
burgh fowls; such as the silver and golden pencilled,



SILVER-PENCILLED HAMBURGH COCK AND HEN.

silver and golden spangled, silver and golden pheasant, coral or creole, Bolton bays, Bolton grays, &c. They are called Creole, from the intermixture of black and white; Coral, because the numerous points of the polished, bright scarlet rose-comb bear no dis-

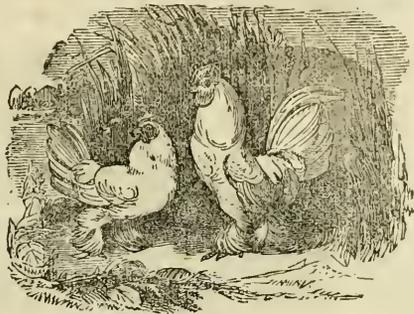


GOLD-PENCILLED HAMBURGH COCK AND HEN.

tant resemblance to grains of red coral; Bolton grays, from their being extensively cultivated in and about Bolton, a town of that name in England. All

Ham-
burgh fowls, though scarcely of medium size, are plump, compact, and beautifully marked, which, added to their great reputation as layers, should commend them as general favorites. Their eggs are of medium size; they are rather noted for long continued than rapid layers, and are rarely known to sit.

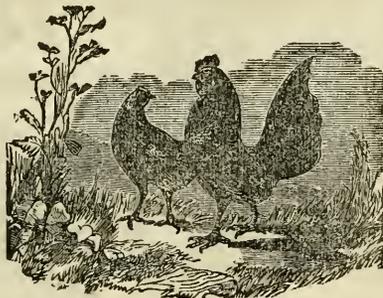
"Though extremely small in size, the Bantam cock is elegantly formed, and remarkable for his grotesque figure, his courageous and passionate temper, his



WHITE BANTAM COCK AND HEN.

amusing pompousness of manner, his overweening assumption and arrogance; and his propensity to make fight, and force every rival to "turn tail," has caused him many difficulties. The Bantam must be considered more as an object of curiosity than utility, and of course must expect to be received with no peculiar favor, in this country, except as a "pet." They arrive at maturity early, are faithful sitters, good mothers, and will lay more eggs, though small, than any other variety.

"The Black Bantam is a most beautiful example of a great soul in a little body. He is the most pugnacious of his tribe. He is more jealous, irascible, and domineering, in proportion to his size, than the Game cock. He will drive to a respectful distance great dunghill cocks five times his own weight. He will even attack a turkey cock. He is, however, a pleasing little fellow, though an impudent, consequential creature. Oh, the little strutting, fop-



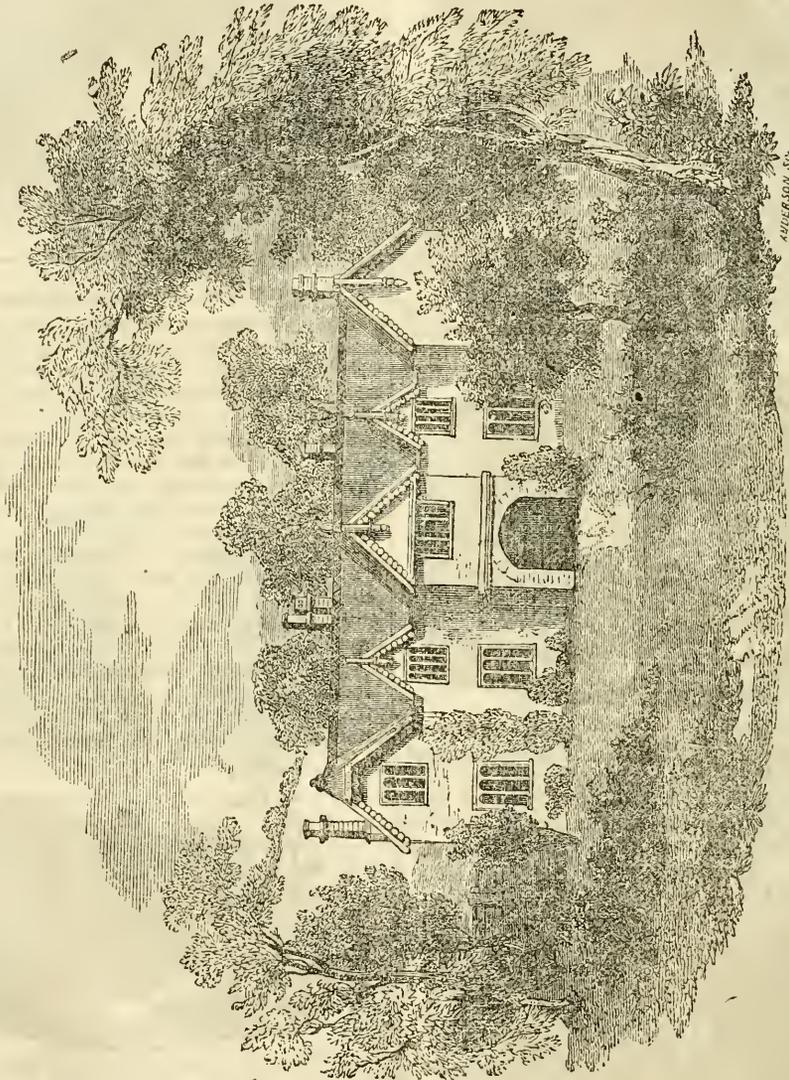
BLACK BANTAM COCK AND HEN

pish scamp! Who would think that such a contemptible minikin as that should have the assurance to strut and parade his insignificant person in the presence of great hens, and should presume to show such marked attention to the members of families of weight and substance—before the Misses, and still more, the Mistresses Malay, Cochia and Dorking? I declare to ****! Well, there is no knowing to what length impudence will go, so long as Bantams escape extermination."

ENGLISH COUNTRY HOUSE.

WE present our readers this month, a view of a very interesting old English building—known as *Hayes Farm*, in Devonshire. It is doubly interesting to us. First, as having been the birth place of the celebrated Sir WALTER RALEIGH—whose name is always associated with the early history of America; in the second place, as a good example of a style of respectable country house still very common in

England. Simple in character, built of solid materials, of ample size, and full of substantial comfort; it seems to us a better type to study, and a better hint for a model, than most of the over-decorated cottages and villas at present so much the fashion. Of course, it is only a hint, for some of the details are faulty, but the expression is genuinely that of a substantial country house that has no pretension which it cannot fulfill, and which aims at being nothing which it is not in reality. "We like," says the



HAYES FARM—DEVONSHIRE—THE BIRTH-PLACE OF SIR WALTER RALEIGH.

late A. J. DOWNING, "the simplicity of the solid walls of stone roughcast, the plain gables and windows, and the ample porch. Diminish the size of this house to suit our wants, and add a verandah, and a more appropriate style for a country house in the Northern States, is not easily attained."

It is our wish to give a design for a farm house, cottage, or some other building, in each number of the *Genesee Farmer*, accompanied with a carefully prepared estimate of the cost, according to the

price of materials, labor, &c. We have made arrangements with a practical architect and builder to furnish such estimates, and if our readers will send us the ground plans of such houses as have proved convenient, together with a sketch of the elevation, (however imperfect) we shall feel much obliged, and will have them drawn over and engraved for the *Farmer*. In the *Rural Annual* for next year we have given a number of original designs for farm houses, engraved in the best manner, which will be found useful.



Horticultural Department.

PREPARE FOR PLANTING NEXT SPRING.

Much of the success in planting fruit trees depends on the previous preparation of the soil. Those intending to plant next spring should prepare the soil,—if they have not done so already—the present month.

The first thing to be attended to is to ascertain if the site selected needs underdraining. Dig a few holes, here and there, three or four feet deep, and if water flows in and remains there, underdraining is absolutely essential to the success of an orchard on such soil. The drain should be at least three feet deep, and if there is fall enough four or five feet deep would be all the better. The deeper the drains, the fewer will be needed, and in this country where tiles and other draining materials are so expensive it is the greatest folly to make shallow drains, even were they as good as the deeper ones, which is very far from being the case, especially for garden vegetables and fruit trees. Trenching or subsoiling is the next process to be attended to. The former is the most beneficial, but is too expensive to be resorted to on a large scale. Subsoiling can be performed at little cost compared with its advantages. Underdraining and subsoiling are the grand means of increasing the temperature of the soil, as well as equalizing it in this respect—they also supply moisture and air—the latter so important to the healthy action of the roots of plants. The air admitted by the drains and porous earth carries with it, during summer, heat from the sun, which is daily accumulating and retained for a length of time, the soil being a bad conductor of caloric. The old idea of Jethro TULL has been recently revived in England that if the soil was sufficiently pulverized as deep as the roots of plants descend the soil would furnish sufficient "pasture" without the application of manure. This is not always true, but there can be no doubt that under such circumstances the quantity of manure required is considerably lessened.

It is not desirable to bring too much of the raw subsoil to the surface. On this account subsoiling—which merely breaks up the subsoil without bringing it to the surface—is better than deep plowing. In trenching, too, it is better not to bring the lower spit to the surface, but simply to break it up, and if some fresh manure could be worked in with it so much the better. For this purpose, broad-pronged forks are preferable to spades, and are generally used in England.

Many persons in planting trees put manure immediately below the roots. This is a bad practice. Raw manure often proves very injurious to the

young fibrous roots. It is better to make the whole surface soil moderately rich by plowing in a little well-rotted manure and thoroughly incorporating it with the soil. This should be done the fall previous to planting. There is little danger of any loss of fertilizing matter from leaching.

Farmers and gardeners are so busy in the spring as soon as the weather is fine enough to plant that it is advisable that everything which will facilitate the work should be done during the more leisure time in the autumn and winter. In the operations of underdraining, trenching and manuring, it is not only *convenient* but decidedly best in every way to attend to them at this season of the year.

LENGTH OF PEAR ROOTS.—CORRECTION.

FRIEND HARRIS:—The clear, concise, and generally accurate report of the Fruit Growers' Society at its late session, made in the last number of the *Genesee Farmer*, contains one sentence which I wish to modify or correct, where I was not clearly understood. I am reported as remarking in relation to the Standard Pear, "that the extent of the roots correspond with the height, and a tree eight feet high, for instance, has a breadth of roots of about eight feet, or four feet on each side, and the trees should not be cultivated so closely as much to disturb these roots."

I intended to have been understood as saying that the roots extended *on each side* at least equal to the height of the tree, as I had proved by the application of manure at different distances; and that a tree eight feet high might therefore be expected to have an extension of roots as far as the outside of a circle sixteen feet in diameter. Also, that allowing the trees to branch near the earth, would not materially prevent the proper cultivation of the trees, as most of the area covered by the roots would be *outside* of the spread of the branches. I have never felt any fear that judicious and thorough cultivation would cause injury by "disturbing the roots," as I have long been satisfied that the loss from a want of proper cultivation is far greater than any that the mutilation by judicious culture could ever produce.

If any one doubts the distance I have assigned for the extension of roots, he may satisfy himself by allowing a number of trees to grow up to dense grass, so as to check their vigor, and then work into the soil a portion of rich manure, at different distances from each. The distance at which these trees will be affected and stimulated to increased growth by these remote beds of manure, will be surprising. *Peach* trees are the best for this experiment, as they are more promptly and completely checked by seeding to grass, and more quickly started by manure.

It will be understood that these remarks do not apply to pears on quince, the roots of which are much shorter.

May I ask the favor of the insertion of this correction in the next *Genesee Farmer*? I should deem it a matter of less consequence, were it not that a great deal of false practice results from an ignorance of the length of roots,—often witnessed in the application of manures and mulching in a small circle about the foot of the trunk, where these applications can no more reach and benefit the great network of fibres, than cold water poured into a man's boots could operate in quenching his thirst.

Union Springs, N. Y.

J. J. THOMAS.



BRINKLE'S ORANGE RASPBERRY.

THREE GOOD RASPBERRIES

BRINKLE'S ORANGE.—Produced in 1844, from seed, by Dr. BRINKLE, of Philadelphia. Shoots vigorous, with white spines; leaf irregular; fruit large, ovate, beautiful bright orange color, of excellent flavor, and very productive. Probably one of the best of Dr. BRINKLE'S excellent seedlings.

HUDSON RIVER ANTWERP.—This is one of the

It is an English variety; and it is said that the Duke of Bedford paid a guinea for two plants. It differs



HUDSON RIVER ANTWERP.



FASLOFF RASPBERRY.

very best varieties of the raspberry for marketing. Its firmness of flesh, and parting readily from the germ, together with its fine, handsome appearance, render it every way desirable to the market gardener.

from the genuine European Antwerp principally in

the canes, which branch more, and are smoother and of a brighter color. The size and appearance of the fruit is very similar, but the Hudson River Antwerp is the most profitable market berry.

FASSTOLFF.—A very vigorous and productive variety, of large size and fine flavor. Color, bright purplish red. Originated at Fastolf Castle, near Yarmouth, England.

HORTICULTURAL OPERATIONS FOR OCTOBER.

TRENCHING.—Let all cleared and vacant ground be trenched up into ridges, more especially that wanted for early spring planting and sowings. Let a good coating of rotten manure be wheeled on to the ground and spread evenly. Now stretch a line the length of the piece to be trenched, mark it out with the spade up to the line; now shift the line thirty inches from the mark made by the spade, stretch it tight and make another similar to the first. This leaves a trench marked out thirty inches wide and the whole length of the piece to be trenched. Now commence at one end, place yourself in the middle between the two lines. Take the first spadeful in the middle of the trench and turn it over as in common digging; take the next spadeful from the righthand-side of the trench and bring it towards the left, turning it upside down and leaving it upon the side of the first spadeful. Now take the next spadeful from the left side of the trench and turn it in towards the right, leaving it upon the left handside and top of the middle spadeful. Proceed on so all down the trench; turning the middle spit over in the middle of the trench, then take one from the righthand, bring it towards the left and turning up in the middle, then one from the left and bringing it towards the right and turning up in the middle as before. This leaves the ground in ridges, something like celery banks, thirty inches wide at base and about eighteen inches high in middle and the soil quite rough—the rougher it is the more surface there will be exposed to the action of the frost in winter which will pulverise and enrich the soil amazingly.

WINTERING THE RASPBERRY CANES.—Prune out all the small canes, leaving three or four, or where the hills are very strong even five canes to a hill. Cut them back to the height of three or four feet. The smallest may be left two feet six inches, the middle size three and the strongest four feet in length. Now, if a little earth be thrown into a little bank between two hills of canes, they may be bent down over this little bank without breaking them. Bring the ends of the canes of two hills together, and hold them with one hand while you drive two short pegs across the canes in the form of a fork to hold them down. When all are pegged down, throw some earth over them, with the spade so as just to cover them, this will be sufficient protection. Or tie them close up to the stakes and cover them with straight rye straw.

STRAWBERRIES.—The strawberry beds should now be neatly trimmed, the dead leaves and runners cut off and a little rotten manure forked in, where not done before. Just before severe weather is expected the beds should be covered all over with littery manure or taa-bark, saw-dust, &c., as a winter protection.

CABBAGES.—Where there is not cellar room enough, cabbages may, sometimes, be wintered very well by digging a trench one foot wide and one foot deep, and stripping the large leaves off the cabbage

put the head down into the trench, leaving its roots sticking out, fill the trench full of cabbages in single rows, then put on a little clean straw and cover with earth. It is not to be recommended when they can be stowed away in a cellar or shed where it will not freeze much.

CAULIFLOWER AND BROCOLI.—Late cauliflower and brocoli will head up very fairly in the cellar during the winter. Just before severe frost begins pull the plants and break off all the large loose leaves and carry the plants into the cellar. Set them upright close to the wall and as close as they will stand to each other without crowding, then cover their roots two or three inches thick with moist earth. They will head up here almost as finely as though growing out of doors.

ASPARAGUS.—The beds of asparagus will need some protection. Wheel on a covering of rotten manure and lightly fork it in without injury to their crown; then cover the whole bed with littery manure or leaves, six to nine inches thick.

RHUBARB.—The rhubarb roots will need some little protection as recommended for asparagus, they will start the earlier and stronger in spring.

SPINACH.—The beds of winter spinach will need the dead and decayed leaves picking off and the whole bed covering with littery manure three or four inches thick.

CELERY.—Just before severe frost is expected the celery will want its final earthing up. Dig up a sufficient quantity of heads to last a month or so; strip off all the loose leaves and trim the roots a little, then tie a piece of basswood bark or string round each stick to keep its leaves from breaking and set them upright in a box in the cellar as close as they will stand and then fill in between them with fine earth. This will keep them quite fresh all winter. That which is left out in the trenches must be banked up, in banks, at least three feet thick and nearly as high as the top of the plants. Then cover their tops over with a good covering of clean straw and lay boards upon this to keep it dry and from blowing off. When the first supply is used, from the cellar, or a thaw comes in winter, then get in a fresh supply as recommended first.

IN MY "NEW GARDEN."—No. 4.

WELL as I love it, "My New Garden" has been rather neglected of late, save only to gather the fruits thereof. These I must tell you about, and then, perhaps, lay over the pen until another season.

MELONS.—Of the "water, musk and other millions," as Knickerbocker CLARK calls them, no mention has been made. When the cherry trees bloomed, the 25th of May, I thought it time to plant melons and cucumbers, and it was now too early for either crop. Both grew well—were but little troubled by bugs and worms—and produced fairly. The melon seed was some saved from the best melons raised last year—some Orange Watermelons; some red-fleshed, some white, a few apple-seed,—all grown together, and of course mixed. I would like to get pure seed of two or three good kinds to plant next year, and to keep them separate hereafter. The best melons were pronounced by the friends who enjoyed them with me, "the best they ever ate," but I want to do better next year. Some of the Muskmelons were very fine—others were worthless.

CUCUMBERS.—I can find no cause for cucumber vines dying out, more or less in every hill, as they have this summer. But enough were left to supply us, and some for the neighbors whose hens were too hungry to permit them to grow their own.

ONIONS.—Grew fairly with me, but I nearly spoiled one bed, by pulling them and letting them lie out through a long rain. They *warped* badly, so that instead of being round they are hollow-bottomed like a glass bottle, and much more trouble to dress than round ones. My "black seeds," were thick and rather small, but I dried a lot in midsummer to start on next year.

TOMATOES.—this year, have rotted considerably on the vines, and frost came rather early, so I have not had many more than my chickens wanted. I tried the racks described in an early No. of the *Farmer*, and my best tomatoes grew on them.

SUMMER SQUASHES.—were good, coming among our first "garden sauce," and when we were longing for more fresh vegetables. They were the crook-neck variety and bore abundantly. I would not like to be without this excellent table esculent, nor to fail in raising a good store of the winter varieties. I saw but three or four "squash bugs" on the vines, and those I killed before they did any mischief.

TURNIPS.—Some insect pest, has put a *quietus* on many of my turnips, and so belated others that I shall have but few good ones. It cares nothing for ashes, as I sowed them on many times, hoping to drive off the fly, without success.

SUGAR CANE.—There's a patch of "the Sorghum" in one corner of my garden—and it hides all beyond it, for the canes measure from ten to twelve feet high. It does *grow* greatly when fairly started, but I have my doubts of our getting much good of it, this year. The frost came just as the seed was in blossom.

CELERY.—I have commenced earthing up my celery, but the stalks are so short I give up making much of it this season. I'll try and get plants earlier next year, for I think it a delicious vegetable. The celeriac is growing finely.

POTATOES.—have rotted considerably in "My New Garden," as well as in the field. The ground shaded most, gives the most spoiled potatoes—the row next the corn is nearly worthless.

FRUIT TREES.—One pear, two peach, and several cherry and apple trees grow in and around my garden. They do rather better this year than usual. I want three or four good plum trees badly, for I have not tasted a plum this season. Our old stock of trees have all perished from the black knot—all, all least, worth anything. Good-bye, Mr. Editor, we shall hardly ramble farther, this fall, in "My New Garden."
A COUNTRY INVALID.

Maple Hill, N. Y.

CULTURE OF GRAPES IN THE OPEN AIR.

GRAPE VINES are raised in several ways. The most common one is from long cuttings, which are made at the time of the *winter* pruning, and consist of three eyes each, the bottom end of which is cut close to a bud, and the upper end is left an inch or two above the top of the bud.

These are put into the open ground as soon as the weather will permit in the spring, in a slanting position, with the upper bud an inch above the ground, and by autumn these will make fine rooted plants.

The next method as considerably practiced is from layers, which consists in bending down shoots of the present season's growth, the latter part of July or in the spring, with wood of the previous year's growth, into the soil, made light and fine by the spade and rake, and with a sharp knife an incision is made at the base of a bud, (on that part of the vine to be layered) through the bark and partly through the wood, slitting the shoot an inch or two in length, and the shoot is laid in the ground with the cut open, and kept down by means of a hooked peg. The earth is then drawn in, covering it two or three inches deep.

A long shoot of the vine may be layered at several points, thus procuring several rooted plants in a season. By autumn these will be strong, well rooted plants.

Another method of raising first rate vines is from single eye cuttings, made of one eye each, with half an inch of wood on each end of the bud. These require artificial heat to start them; and the best plan where persons have no hot house, is to make a good tight hot bed, with plenty of bottom heat; and in March take pieces of vines, which should be saved for this purpose, from the land in which they have been preserved, (which should be in a dry, cool cellar) and cut them up into eyes and place these into boxes of sand, far enough apart to allow them room to root freely, and cover half an inch deep with sand.

The boxes after being filled, should be placed in the hot bed, and put on the sash.

In this way many cuttings may be grown in a small place.

These require to be kept just moist, giving them an airing when it is quite warm in the middle of the day, and the sash covered with a mat at night.

If the ground should not be sufficiently open to make a hot bed in March, they can be planted the first of April, and make fine, well rooted plants by fall. As soon as they have nicely started and began to root, which will be about the latter part of May or first of June, they can be turned out into the open ground, taking the time to do it in a moist day. If at this time any should be found which have not struck roots, they can be put back in the hot house awhile longer, until rooted.

Where a person has a hot house, cuttings can be struck in January, and turned out as soon as the weather will permit. The soil, proper for cuttings and layers of the grape vine, should be rich, mellow and dry.

Vines raised from single eyes are by far the best, as they contain more fibrous roots, and grow faster than those grown from long cuttings or layers.

We have vines planted the last spring, one year old, from single eyes, which have now, August 20th, a growth of ten feet.

We now commence with the vine one year old, from the cutting or layer.

The requisites for proper grape culture must be a proper soil, and all that can be said is, that it be *light* and *dry*, *deep* and *rich*, so that if the land is any way inclined to moisture, there should be a drain of stones a few inches thick, two feet below the level of the ground.

In filling up, put in about one-half compost (made of equal parts rotten manure and muck, to which add a good share of leached ashes) and one half

good soil, and filled up about a foot above the level, to allow for settling.

Plant the vine about as deep as it stood in the nursery, taking care to spread out the roots, and carefully working the earth in among them.

Great care is required in taking up the young vine to save all the roots, as they should never be pruned. At the time of planting it should be cut back to within six eyes, which, as soon as they start, should all be rubbed off but the two strongest, and after these are fairly growing, rub off the weakest, leaving only one.

The summer pruning consists simply in keeping off all side shoots that may appear, and which tend to check the growth of the main plant.

The terminal bud should be pinched about September, to mature and strengthen it.

SECOND YEAR.—The shoot of last year may now be cut back to four buds, and two canes trained up this season. Summer pruning to be performed same as last season, and in September these canes are to be stopped as before.

THIRD YEAR.—The canes of last season's growth are cut back at the winter pruning (which takes place in December) to within two or three feet of their base, and laid in on the bottom slat of the trellis, for the frame work of the vine. The bud on the end of each will produce a shoot to continue the prolongment in a horizontal direction, and a bud on the upper side of each, near the base of the horizontal shoot, will produce a cane, to be trained to one of the upright bars. All other shoots are rubbed off.

These canes are tied in as they require it, and the summer pruning continues the same as before. They are stopped in September as before.

FOURTH YEAR.—At the winter pruning the canes of last year's growth are cut back, the horizontal ones to two feet and the upright ones to four feet.

The upright canes will continue their growth upwards, and the horizontal ones outward as before, and this year two more shoots can be trained upright for bearing wood next season.

The vine produces fruit on spurs of the present season's growth, which start from eyes on the upright canes. From one to three bunches is sufficient to ripen on one spur, and soon after the fruit is set the spur should be stopped and tied into the trellis, to prevent breaking.

This year several fruit spurs will be produced on the two canes of last season's growth, on each of which two or three bunches of grapes may be ripened.

In this way the vine adds every year two new upright canes until the trellis is filled. The after management being to attend to summer pruning, or to cut back all the spurs to the old wood at the winter pruning, new ones of which are made every year.

The trellis need not be made until the second year, if preferred, by keeping the canes tied on to poles. Many may think this plan of cultivating grapes a very laborious and expensive one; but there are none more satisfactory, as the fruit is of superior size and flavor, and will come into full bearing quicker than those allowed to ramble everywhere, and be pruned once in two or three years, cutting them all to pieces at once, as often practiced.

Grapes for vineyard culture should be planted on dry, rich soil, which should have a thorough sub-soil-

ing, liberal manuring, and southern aspect. The vines should be planted about six feet apart, and trained to posts from eight to ten feet high.

The vines are planted as before recommended, and for the first year or two should be cut back close, to establish good strong plants, and only one cane be allowed to grow. The third year this cane can be allowed to ripen some fruit, and a new shoot carried up to bear next year.

At the winter pruning the cane that bore is cut away, and then a succession is kept up. As the vines grow older, two or three bearing canes can be taken from each plant.

J. H. B.

Brighton, near Rochester, N. Y.

RAISING PEACHES IN MASSACHUSETTS.

For the last few years, many cultivators of this delicious fruit have been so discouraged in their attempts at success, that they have rooted up their trees, as cumberers of the earth. The primal difficulty that they encountered seems to have been *cold weather*—either as sudden freezing and thawing in late fall, intense cold in the winter, or raw, blighting east winds in the spring. Then are added borers, the yellows, and perhaps other discouragements.

But as good peaches can be raised in Massachusetts as in any other State or locality in the Union. To the truth of this my own garden this year attests, though not the first time, nor does it stand alone. We may not raise them so early or so plentifully as New Jersey, but the thing can be done, and it is an important object. The great desideratum is high, warm land, the better with a slope to the south or west. Giving the trees good culture, the advantage of such a locality will readily be seen. But no position, however favorable, will insure a good crop every year, while there are seasons when the worst position will yield well. The advantage is comparative.

In regard to *how* cold weather destroys the peach crop, is a mooted and difficult subject, almost equal to the potato rot. No theory seems to give general satisfaction. During the winter of 1854-55, the thermometer sunk to more than 20 deg. below zero, and the only peach blossoms I saw in the spring were in my garden, three in number! All the buds on the trees could be stripped off with the hand, or shaken down with a slight jar. Yet, few or none of my trees were killed. The last winter the thermometer sunk equally as low, though the continued cold was less. This summer my trees (on a western slope) have done admirably, against my expectations, though I discovered early that the buds were not loosened. Why they were not destroyed is a problem. A variety of circumstances which science may fail to discriminate, was probably the cause. That ravines take the colder and denser air, is pretty well known, and perhaps their soil generally is not so favorable for the ripening of wood as hill-tops, where the air is more stirring,—both of which may account for the conceded fact that elevations are more favorable to the peach.

After receiving a good position, there are evils to encounter in peach raising, common to all localities and climates—the borer and the yellows. To keep off the former, I think whitewashing the lower part of the trunk, even below the earth, is the best preventive—to be done, say in June. If the borer is

already in the trunk or roots, cut him out, or destroy him with a wire. Some object to whitewash, but experience will probably show that the borer is more injurious than a little lime on the rough bark of a tree capable of bearing.

As to the yellows—which is merely feebleness—the best remedy is good culture, sufficient to keep up the vitality of the tree under heavy crops.

For the purpose of ripening the late wood, causing fruit-buds to swell, and keeping the branches from shooting ungracefully into the air, take a grass-cutter in August, and clip off the tops of the vigorous shoots.

As to the varieties of peaches which do well here, they are numerous. Those which ripen before September, however, are hardly worth raising. Late Admirable is good, and a heavy and early bearer. Crawford's Early is excellent; so of the Late, but it must be well exposed, and is not a free bearer. Bergen's Yellow is splendid. Seedlings very frequently are fine. Peaches, however are very precarious in their quality and appearance in different seasons—varying with the vigor of the tree and the prevailing weather.

As a general thing, peach trees do better with us than plum trees, and every cultivator should keep a supply of young trees to fill in where the older ones perish.

West Medford, Mass.

D. W. L.

THE WILLOW.

This tree may be propagated very easily—I mean most especially the Golden Willow—either by cuttings or in the usual manner. For shade, they are graceful and beautiful, at least until old, and they make a more rapid growth than any other tree in our climate. Set along the banks of our rapid, mountain streams, their closely woven roots soon preserve the banks against our torrent freshets, and in this year of “disaster in broken banks,” this is no mean office. They will grow anywhere and everywhere, in mud and water, gravel and water, on overhanging banks and rocky precipices.

We set a large number the past summer, prepared as follows: In the latter part of winter the cuttings were prepared, generally averaging from one to three inches in diameter. They were cut and trimmed, and left in a pile until a leisure hour in June, when we stuck them with a crow bar and beetle. Thanks to the wet summer, they “yet live,” but we would recommend that they be set earlier, as a general thing.

Ours were set for fence. We have good fence, on low land, of willows. The willow can be made a vigilant sentinel on low banked creeks, and is worthy attention. Mill-dams and banks of earth, stuck full of these cuttings, once well rooted, are much less liable to be destroyed.

JNO. SANFIELD.

REMEDY FOR THE CURCULIO.

MESSRS. EDITORS:—The Hoosiers in and about this locality have most of us given up the idea of raising plums. The curculio is the worst enemy. The plan I am now pursuing is this: I put all my plum, nectarine and apricot trees by themselves; let them grow unpruned; enrich the soil, taking care to give the trees plenty of salt, and in a sandy soil as mine is, liberal dressings of clay. After the trees are large enough to bear, let the hogs use the lot from the time the trees blossom till the plums are ripe. Protect the trees from the hogs by setting three or four small stakes immediately about the

tree, secured by ropes, bark or nails, as is most convenient. The hogs will take care of all plums and their contents as they fall, and after the first season the plum crop is a *sure* one. This mode has been frequently recommended, but followed out in practice by but few. Why it is so I can't see, for certainly it is simple, and *perfectly* efficacious for the fruits mentioned above, as well as for cherries, which suffer from the curculio. A tree grown close to the walk or door, where it is frequently shaken by people passing, will also perfect its fruit every year. There is a tree growing in town, planted by my brother (LYMAN BRACKETT) thirteen years ago, which for the past ten years has not missed one season, perfecting a fine crop of fruit. It is almost or quite in the path. The consequence is that the ground being hard trodden, refuses access to the worms, if any are hatched on the tree, and but few eggs are deposited in the growing fruit, because the tree is subjected to frequent shakings by people passing.

Let all them who love good fruit plant according to the plans above described, and I will warrant a perfect exemption from this pest.

C. BRACKETT.
Rochester, Fulton Co., Ind., Aug. 30, '57.

VARIETIES OF FRUIT FOR THE WEST.—The recent meeting of the North Western Fruit Growers Association held at Alton, Ill., the following varieties of fruit were recommended for general cultivation between the 39th and 41st degrees of North latitude:

SUMMER APPLES.—Yellow June, Early Harvest, Carolina June, Keswick Codlin, Sweet June, Summer Rose, Dana, Summer Pearmain, Golden Sweeting, Hocking.

AUTUMN APPLES.—Maiden's Blush, Fall Wine, Rawle's Janette, Wine Sap, White Winter Pearmain, Rambo, Autumn Swaar, Newton Pippin, Willow Twig.

WINTER APPLES.—Jonathan, Buckingham, Downing's Paragon, (new,) Fameus, Snow, Roman Stem, White Bellflower, Early Winter Sweet, Yellow Bellflower, Swaar, Fulton, Peck's Pleasant, Sweet Non-such.

CHERRIES.—American Heart, Knight's Early Black, Black Heart, Elton, Yellow Spanish, White Tartarian, Ox Heart, Early May.

PLUMS.—Yellow Magnum Bonum, Lombard, Green Gage, German Prime, Chicasaw, (N. L. Shaw,) Blue Imperatrice.

AMERICAN PLUMS.—In his “Book of the Garden,” published at London, McINTOSH says: “Strange to say, America, with only three species of the genus *Prunus*, *P. Maritima* and *Pubescens* from neither of which a cultivated plum has been raised, has nevertheless produced more excellent plums than any other country whatever. The original parent of all cultivated plums, *Prunus Domestica*, is not indigenous to that country but has been introduced.”

This is undoubtedly true. But we do not see why it should be regarded as “strange” when it is known that the interest taken in the cultivation of fine fruit is much more general than in England. There is a greater proportion of the intelligence of the country brought to bear on fruit culture in the United States than in any other country; and from the diversity of our soil and climate together with the enterprise and skill of American horticulturists great results may be anticipated.

Ladies' Department.

TASTE IN IOWA—ONCE MORE.

MESSEES EDITORS:—In the September No. of the *Farmer*, I notice a stricture on a lady's opinion of the West in the June No. I do not wish to enter into a discussion, much less a dispute with my legislative friend, C. F., and I am willing to accord to the farmers of Iowa all credit for what they have done and are doing for our gallant state. I have no doubt there are thousands who have made just the improvements necessary to secure to their families the comforts of life. Within my own town I can number some excellent farmers of substantial means, whose industry and thrift are unquestionable; but where are the flower gardens and shrubbery which should adorn every farmer's dwelling? echo only answers where. It is true I have not travelled very extensively over the State, but I have been to *Washington* and found it a busy thriving little place—but it is not of towns I would speak. I was talking with a lady not long since on this very subject, and she remarked that men, and women too, lost their taste for such things (flowers and shrubbery) after coming here. They found so much to do to get ready to live that every thing else was neglected. I have no doubt this is true, and it is for this very reason that I appeal to them to begin again to cultivate the taste. C. F. enumerates some things of which I complain, and I think justly, and some things of which I did not complain. I wish he would stir up the State a little on the subject of bridges, for though they have one noble one (which by the way there is a continual quarrel about) we are very deficient in plain structures for the use of the people. I believe I did not complain of the want of hogs, for no one who has ever traveled from Muscatine to Washington would be guilty of the error, but he admits that farmers are careless and waste some of the bounties which should be saved—that a few bushels of grain every year go back to dust. We can only hope that the scarcity of feed in the winter of '56—7 will convince farmers of the necessity of saving their few bushels which are annually wasted for their unfortunate cattle. Thousands of cattle, horses and hogs, perished from starvation, and want of suitable shelter, which these wasted bushels might have saved, and how many stacks of straw are annually burned, which might be converted, by proper management, into comfortable sheds and stables for shelter. I cannot call a man a good farmer who suffers his stock to lie exposed to our western storms in winter, for a merciful man is merciful to his beast.

Now I do not wish to present to my friend C. F. an apple of discord—but I will give him an excellent, veritable apple, grown by my side, if he will visit me, and he may eat it under the shade of some beautiful locusts which surround my humble home, and I shall not have to visit my neighbors, to get a very fair supply of this excellent fruit. By the by, I will tell you something of this orchard of mine. Eleven years ago this small orchard of 30 trees was planted on unbroken prairie by the former owner, consequently had never grown wood or fruit, but 4 years ago when we took possession, the ground was broken up, and I with my own hands, washed the trees as high as I

could reach every spring and fall, with strong soapsuds, made with the refuse of the soap boiling. The trees started to grow most vigorously, and last year, and this, produced quite a number of bushels of apples. Two trees of a very early variety fruited this season, and I had the pleasure of taking the first ripe apples of the season into Washington. C. F. reminds me of the old Dutch settlers on the Hudson, N. Y., as a precedent for large land owners, the Van Rensselaers and others of time honored memory—peace be to their ashes—for I claim them for my kindred, and my ancestors. But they had trouble enough, I ween, from their large landed possessions, and I would advise no farmer to own more land than he can cultivate well: if a man own two hundred acres, and can cultivate with all the help he can get but one hundred, would he not benefit himself and his country more by selling his extra one hundred acres to somebody who would till it, thus producing a large surplus of grain for market, rather than letting his land lie useless producing nothing? But the length of my article warns me to let the subject drop for abler and wiser heads than mine to discuss.

I hope to be able ere long to give you our experiments with the Sorgho molasses, we have some very fine canes varying from 12 to 15 feet in height—we are only waiting for the seeds to ripen a little more—the fall has been remarkably favorable—no frost as yet in this part of the state, a luxuriant growth of corn well ripened and mostly secured.

VIOLA.

Clay, Washington co., Iowa, Oct. 11th, '57.

ORIGINAL DOMESTIC RECEIPTS.

FOR WASHING.—Cut into small pieces a pound of bar soap; put it into a tin pan or iron pot, with one quart water. Keep it *hot*, but not boiling, till the soap is dissolved, and stir in two large spoonfuls of powdered *borax*. When cool, it will again harden, and you will have double the quantity of soap, and better for washing all kinds of clothes. The labor of *rubbing* is very much diminished.

Four spoonfuls of borax added to each gallon of *soft soap*, when first made, will greatly improve the soap for washing, and also prevent its eating the hands, as new soft soap is apt to do.

TO MAKE WASHING EASY.—Take one half lb. of hard soap, cut fine and dissolved; one half lb. of soda; dissolve each by itself, and when so done put them together, and boil, adding one tea cupful of strained lime water. Put this in to boil the clothes. Boil them twenty minutes. This will serve several boilers full. The clothes must be previously soaked, and soap rubbed on the stained spots. You can wash the finest material with this, and colored clothes boiled in this will not fade.

TO REMOVE STAINS FROM THE HANDS.—A few drops of oil vitriol (*sulphuric acid*) in water will take the stains of fruit, dark dyes, stove blacking, &c., from the hands, without injuring them. Care must, however, be taken not to drop it upon the clothes. It will remove the color from woolen, and eat holes in cotton fabrics.

TO MAKE CRACKERS.—Two cups of flour, one cup of butter, (or half lard and half butter), two cups of water, two tea-spoonfuls of cream of tartar, one tea-spoonful of soda, and a little salt. They require only a common kneading, and are very nice.

Editor's Table.

New Advertisements this Month.

New Rochelle Blackberry.—Linnaeus Rhubarb.—John C. Teas, Raysville, Ind.

Dadd's Modern Horse Doctor.—A. O. Moore, New York.

Agents Wanted.—A. O. Moore, New York.

American Farmers' Encyclopedia.—A. O. Moore, New York.

Guano, Superphosphate of Lime, &c.—A. Longett, New York.

The Genesee Farmer for 1858.—Joseph Harris, Rochester, N. Y.

THE NEXT VOLUME OF THE GENESEE FARMER.—Encouraged by the extraordinary increase in the circulation of the *Farmer* during the present year, we have determined to make great improvements in our next volume, and also to offer a greatly extended list of Premiums. We have procured an entire new dress of type, and have made arrangements for a supply of much better paper, and shall spare no expense in procuring excellent engravings. So far as we have been able to ascertain, the *Genesee Farmer* this year has given very general satisfaction. Thanks to our correspondents, it is undoubtedly not only the *cheapest* but the *BEST* agricultural and horticultural paper in the country. We are satisfied that by a little timely effort, our friends will enable us to double our circulation the coming year. "Hard" as are the times, the *Genesee Farmer* is so marvelously cheap that few persons could refuse to subscribe, were they requested to do so by one of their intelligent and influential neighbors.

In the January number we shall publish a number of Prize Essays on a variety of subjects. This number alone will be worth the price of the volume.

Last year, for the first time, we offered "January Premiums." Thousands of our readers neglect to send in their subscriptions till the winter is nearly past, and thus they are without the paper during the most leisure season of the year. To counteract this as much as possible, we not only continue to offer these January Premiums this year, but have increased them in number and amount *one-half*. Those who take a January Premium can also compete for an April Premium with the same list of subscribers. There are so many Premiums offered, that no one who tries can fail to take one, and may obtain two.

Hitherto but few of our friends—who act as agents simply from a desire to promote agricultural and horticultural improvement in their respective neighborhoods—have competed for the premiums. Hence we have thought of discontinuing them; but wishing to reward our friends as far as possible for their disinterested labors, we have concluded not only to continue them another year, but to offer so many that some of our agents will obtain premiums whether they try for them or not. A good Agricultural Library, however, is worth a little effort, and we trust that our friends will endeavor to increase their lists, so that this increase of Premiums will not entail upon us any loss. Now is the time to commence making up your lists, before other agents enter the field.

If any of our readers have friends who are not acquainted with the *Genesee Farmer*, we will gladly send them, pre-paid, specimen copies of the paper, if they will furnish us their names.

WHAT IS SAID OF THE GENESEE FARMER.—Our contemporaries are continually saying good words for the *Genesee Farmer*. Commendation is pleasant to all, but it is not modest to repeat compliments. On this account we seldom re-publish any of the kind things our contemporaries say of us. If, however, as our friends say, "the *Genesee Farmer* is the best agricultural paper in the country," the credit must be ascribed to its numerous and able correspondents. There may be many other papers that give more and better editorial articles, but we are certain that no agricultural and horticultural journal in the world has such a list of intelligent, practical correspondents. We have, during the present year, published, each month, on an average, at least fifty articles written by some of the most experienced and best practical farmers and fruit growers in the United States and Canada. As our friend "B," of Niagara County, observes, the *Genesee Farmer* is a "Monthly Farmer's Club," at which we have delegates from all sections of our extended country, who quietly and concisely communicate the results of their experience. Modes of cultivation may sometimes be recommended, which, however good they may be in one section, cannot be profitably adopted in others; yet no intelligent reader can fail to get hints which may prove valuable in his own practice. One such hint may be worth the price of ten years' subscription. Ascribing the credit to our correspondents, therefore, we may be excused for giving a few extracts from the numerous complimentary notices of our appreciating contemporaries.

"For most of the extracts in this department we are indebted to the *Genesee Farmer*, a very spirited and valuable agricultural work, published at Rochester N. Y., for fifty cents a year. Farmers should subscribe for it. There is not a single number but what contains something which will repay a *thousand fold* the cost of subscription."

[Delaware State Register.

"We heartily wish that every farmer in this country was a subscriber to the *Genesee Farmer*. It would repay them four fold."—[Virginia Star.

"The *Genesee Farmer* is a monthly publication that should be taken by every farmer in the country. We are indebted to it for many articles which have made up our agricultural column."—[Essex Co. (N. Y.) Republican.

"The contents of any one number is worth a year's subscription to any practical farmer."—[Jacksonian, Pontiac, Mich.

"The *Genesee Farmer* is one of the best agricultural papers for the West, and ought to be well sustained, and will be, no doubt."—[Kane Co. (Ill.) Journal.

"This old and well established agricultural paper is one of the very best and cheapest in existence."—[Welland (C. W.) Herald.

"The *Genesee Farmer* is one of the oldest as well as best and cheapest papers for farmers in the country."

[Chicago Democrat.

"The *Genesee Farmer* is published monthly at Rochester, N. Y., by JOSEPH HARRIS. It costs only fifty cents a year, and is well worth five times the amount, for it admits nothing but what is of practical benefit to its readers. Its unpretending merit deserves encouragement and support, which it receives wherever it is known."—[Lucks Co. (Pa.) Intelligencer.

"We have been a regular reader of the *Genesee Farmer* for a number of years. It contains more good, sound reading matter—*practical and beneficial* to the farmer—than any other monthly of the same size. The *Genesee Farmer* need not come in competition with any other paper. 'It has a field of its own.' It costs—*nothing*, and every farmer may have it. Three dozen eggs or two chickens will pay a year's subscription."—[Putnam Republican Banner.

"The *Genesee Farmer* is replete with matter, not only useful and interesting to the agriculturists and horticulturists, but also to the general reader. It is published at only fifty cents a year, and is the cheapest journal of its kind published perhaps in the world."—[Commercial Bulletin.

The *Genesee Farmer*, of Rochester, N. Y., is so valuable and cheap, that no one can afford to be without it. J. HARRIS publisher—50 cents a year.—[Pontiac Jacksonian.

•••
THE RURAL ANNUAL AND HORTICULTURAL DIRECTORY FOR 1858.—This beautiful work is now published. To those who have seen the previous volumes, it will be sufficient to say that the present volume is fully equal to its predecessors. *No farmer or fruit grower should be without it.* It contains carefully written treatises on manures for the orchard and garden; on the cultivation of fruit for market; on birds injurious and beneficial to the horticulturist; on the cultivation of grapes in the open air; on garden furniture; on rural architecture; on the cultivation of dwarf and standard pears; on transplanting vegetables, &c., &c. It is illustrated with appropriate and beautiful engravings, and is alike attractive and useful. The articles are all written expressly for its pages by able, practical men. It is not, as some suppose, a new edition of last year's volume. *Every line is new.* It will be found invaluable to the fruit grower, and useful to every one interested in rural pursuits.

It will be sent, postage paid, to any address, on the receipt of twenty-five cents in postage stamps. Address, JOSEPH HARRIS, Rochester, N. Y.

•••
Premiums for Short Essays.

WE will give a book (or books) of the value of one dollar for the best Essay on each of the following subjects:

- On the Management of Permanent Grass Land;
- On the Advantages of Cutting Grass or Grain by Machinery;
- On the best Method of making Stone Fences;
- For the best Practical Hints on building a Farm House;
- On the best Method of Breaking Steers;
- On the best Method of Breaking Colts;
- On the best time for Cutting and the best Method of Curing Clover for Hay;
- On the best Method of Curing Timothy and other Grasses;
- On the Cultivation of Peppermint;
- On the Cultivation of Liquorice;
- On the Management of Woodland;
- On Planting Trees on the Prairie for Shelter, Fuel and Timber;
- On the Benefits of Farmers' Clubs, and the best Plan for their Organization;
- On the Use of Superphosphate of Lime as a Manure;
- On the best Method of Pulverizing a Heavy Clay Soil;
- On the Best System of Rotation on a Clayey Farm;
- On the Best System of Rotation on a Sandy Farm;
- On the Best Time for Cutting the various kinds of Grain;
- On the Best Time for Cutting Timber for Building and Fencing Purposes;
- For the best Essay detailing Experiments in the Use of Muck applied Unmixed to the Soil;
- On the Use of Muck in Composts, and as Litter for Stables and Yards;
- On the Cultivation of the Chinese Sugar Cane;

- On the Best Method of Destroying Red Root;
- On the Best Method of Destroying Canada Thistles;
- On the Best Method of Destroying Pigeon Weed;
- On the Cultivation of Sweet Potatoes, and keeping them through the Winter;

• On the Advantages of a Good Agricultural Library, and the best means of obtaining it;

- On the Reclaiming and Management of Boggy Land;
- On the Propriety of Farmers Supporting none but Purely Agricultural Papers, *as such*; and is their publication monthly often enough?

- On the Best Manner of Binding Wheat;
- On the Duties of Landlord and Tenant to each other;
- On the Best Method of Raising, Gathering and Cleaning Clover Seed;

• What are the Best Pastures for Dairy Cows?

- On the Most Economical Method of Keeping Dairy Cows Through the Winter;
- On Fattening Sheep in Winter;
- On Fattening Cattle in Winter;
- For the Best Essay detailing Experiments in Feeding Cattle or Horses with cut or uncut Hay, Corn Stalks, and other fodder;

- On Irrigating Grass Land;
- On Keeping Sheep on the Prairies.

HORTICULTURAL SUBJECTS.—On the Cultivation of Standard Pears;

- On the Cultivation of Dwarf Pears;
- On the Cultivation of Plums;
- On the Cultivation of Cranberries;
- On the Advantage of Shelter for Gardens, and the best Means of Providing it;
- On the Cultivation of Grapes in the Open Air;
- On the Cultivation of Hot House Grapes in Pots;
- On the Cultivation of Melons;
- On the Cultivation of Tomatoes;
- On the Cultivation of Rhubarb;
- On the Cultivation of Asparagus;
- On the Cultivation of Cabbage and Cauliflowers;
- On the Cultivation of Early Potatoes;
- On the Best Method and Time of Transplanting Evergreens;

• What is the Cause of the Failure of so many Fruit Trees sent out by Nurserymen?

- On Planting Trees by the Roadside.

FOR THE LADIES.—What are the Proper Duties of a Farmer's Wife?

- On Making and Packing Down Butter for Winter Use;
- On Making Cheese from a few Cows;
- On the Best Method of Making and Preserving Feather Beds;

• For the best Three Reasons why it is Desirable that Farmers' Wives and Daughters should write for the *Genesee Farmer*.

• For the best answer to the question "How can we most Profitably and Agreeably Spend our Winter Evenings?"

• How can Mothers best instil into the Minds of their Daughters a Love for Domestic Duties?

- On the Manufacture of Vinegar.

Last year we offered a dollar book for the "Best Dozen Domestic Receipts," but it was found impossible to determine which was the best without actual trial, and we awarded a twenty-five cent book to each of the competi-

tors. We now offer a *Rural Annual*, or any other work costing twenty-five cents, for any Dozen of Original Domestic Receipts which the committee considers worthy of publication. (The printer is very anxious that the ladies should write only on one side of the paper.)

The Essays should not exceed one page of the *Genesee Farmer*, say eight pages of foolscap—and must be received on or before the fifth of December, so that they can appear in the January number.

The articles will be submitted to competent judges. *Brevity will be considered as a mark of excellence.* We mean by brevity, not the omission of words necessary to make good grammar, but the expression of thoughts in as clear and concise a manner as possible. The prizes will be promptly announced, and the books immediately sent, pre-paid, by mail.

“THE ADVANTAGES OF A GOOD AGRICULTURAL LIBRARY, AND THE BEST MEANS OF OBTAINING IT.”—One of our correspondents offers this as a subject for a Prize Essay. It will be found in our list. We are not allowed to compete; but if we were, should suggest that the “advantages” are “too numerous to mention,” and that “the best means to obtain it” is to get subscribers to the *Genesee Farmer*. Any young man might, by a little effort, take our first premiums for the largest number of subscribers, and would thus obtain a seventy dollar library of the best agricultural and horticultural books. If he fail in obtaining the first premiums, he is certain of some of the smaller ones. We have increased the number of premiums to such an extent that, unless there is greater competition than there was last year, a club of twenty subscribers will take our lowest premiums. Last year we offered eight January premiums, and Mr. EDWARDS, of Centre Lisle, N. Y., took the eighth premium, with *fifty-three* subscribers. This year we offer *twelve* premiums, and a correspondingly fewer number of subscribers will probably take a premium. Let all young men who want an Agricultural Library, ask their neighbors to subscribe to the *Genesee Farmer*, and they will get it. He will in this way not only benefit himself, but greatly enhance the prosperity of the town in which he lives by the spread of agricultural and horticultural intelligence.

ONTARIO PEAR.—We are indebted to W. T. & E. SMITH, of Geneva, N. Y., for specimens of this Pear, which originated in Ontario county, about eight miles west of Geneva, and is considered a valuable fruit for market purposes. It is of medium size, elongated, obtuse pyriform; skin, pale yellow; stalk, long, curved, inserted by a fleshy ring in a rather large depression; calyx, partially closed, or opened in a shallow, irregular, corrugated basin; flesh, white, rather juicy, with a sweet, agreeable flavor. Ripens about the first of October.

DELAWARE GRAPES.—We are indebted to Messrs. H. E. HOOKER & Co., of this city, for some Delaware grapes. It is almost impossible to say too much in favor of this variety. It is early, hardy and productive; the bunches and berries of fair size, and of the most exquisite flavor.

MISSING NUMBERS.—If any of our subscribers have failed to receive, or have lost any numbers of the *Farmer* for this year, we will most cheerfully furnish them.

OUR JANUARY PREMIUMS.—Now is the time to commence canvassing for new subscribers. The January number will be issued by the middle of December, and the earlier orders are sent in the better. We offer *twelve* liberal premiums for the greatest number of subscribers sent in by the *fourteenth of January*. A very little exertion in procuring subscribers will enable any one to take one of these premiums. Only *try*, and the Prize is yours. *Now is the time to commence.*

OVER THREE HUNDRED DOLLARS IN PREMIUMS FOR SUBSCRIBERS TO THE GENESEE FARMER.—It will be seen, by reference to our prospectus on another page, that we offer *three hundred and twenty dollars'* worth of books, at the lowest retail rates of the publishers, for subscribers to the *Farmer* for 1858. In addition to this, we also offer liberal *specific* premiums, so that we have all prizes and no blanks. No one who tries CAN FAIL to take a premium.

TO OUR AGENTS.—If any of our friends have not received the *Rural Annual* for getting up a club for the *Farmer*, we hope they will inform us, and it shall be forwarded immediately. Mistakes frequently occur, which are very annoying to our readers. These are sometimes our fault, and not unfrequently the fault of the Post Office Department. We are, however, always willing to send papers or books over again, without charge.

TO OUR FRIENDS EVERYWHERE.—We will gladly send specimen copies of the *Genesee Farmer*, and handsome show bills for 1858, to any of our friends who are disposed to act as agents in procuring subscribers.

SHOW-BILLS.—Those of our friends to whom we send show-bills, will greatly oblige us by posting them in some conspicuous place.

Inquiries and Answers.

WHAT FRUIT TREES ARE MOST DIFFICULT TO TRANSPLANT?—(R. G.) Nearly all our common fruit trees can be transplanted, when not too large, without difficulty. Plants having long tap-roots, with few fibres, are most liable to injury from transplanting; and those whose soft, spongy roots, when broken or cut, do not readily heal, should be moved with care. The cherry, particularly when large, is perhaps more difficult to transplant than any other hardy fruit tree. Next to the cherry, the apricot, nectarine, peach, pear, apple and quince, are least successfully removed in the order named. With proper care, however, you need apprehend no trouble in transplanting any of these trees at the age at which they are usually received from the nursery. The older they are the more care will be necessary.

DENSITY OF SOILS.—(R. S., Seneca, C. W.) The density or absolute weight of soils varies considerably, as will be seen from the following table:

One cubic foot of dry silicious or calcareous sand weighs about.....	110 lbs.
Half sand and half clay.....	95 “
Common arable soil.....	from 80 to 90 “
Pure agricultural clay about.....	75 “
Garden mould.....	70 “
Peaty soil.....	from 30 to 50 “

PLASTER AND LIME AS MANURE.—I would desire information respecting the advantages to be derived from the use of plaster. How to be used on the different kinds of crops and soils, and the quantity to be used on each. Also,

is there any permanent benefit derived from the use of lime upon land? If so, what kind of land is benefited most, and at what time, and in what quantity, should the lime be applied? I should be extremely glad to see thorough answers to these questions in some future number of your paper. W. D. MITCHELL.—*Pin Oak, Warren Co., Mo.*

ADVERTISEMENTS,

To secure insertion in the FARMER, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. TERMS—Two Dollars for every hundred words, each insertion, PAID IN ADVANCE.

A. LONGETT,

No. 34 CLIFF STREET, NEW YORK,

DEALER in Peruvian, Colombian and Mexican Guano, Superphosphate of Lime, and Bone Dust. November 1, 1857.—1y.

AMERICAN FARMERS' ENCYCLOPEDIA.

THE most comprehensive work on American Agriculture, and a work of real value. Twelve hundred pages, seventeen Lithographic Plates, besides other illustrations.

Price \$4. Sent by mail, post-paid, on receipt of price. Catalogue of Agricultural Books sent gratis to all applicants.

A. O. MOORE,

Agricultural Book Publisher, 140 Fulton street, New York. November 1.—1t.

NEW ROCHELLE BLACKBERRY.

GOOD, genuine plants 25 cents each; \$2.50 per dozen; \$16 per hundred; \$150 per thousand. Liberal discount to the trade.

LINNÆUS RHUBARB.

The very best kind for pies, &c., \$2 per dozen; \$10 to \$15 per hundred; \$80 per thousand.

Also, Fruit and Ornamental Trees, Mahaleb Cherry, Pear and Quince Stocks, &c., &c.

JOHN C. TEAS,

Raysville, Ind.

November 1.—1t*

YOUNG MEN, FORM A BOOK CLUB

FOR YOUR TOWN. Get twenty or thirty cents and ladies, and, by a simple organization, you may have a Course of Lectures, and also have all the popular Books of the day for circulation in the Club, at little or no expense to each member. By-Laws, and full printed directions for forming Book Clubs, will be sent to any address, on application by mail, enclosing a stamp. Address

D. M. DEWEY,
Rochester, N. Y.

October 1.—2t.



ALBANY TILE WORKS,

Corner of Patroon and Knox Streets, Albany, N. Y.

THE subscribers, being the most extensive manufacturers of Draining Tile in the United States, have on hand, in large or small quantities for Land Draining, the following descriptions. warrant superior to any made in this country, hard burned. On orders for 10,000 or more, a small discount will be made.

HORSE-SHOE TILE CUT 14 INCHES LONG—PIECES.

2½ inches rise,	\$12 per 1000
3½ " " "	15 " "
4½ " " "	18 " "
5½ " " "	20 " "
6½ " " "	22 " "
8 " " "	25 " "

SOLE TILE CUT 14 INCHES LONG—PIECES.

2 inches rise,	\$12 per 1000
3 " " "	18 " "
4 " " "	20 " "
5 " " "	22 " "
6 " " "	25 " "

Also on hand, 6-inch calibre Octagon Pipe, \$20 per 100, and 8-inch calibre Round Pipe, \$30 per 100, for large drains. Cornice Brick, of the pattern used in the city of Washington, also on hand. Orders solicited. Cartage free.

C. & W. McCAMMON,
(Late BARCOCK & VAN VECHTEN.)
Albany, N. Y.
DANA & CO., Agents,
Utica, N. Y.

October 1.—2t.

GENESEE VALLEY NURSERIES.

FRUIT TREES, ORNAMENTAL TREES, SHRUBS, ROSES, &c. &c.

THE Proprietors of these well-known Nurseries have on hand a large and well-grown stock of

FRUIT TREES, ORNAMENTAL TREES, SHRUBS, ROSES, GREEN-HOUSE AND BEDDING PLANTS, DAHLIAS, PILEOXES AND OTHER HARDY BORDER PLANTS.

The assortment of ROSES is very extensive, and embraces all varieties which could be obtained, and which are considered worthy of cultivation. Our collection of HYBRID PERPETUALS is the most complete in the country.

The GREEN-HOUSE DEPARTMENT receives particular attention, and the stock of Fuchsias, Geraniums, and other Green-house Plants, is large and varied. In the

FRUIT DEPARTMENT,
OUR STOCK CONSISTS OF

APPLES, of the leading varieties, Dwarf and Standard.
PEARS, of all desirable varieties, on Quince and Pear Stocks.
PLUMS—A choice selection of well-grown trees, of popular sorts.
CHERRIES—All the popular sorts, Dwarf and Standard.
PEACHES—A choice assortment.
NECTARINES, APRICOTS and QUINCES, in variety.
GRAPES—A complete assortment of both Native and Foreign sorts, including many of recent introduction.

SMALL FRUITS.

CURRENTS—Twenty-five choice sorts, including many new varieties.

RASPBERRIES, GOOSEBERRIES, BLACKBERRIES and STRAWBERRIES, of all new and approved varieties.

We have, for the accommodation of NURSERYMEN, STOCKS and SEEDLINGS, including APPLE, PEAR, PLUM, CHERRY, QUINCE, &c. &c. Also, SEEDLINGS OF EVERGREEN TREES, including Norway Spruce, Balsam Fir, Scotch Pine, Austrian Pine, Larch and Hedge Plants.

ORNAMENTAL DEPARTMENT.

The stock of Ornamental Trees and Shrubs, both Deciduous and Evergreen, will be found to embrace all that is desirable among LAWN and STREET TREES and SHRUBS.

ROSES—Consisting of Hybrid Perpetual and Summer Roses, Moss, Bourbon, Noisette, Tea, Bengal or China, and Climbing or Prairie Roses.

HARDY HERBACEOUS or BORDER PLANTS, and BULBOUS FLOWER ROOTS—An extensive assortment.

All the above will be disposed of at low rates, and on advantageous terms. For further details, we refer to our full set of Catalogues, which will be mailed to applicants who enclose a one cent stamp for each.

- No. 1. Descriptive Catalogue of Fruits, &c.
- No. 2. Descriptive Catalogue of Ornamental Trees, Shrubs, Roses, &c.
- No. 3. Descriptive Catalogue of Green-house and Bedding Plants, Dahlias, &c.
- No. 4. Wholesale or Trade List for Nurserymen and Dealers.

Amateurs and others interested in Horticulture, are respectfully invited to visit our Show Grounds and Green-houses, at 153 South Sophia street, a short distance from the central part of the city.

All communications to be addressed to

A. FROST & CO.,

Sept. 1.—3t. Genesee Valley Nurseries, Rochester, N. Y.

BUFFALO NURSERIES

AND

OAKLAND'S GARDENS & GREENHOUSES.

THE subscribers offer for sale, the ensuing autumn and spring, a large and fine stock of—

FRUIT TREES.

EMBRACING

Apple,	Plum,	Nectarine,
Pear,	Cherry,	Quince,
Peach,	Apricot,	&c., &c.

—ALSO—

Apple, Cherry, and Quince Stocks. Strawberries, Gooseberries, Raspberries and Currants.

The Ornamental Department is full and extensive, including a superb stock of Evergreens and Roses.

Special attention is called to the Pear trees, both Standard and Dwarf, as we have a large and unusually fine stock.

Catalogues will be sent to persons requesting them.

Office on Ferry street, Buffalo, N. Y.

Sept.—3t.

MANLEY & MASON.

THE
GENESEE FARMER
FOR 1858.

DURING the present year, the circulation of the *Genesee Farmer* has nearly doubled. We believe it has now a larger list of subscribers than that of any similar journal in the world. This is mainly due to the voluntary efforts of the friends of Agricultural and Horticultural Improvement, who have kindly consented to act as agents, in procuring and forwarding the names of subscribers in their respective districts. To Postmasters, especially, we are under great obligations, for their disinterested labors in increasing the circulation of the *Farmer* and *Rural Annual*.

Grateful for past favors, and hoping for a continuance of them, we have determined to make great improvements in the volume for 1858. We have purchased an entire dress of new type, have made arrangements for a supply of better paper, and intend to spare no expense in procuring engravings of Farm Houses, Buildings, Animals, Machines, Implements, new Fruit Trees, Shrubs, &c. The *Genesee Farmer* is the only fifty cent agricultural paper in this country that is not made up from a weekly paper. It contains as much matter as any of the dollar monthlies, and much more than many of them. It has a larger and more extensive list of correspondents than any similar journal in the world. It is published in one of the finest agricultural and fruit growing sections in the United States, and we number among our correspondents many of the best practical farmers and gardeners in the country. The paper is not local in its character. No farmer nor fruit grower in any section of the Union, or in the adjoining Provinces, can read a single number without getting some hint that may prove valuable.

Encouraged by past favors, we have determined to offer a much more extended

LIST OF PREMIUMS FOR 1858.
SPECIFIC PREMIUMS.

1. To every person who sends EIGHT Subscribers, (at our lowest terms of thirty-seven and a half cents each,) we will send, postage paid, a copy of our beautiful twenty-five cent book the *Rural Annual* for 1858.
 2. To every person who sends us SIXTEEN subscribers, (at our lowest club terms of thirty-seven and a half cents each,) one extra copy of the *Genesee Farmer*, and one copy of the *Rural Annual*.
 3. To every person sending us TWENTY-FOUR subscribers, as above, two copies of the *Rural Annual*, and one extra copy of the *Farmer*, or any agricultural work valued at 50 cents, postage paid.
 4. To any person ordering THIRTY-TWO copies of the *Farmer*, as above, three copies of the *Rural Annual* and one extra copy of the *Farmer*, or any agricultural book valued at 75 cents, postage paid.
 5. For FORTY, four copies of the *Rural Annual* and one extra copy of the *Farmer*, or any agricultural book valued at \$1, postage paid, or four extra copies of the *Farmer*.
 6. For FORTY-EIGHT, five copies of the *Rural Annual* and one extra copy of the *Farmer*, or any agricultural book valued at \$1.25, postage paid, or five extra copies of the *Farmer*.
- For larger numbers, books or papers given in the same proportion.

To save expense to our friends, we pay the postage on all these works, and persons entitled will state what they wish sent, and make their selections when they send orders; or if their list is not complete, if wished, we will delay sending until the club is full.

JANUARY PREMIUMS!
For the Greatest Number of Subscribers.

In order to excite a little competition among our friends everywhere, as well as to reward them for their voluntary labors in behalf of our journal, we make the following liberal offers. Those

who do not get the premiums offered below are sure of the above, so that we have no blanks.

1. TWENTY DOLLARS in Agricultural Books, to the person sending us the largest number of subscribers (at the lowest club price of thirty-seven and a half cents each,) before the *fourteenth day of January*, 1858, so that we can announce the successful competitors in the February number. (The order with the money must be received, not mailed, before the fourteenth of January. Last year many of our agents mailed letters on the fourteenth, thinking they would be in time to compete for the January Premiums.)
2. FIFTEEN DOLLARS in Agricultural Books to the person sending us the *Second* highest list, as above.
3. FOURTEEN DOLLARS in Agricultural Books to the person sending us the *Third* highest list, as above.
4. THIRTEEN DOLLARS in Agricultural Books to the person sending us the *Fourth* highest list, as above.
5. TWELVE DOLLARS in Agricultural Books to the person sending us the *Fifth* highest list, as above.
6. ELEVEN DOLLARS in Agricultural Books to the person sending us the *Sixth* highest list, as above.
7. TEN DOLLARS in Agricultural Books to the person sending us the *Seventh* highest list, as above.
8. NINE DOLLARS in Agricultural Books to the person sending us the *Eighth* highest list, as above.
9. EIGHT DOLLARS in Agricultural Books, to the person sending us the *Ninth* highest list, as above.
10. SEVEN DOLLARS in Agricultural Books, to the person sending us the *Tenth* highest list, as above.
11. SIX DOLLARS in Agricultural Books, to the person sending us the *Eleventh* highest list, as above.
12. FIVE DOLLARS in Agricultural Books, to the person sending us the *Twelfth* highest list, as above.

There is not a town in the United States where any person, by showing his neighbors a copy of the paper and asking them to subscribe, might not take some of the above January Premiums. The Premiums will be promptly paid. The Books can be selected by the person taking a premium from the very complete list which we publish in our advertising columns, or we will get any works which are required, and furnish them at the lowest retail price of the publishers.

Our object in offering Books is to increase their circulation throughout the country.

LARGE APRIL PREMIUMS

For the Greatest Number of Subscribers.

1. FIFTY DOLLARS, in Agricultural Books (at the lowest prices,) to the person who shall send us the largest number of subscribers at the lowest club price of 37½ cents, before the 15th day of April next, so that we may announce the successful competitors in the May number.
2. THIRTY DOLLARS in Agricultural Books, to the person who shall send us the second highest list, as above.
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Beef, per 100 lbs.,	\$6.00 @ \$7.50		\$5.75 @ \$6.00		\$4.00 @ \$5.00	\$8.25 @ \$13.00
do mess, per bbl.,	12.50 15.00			\$10.00 @ \$11.00		
Pork, per 100 lbs.,	3.00 3.25		5.00 9.00		5.00 6.50	10 50 15.00
do mess, per bbl.,	21.00 22.00	\$19.00 @ \$23 50	23.00 25.00	21.00 23.00		
Lard, per lb.,	.13½ .16	.15 .17	.15½	.14 .14½		.13 .15
Butter, do	.15 .23	.14 .15	.14 .17	.17 .21	.20 .25	.18 .26
Cheese, do	.05 .08		.08 .10	.10 .12	.09½ .12	.11 .17
Flour, per bbl.,	4.60 8.25	5.25 7.00	5.00 6.75	4.00 6.00	4.25 5.50	7.20 8.16
Wheat, per bush.,	1.05 1.45	1.10 1.30	1.10 1.15	.65 .70	.80 1.15	1.44 1.93
Corn, shelled, per bu.,	.70 .72	.74 .77	.75	.50		1.03 1.17
Rye, do	.78 .80	.73 .75		.50 .55	.60	.90 1.17
Oats, do	.34 .48	.34 .36		.24 .30	.35 .40	.60 1.02
Barley, do	.80 .85			.30 .60	.50 .60	.78 1.33
Clover Seed, do			6.50 7.00	6.50 7.00		
Timothy Seed, do		2.25 2.50	3.00 3.75	1.75 2.00		
Flax Seed, do	1.40 1.45	1.70 1.75		1.00		
Hay, per ton,			7.00 11.00	6.00 9.75	10.00 17.00	2.13 2.16
Wool, per lb.,			.30 .40		.20	
Wood, hard, per cord,			4.50 5.50	6.50 7.50		

Contents of this Number.

The British Breeds of Cattle, 329
 The Practical Utility of Soil Analyses, 331
 Fair of the New York State Agricultural Society, 333
 Provincial Exhibition of Canada West, 334
 Items Suggested by the October Number, 335
 Notes for the Month, by S. W., 336
 Crystallized Sugar from the Chinese Sugar Cane, 337
 Domestic Pigeons, 337
 Crops in Seneca County, &c., 338
 Topping vs. Cutting Up Corn, 339
 Notes from Indiana, 339
 On the Management of Corn for Feeding Cattle, 340
 Agriculture in Virginia, 340
 Experiments with the Chinese Sugar Cane, 341
 Laying Down Butter for Winter, 341
 Planting Sugar Cane instead of Seed, 341
 Good Management of Business Affairs—Buying, Selling, &c., 341
 Mind your Business, 342
 Agriculture in Western New York, as described by an intelligent Scotch Farmer, 343
 Improve your Stock of Fowls, 343
 English Country House, 346

HORTICULTURAL DEPARTMENT.

Prepare for Planting next Spring, 347
 Length of Pear Roots—Correction, 347
 Three Good Raspberries, 348
 Horticultural Operations for November, 349
 In my "New Garden,"—No. 4, 349
 Culture of Grapes in the Open Air, 350
 Raising Peaches in Massachusetts, 351
 The Willow, 352
 Remedy for the Curculio, 352
 Varieties of Fruit for the West, 352
 American Plums, 352

LADIES' DEPARTMENT.

Taste in Iowa—Once More, 353
 Original Domestic Receipts, 353

EDITOR'S TABLE.

The next Volume of the Genesee Farmer, 354
 What is said of the Genesee Farmer, 354
 The Rural Annual for 1853, 355
 Premiums for Short Essays, 355
 "The Advantages of a Good Agricultural Library, and the Best Means of Obtaining it," 356
 Ontario Pear, 356
 Delaware Grapes, 356
 Missing Numbers, 356
 Our January Premiums, 356
 Over Three Hundred Dollars in Premiums for Subscribers to the Genesee Farmer, 356
 To our Agents, 356
 To our Friends Everywhere, 356
 Show-bills, 356
 Inquiries and Answers, 356

ILLUSTRATIONS.

Heads of West Highland Cattle, 329
 " Galloway " 329
 " Ayrshire " 329
 " Alderney " 330
 " Long-horn " 330
 " Short-horn " 330
 " Hereford " 331
 " North Devon " 331

Group of Domestic Pigeons, 333
 Polish Top-knot Cock and Hen, 344
 Heads of Spanish Fowls, 344
 Dorking Cock and Hen, 344
 Dominique Cock, 344
 Game Cock and Hen, 345
 Silver-pencilled Hamburg Cock and Hen, 345
 Gold-pencilled Hamburg Cock and Hen, 345
 White Bantam Cock and Hen, 345
 Black Bantam Cock and Hen, 345
 View of Hayes' Farm, Devonshire—the Birth-place of Sir Walter Raleigh, 346
 Brinkle's Orange Raspberry, 343
 Hudson River Antwerp " 348
 Fastolf " 343

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 June, 1857.



HAVE WE MADE ANY PROGRESS IN AGRICULTURE DURING THE PRESENT YEAR?

It is difficult to answer this question. "That which grows makes no noise." There are, according to the last census, 118,435,178 acres of "improved," and 184,596,025 acres of "unimproved" land in the United States. An improved system of culture, that should increase the annual productiveness of our farms one dollar per acre, could not be perceived by the most careful observer, nor even by the farmer himself, except from his account book; and yet, allowing eighteen millions of dollars for the cost of such improvement, it would add over *one hundred millions* of dollars to the wealth of the nation. That great improvement has taken place in individual cases cannot be doubted, but that there has been any general improvement may be questioned. Too many farmers have been speculating in Western lands, instead of cultivating properly their own farms. American agriculture needs more capital, and had all the surplus profits of farmers been invested in judiciously improving their own farms, there can be no doubt that the farmers themselves would have been much more prosperous, and the country generally would have suffered far less from the commercial calamities which have overtaken us.

We fear it must be admitted that we have made very little improvement in our system of agriculture during the present year. We do not agree with those who are continually advancing the idea that our soils are becoming *exhausted* by bad tillage. It might easily be shown that such is not the case. The first flush of fertility may have been removed, but good cultivation and manuring will still enable our farms to produce as much food for man and beast as at any previous period.

The wheat midge (*Cecidomyia tritici*) has been a great drawback on agricultural profits and progress. This destructive insect is no new thing in agriculture. In the Carse of Gowrie, Scotland, the injury done to the wheat crop by it in 1827 was estimated at \$100,000, and in 1828 at \$150,000, and in 1829 at \$180,000. But the farmers did not give up wheat culture. They did not think that the soil was exhausted. They devised means to mitigate the evil, and their farms are more productive and profitable to-day than ever before. We believe such will be the case in this country. We have no fears that wheat culture will have to be abandoned in Western New York. The soil and climate of Western New York and Western Canada are particularly favorable

for the growth of wheat, and we greatly over-estimate the intelligence, enterprise and practical skill of our farmers if they do not discover varieties sufficiently early to mature before the midge can materially injure the crop, and also develop processes of culture and manuring that shall tend to the same result. In agriculture we can adopt no improvement but what benefits us in more ways than one. In using means to destroy weeds, we not only attain this object, but, by rendering the inert matter available, we increase the fertility of the soil. Underdraining, too, has a plurality of good effects. Its primary object is to relieve the soil from excessive moisture, but at the same time it increases the temperature of the soil, renders it more porous, and more easily worked; the admission of air decomposes the organic matter, and disintegrates the mineral matter of the soil, while the rain water, as it descends to the drains, leaves its ammonia and nitric and carbonic acids in the soil, ready to be taken up as wanted by the plants; the cool, porous soil, too, condenses moisture, and with it ammonia from the air during a drouth. Thus the single operation of underdraining has a great variety of beneficial actions. And so it is with all agricultural and horticultural improvements. We believe, therefore, that in endeavoring to counteract the destructive influences of the midge, farmers will be led to adopt systems of culture that will give greatly increased crops. On many farms, the present year, the "rust" proved as injurious as the midge, and fortunately, the means necessary to avoid the one will also do much towards enabling us to avoid the other. The same may be said of winter-kill, heaving, &c.

If the midge shall cause us to till less land, and cultivate it better, to sow only the best portions of the farm to wheat, and to enrich them more, while we are underdraining and otherwise improving the low, wet and poor portions; if it shall cause us to keep more stock, and make more and better manure, the midge will prove one of our greatest blessings. To some extent it has already had this effect. Though the aggregate productiveness of our farms may have fallen off during the present year, yet we are at least making some progress in adopting an improved system of cultivation, which will in the end greatly increase the general productiveness of the land and the wealth and prosperity of the whole country.

In the erection of neat and commodious farm-buildings, we are undoubtedly making commendable progress. Much improvement is also manifested in the removal of old, unsightly fences, and the substitution of those which occupy much less land. Th-

great number of patents which have been granted for portable field fences, shows conclusively that public attention is turned to this important subject.

In the operations of tillage, too, some improvement is manifested. Sub soil plowing is becoming more general. Cultivators and other implements for pulverizing the soil are becoming yearly more popular, and the manufacturers of seed drills inform us that their sales are large. Perhaps little improvement has been made in the construction of plows, but we are much mistaken if good plowing is not more general. We plow narrower, neater and straighter, and finish the dead furrows better. It must be confessed, however, that our plowing in these respects admits of very great improvement. Our annual plowing matches have accomplished much good, but still there is great need of good plowmen. We can say little in favor of too many of the harrows in general use. Some of them are in a solid frame, and have a tendency to consolidate rather than to pulverize the soil. There is a great want of light harrows for covering the seed. Good rollers are too seldom seen, and a clod-crusher, somewhat similar to that of CROSSKILL'S, so general in England, would prove of very great benefit on all clayey farms.

In the improvement of farm stock we are making most commendable progress. Some of the best animals that money can purchase have been imported during the present year, and much improved stock has been introduced into new localities. The influence of these thorough bred animals in improving our common stock, cannot fail to be very beneficial.

Much good has been accomplished by the Agricultural Department of the Patent Office, and by our Agricultural Societies, by the diffusion of valuable seeds—though perhaps they have been confined too much to favorites or political friends.

Agricultural exhibitions have been generally successful. The tendency to convert them into horse races has been checked; trials of implements and machines have been more general, and the Societies are using commendable efforts to elicit information in regard to the cultivation of products receiving premiums. We think, too, the selections of lecturers to deliver the annual addresses, have been made with some reference to their capabilities of imparting correct, practical information on matters connected with the farmer's vocation. The able, interesting and instructive address delivered before the Michigan State Agricultural Society, by SANFORD HOWARD, of the Boston *Cultivator*, deserves special praise. Such lecturers may not *draw* as well as some popular orators, but much more good is accomplished.

The sale of agricultural books is on the increase. Few new books have been published during the year, and too many of those previously before the public were written for other climates and circumstances, and are not adapted to the wants of American farmers. Still they are the best that can be obtained, and though they cannot be implicitly followed, yet their perusal leads to thought, and we would not willingly say a word which might curtail their dissemination. The publication of agricultural works in this country is confined almost exclusively to A. O. MOORE, of New York, and he deserves the thanks of the farming community for the enterprise with which he is prosecuting this important business.

Agricultural papers have been well sustained the

present year. The Pennsylvania *Farm Journal* and the *Wool Grower* have been given up, but their places are occupied by new and spirited papers in other States. We exchange with thirty-three agricultural papers published in the United States. We should estimate their aggregate circulation at a quarter of a million. In no country in the world are the means of disseminating agricultural and horticultural information so abundant as in this country. We are not disposed to underrate the influence of the Agricultural Press. It is doing much to promote good cultivation and rural improvement. As a general rule, it is in the hands of honest, capable and intelligent men,—men who feel a deep interest in rural affairs, and labor zealously to promote the agricultural prosperity of the country. A few there may be who publish papers for the promotion of other business in which they are engaged; some may publish them for the purpose of foisting upon the public their worthless artificial fertilizers, and others who make loud pretensions to disinterested independence, insert puffs and cuts of patent machines, implements, fences, pens, pianos, &c., in their leading editorial columns, at *twenty-five cents a line*. Still, we believe these things will correct themselves. A printer, ignorant alike of the science and the practice of agriculture, may start a paper; publish his own name as "conductor;" hire men to write his editorials; and by constant puffing, "Excelsior" mottoes, flaming handbills, and piano premiums, may attain a large circulation for his paper and an ephemeral reputation for himself; but the farmers of this country are too intelligent long to be deceived by borrowed plumage. They are beginning to distinguish between their real and pretentious friends, and few will be found willing to follow in the footsteps of the so-called "leading weekly." In this respect we are making progress.

While the means of diffusing agricultural facts are so abundant, the means of developing them are lamentably deficient. There is not a single private or public institution in this country devoted to experimental investigations into the laws of vegetable growth and animal nutrition. During the present year we have published in the *Genesee Farmer* over five hundred articles and essays from some of the most intelligent and experienced farmers and fruit growers in the United States and Canada. Able, interesting, instructive and useful as these articles undoubtedly are, it is nevertheless apparent that little is doing in any section of the country to develop, on anything like a regular, scientific basis, new truths, in agriculture and horticulture. Entertaining as we do, the highest respect for American farmers; sincerely believing them to be, as a class, the most enterprising and intelligent cultivators of the soil to be found in the world, we must nevertheless admit that the fact that the first Experimental Farm has yet to be established on this continent, reflects no credit to American agriculturists either at home or abroad. Something has been done in the States of New York and Michigan towards establishing Agricultural Colleges, and much good may be expected from them; but it must not be forgotten that Agricultural Schools and Colleges are designed to teach truth already discovered, and not to develop new truths. Our great want is not the means of disseminating truths, but of discovering them. Without an Experimental Farm, colleges will accomplish little. Knowledge must be obtained before it can be taught.

CULTIVATION OF WINTER WHEAT.

No soil can produce wheat unless it contains, in an available condition, all the inorganic elements of plants. It does not follow, however, that if these are present in sufficient quantity, the soil will produce good wheat. Indian corn is composed of precisely the same elements as wheat, and the proportions are nearly identical; yet we have much land that produces excellent corn, that is not adapted to wheat culture. We know so little in regard to the manurial requirements of Indian corn, that we can offer no chemical explanations of this fact. We know that wheat requires in the soil, a large quantity of ammonia, for the production of a good crop; and nearly every well established fact in regard to corn culture goes to show that the same is true of this crop. We come to the conclusion therefore, that while it is probable there are some chemical causes why one soil is better adapted to wheat culture than another, yet that, so far as we can see at present, the difference is owing principally to the mechanical conditions and texture of the soil.

Wheat delights in a compact, calcareous loam, rather clayey than sandy. We have heard farmers say that they preferred a sandy to a clayey soil for wheat, but this opinion arises from the fact that most of our clay land needs underdraining. A calcareous clay that is underdrained, or naturally dry, is better for wheat than a sandy soil under similar conditions. Why it is, we know in part;—the double silicate of alumina and soda parts with its soda and absorbs ammonia from rain water, the atmosphere, and from any other bodies containing it. Sand does not possess this property; and herein lies one reason why a clay soil is better for wheat than a sandy one. Clays, too, have the power of absorbing and retaining moisture to a much greater extent than sand. But we can overcome both these drawbacks by an extensive cultivation of clover, peas, turnips, &c., on the sandy soils. These plants absorb ammonia from rain water and the atmosphere, and thus accomplish the same end as the double silicate of alumina and soda, while the carbonaceous products arising from their decomposition in the soil give the soil an increased capacity for absorbing and retaining moisture. These considerations lead to the conclusion that the farmer has the means in his power to make a sandy soil as good in every respect for wheat-growing purposes as a clayey one, so far as we can see to the contrary with the little light we possess on this subject, except in its mechanical condition.

As we have said, a wheat soil must be compact.—If it is not so naturally, mechanical means should be employed to compress it. Treading light wheat land in the fall or early in the spring with sheep, is frequently beneficial, and a good heavy roller is decidedly advantageous. Crosskill's Clod Crusher, compressing land, as it does, similarly to the treading of sheep, is found very useful on sandy wheat fields in England. We are earnest advocates of deep plowing and thorough pulverization of the soil, but these must not be carried to excess in wheat culture. It is easy to make the light land too fine and loose for wheat.—When wheat is sown on a clover sod after one plowing, it is not advisable to plow it too deep; if the sod is all covered and a good "seed bed" obtained, that is enough. Subsoil and plow deep for corn and root crops, and, if you summer fallow, for wheat also;

but if wheat is sown at one furrow on a clover sod Many instances are recorded where it has had a turned under immediately before seeding, we should seldom go more than six inches deep. The best large field of wheat we ever saw in England, was on a calcareous loam that had been two years in red clover, grazed with sheep, which, a considerable portion of the time, were allowed a lb. of oil-cake per day. It was plowed about three inches deep, just before sowing, and a bushel and a half of seed drilled in per acre, one foot apart in the drills. The yield was 55 bushels per acre.

The question of thick or thin sowing, which was agitated so fiercely a few years ago by DAVIS, MECHT, HUXTABLE, and other ultra agricultural reformers, is now pretty much decided. A peck of seed to the acre is amply sufficient, as they contended, if it all grows, and the crop escapes wire worms, winter kill, &c.; but it is found that those who practice such extreme thin seeding always lose more from these causes than those who sow thicker, and that these losses more than counterbalance the gain from saving a bushel or two of seed per acre. Taking into consideration the many pests that infest our wheat crop, we are inclined to think, that, if anything, we sow too thin. Two bushels per acre is none too much when sown broadcast, or a bushel and three pecks when sown by the drill. The majority of English farmers sow three bushels per acre, and we know some of them who sow $3\frac{1}{2}$ and even 4 bushels per acre. This would be greatly too much in our climate, but we must not err in the other extreme.

The best artificial fertilizer for wheat is unquestionably Peruvian guano. The lumps of guano should first be sifted out and crushed. It can then be mixed with muck in equal parts, or sown alone, broadcast, at the rate of from 200 lbs. to 400 lbs. per acre. It should be harrowed or cultivated in, thoroughly incorporating it with the soil, before sowing the seed. This we prefer; on very sandy soil, it might be advisable to sow 100 lbs. per acre in the fall, after the wheat is sown and another 100 lbs. early in the spring. On heavy land it should always be sown in the fall, and the longer it is incorporated with the soil before the seed is sown the better. The earth is a stomach in which food for plants is digested and prepared: and time should be allowed for it to accomplish this before the plants require nourishment. On light soils, however, there is danger of its leaching if sown too early; and there is less necessity for doing so, as from the admission of air, light and heat, chemical changes take place much more speedily in sandy soils than in those of a closer texture.

Plaster is frequently recommended for wheat, and there are many instances recorded where it has proved very beneficial, but the mass of testimony is against it. In the wheat growing districts of this state, it is frequently sown on wheat in the fall; but it is rather with an eye to its effect on the clover, to be sown the following spring, than to any action it has on the wheat. Many will object to this and contend that plaster does good on wheat. To this we would say, that if plaster acts well as a manure for wheat on your land, by all means use it. When it sells from \$2 to \$5 per ton, as in Western New York, it is the cheapest of fertilizers on all soils where experience shows it to be beneficial. At present, experience—or what is simply a short cut to experience, experiment—is the only guide in this matter.—

Many instances are recorded where it has had a magical effect. Some such have come under our observation. As a general rule, however, salt is of little benefit on wheat. Prof. WAX suggests that salt acts by increasing the solubility of the silicate of alumina and ammonia. Water containing salt will take up a very much larger quantity of this salt than pure or ordinary rain water. He has expressed the opinion that the silica which forms the stiffening of the straw of wheat, is taken up by the plant in the form of this salt—the ammonia evaporating as the silicic acid is deposited on the straw. If this ingenious hypothesis proves correct, we have at once an explanation of the well known fact that salt stiffens the straw of wheat, and has a tendency to retard excessive and injurious luxuriance. We would say of salt, as of plaster, it is cheap, and every farmer should experiment and ascertain its effects upon his own soil. Analysis, in the present state of chemical science, will not aid, though when this subject is better understood, it is highly probable that it may prove useful.

WINTER MANAGEMENT OF HORSES.

THE Suffolk, Cleveland Bay, or Clydesdale is probably the best breed of horses for plowing and other heavy farm work, while roadsters, hunters and racers may be equally good for their respective uses. But for strength, endurance, activity, and adaptation to *all* the manifold wants of farming life, the common horses of the United States, in our opinion, are superior to all others. In no other country, too, are there so many horses kept in proportion to the population. This is an unmistakable evidence of great and general prosperity. In Europe, "poor people" form nine-tenths of the community, and never enjoy a sleigh-ride *after their own horses*, while in America comparatively few are so poor as to be unable either to keep horses themselves, or to frequently hire from livery stables. The number of horses kept for hire is beyond all credence to a European. These horses must be kept on hay, bran, shorts and oats, and hence the comparative high price of these cattle foods in our large cities. Hay is usually higher here than in England, while wheat is 50 per cent. lower. And yet, much more labor is required to grow the wheat than the hay crop. Why this difference?

Without stopping to examine this point, it may be well to inquire if farmers cannot be more economical in the use of hay. City horses must have hay. They cannot get the proper *bulk* and nutriment in a cheaper form. We can get the same amount of nutriment in corn at 70 cents a bushel, or at \$23 per ton cheaper than in hay, or probably in any other food. But we do not get the required *bulk*, and therefore cannot use corn or oats alone. Hay, therefore, which is certainly the most natural food, appears to be our only resource, as under ordinary circumstances it would be our cheapest. But this congregation of horses in one point produces an artificial demand for hay, and proportionably high prices. Under such circumstances it appears highly probable that farmers can winter their horses and cattle more economically than on hay. Some farmers think horses cannot do without hay, but this is a mistake. One winter, after our hay crop had failed, we kept seven horses for three months on cut oats in the straw, a little barley meal and bran, and ruta bagas. The horses kept in admirable condition,—in fact never did

better, and we found this much cheaper than wintering with hay.

A horse requires about 33 lbs. of hay per day, which, at present rates in this city, would make the cost of keeping a horse for six months \$40. Cannot a horse be wintered on a farm at a much less cost? There can be no doubt of it. All that is required is the same amount of nutritious matter and bulk in some palatable food. In good clean straw and corn meal we have the very thing. To get an amount of nutritious matter *in straw* equal to 33 lbs. of hay, we require, according to BOUSSINGAULT, 165 lbs. Of course no horse could consume such a quantity. But if we give him 30 lbs. of straw and 8 lbs. of corn meal, he would receive quite as much nutritious matter, and in the same bulk, while the cost of wintering in this way would be materially reduced. Horses, like other animals, crave variety; and a little oil-cake or pea meal might be substituted, occasionally, for the corn meal with advantage. If the horses are kept constantly at hard work, a little extra oil-cake, peas or oats may be regularly given, inasmuch as they are highly nitrogenous and would be more likely to supply the increased destruction of muscles caused by violent exercise. "But my horses will not eat straw—they will starve first." Then let them starve. They will come to their food in a few days. Let the straw be clean and sweet, *cut short*, and well mixed with meal, so that they cannot separate them, and our word for it, your horses will eat it and do well, and if they have an occasional feed of carrots or ruta bagas, they will do better.

We have said that there is no country in the world where so many horses are kept, in proportion to the population as in America. We may add that in no other country is the horse worse used than here—in none does he work harder, fare harder, and receive less attention. This is owing, perhaps, to the fact that in Europe the labor of one horse is equal to that of two men, while here we pay as much per day for a man as for a span of horses. Let any one visit the French or English stables, and he will be satisfied, by contrasting their system with our own practices, that we are lamentably careless, and culpably negligent of the health of our horses. How often have we seen a span of horses brought in from a hard day's work, swathed in sweat, turned into a cold stable, fed, and left to dry, as best they could, without any other attention than to strip the harness off them, and throw it over the stall. How often, too, do we see a span of horses driven Jehu-like into the city, and then hitched with their feet in ice-cold water, to a post—from whence, after shivering a few hours, they are driven as unmercifully home again, to receive the cold comfort of lying down to rest, (?) covered with clotted perspiration, which, perhaps, is carried off them next morning, prior to another day's work, as severe and as inhuman as the preceding.—Our horses are short lived, and no wonder. The only thing that surprises us is, that they live half so long, and do half the work that they are compelled to perform.

THE action of frost on potatoes and other vegetables is not clearly understood. It disarranges the particles of matter and induces speedy fermentation. The nitrogenous matter acts on the starch and converts it into sugar, similarly to the action of malting. Hence the sweet taste of frozen potatoes.

CHURNING IN WINTER.

WHERE is the farmer's wife who has not been troubled more or less with churning in winter? We recollect having to help churn for two days, and, after all, we had to throw the milk away, for the butter would not come. Cows fed on straw cannot be expected to have much butter in their milk; the poor things need the whole of it to burn in their lungs to supply animal heat. We opine that this is one of the reasons why butter will not come.

It is well known that butter is held in emulsion, in the form of oily globules, encased in a film of caseine, (curd,) and that agitation bursts these films, when the oil or butter, being specifically lighter than the milk, rises to the surface and concretes. This effect is *always accompanied by the formation of lactic acid from the sugar of milk.* But below a temperature of 50° this formation of lactic acid does not take place, and consequently the butter will not come.

To make butter come, then, we would advise *better feed for the cows.* In addition to the straw or hay, give some shorts, a few mangel wurtzel or beets, and, what is best of all, a little oil-cake. Then your milk will contain butter, and to get it out will not be difficult. Place the milk where it will not freeze, and the cream in a temperature of about 60°, and keep it till it gets sour, which will not be long, if the temperature is uniform. Avoid heating it in the day and freezing at night; such a course will turn the cream *bitter* instead of sour. In churning, the temperature should be (in winter) as high as 60° when the cream is placed in the churn, and about 70° when the butter comes. A good "thermometer churn" is of great advantage in winter as well as summer, not because it has a thermometer, but because of the admirable means it affords of placing warm water outside the churn.

TO PREPARE RENNET.—One gallon of poor whey is boiled some time with a handful of salt and a little saltpetre; the solution is then strained, and when it has cooled to the temperature of new milk (98° Fah.), four large maws (the stomach of calves) are put into it—the whole is placed in a covered jar, and may be used after standing fourteen days. The quantity of this solution will be from four to five fluid ounces for a cheese of thirty pounds; two jars of prepared rennet should be kept, to be used alternately. The skins may be re-salted, and dried, to be used again the following year. This is the Cheshire plan. In Gloucestershire a strong brine is boiled, and when cold, to every two gallons four maws are added, with two lemons, and the liquid, after standing a month or two, is fit for use, at the rate of about half a pint to thirty gallons of milk.

In the dairy districts of the State of New York the stomach is emptied of its contents without scraping or rinsing, salted and dried, and kept for one year. It is then soaked for 24 hours in tepid water, a gallon of water to each rennet. They should be frequently rubbed and pressed, to get out all the strength. The liquor containing the soluble rennet, is then saturated with salt, allowed to settle, and strained to separate the sediment and all impurities. It is then fit for use. It should be kept in a stone jar, and in a cool place. As much of the liquor is used each morning as will set the cheese firm in 40 minutes.

WATERING SHEEP IN WINTER.

THAT sheep can do with less water than other domestic animals, is well known. That they should be forced to do with a less quantity than they desire, or compelled to do without any, except what is accidentally supplied by melting snow or rain, no reasonable or merciful man can believe for one moment.—In some experiments on South Down sheep, at Rothamstead, we found that in the summer months each sheep eat 3 lbs. of clover hay, and drank about 6 lbs. of water daily. Thinking that they drank more than was favorable for the deposition of fat, we confined them to a less quantity of water for one week. The result was that during that time they eat less food and *lost weight.* This result satisfied us that sheep knew better than man, though he were scientific, how much water they required.

But we need not quote experiments. The common sense of every man tells him that sheep, as well as all other animals, should be abundantly supplied with good, fresh water. Cows and sheep, if possible, should have free access to it *at all times.* For, unlike the horse, they will not always drink at stated times, however regularly observed. A well, pump and troughs would seem, therefore, to be necessary appendages to every well managed barnyard or sheep fold. Kind reader, *act* on this matter, and your sheep and cows will bless you, if not in words, at least in wool, milk and profit.

ITEMS SUGGESTED BY THE NOVEMBER NUMBER.

RAIN, rain, rain—a decidedly *damp* time. Let us remember last year—what a noble season we had for fall work—and be thankful. Perhaps it may dry off yet, so people can husk corn, dig potatoes, plow, and *get ready for winter.* Yes, we must be ready, for Winter will soon come,—“binding all nature with its icy chain.” I take up the *Farmer*, and come first upon the

BRITISH BREEDS OF CATTLE.—You are right in thinking those “heads of the cattle will be of interest to your readers.” My experience has been confined to grade Devons principally, and I like the cows well for the dairy. We want cattle that will bear scanty feed sometimes—for these dry seasons that occur every two or three years, burn up the pastures on most grain farms. We can, with a little care, get much better grazing than we now do, so grade short horns would probably prove more profitable for feeding. I see that a small infusion of “blood” increases the size and hastens the maturity of our native “all sorts” stock.

UTILITY OF SOIL ANALYSES.—Your views on this subject coincide with those of many intelligent farmers—and they are glad to see you speak out so plainly.

NEW YORK AND CANADA WEST FAIRS.—Do you think there is *improvement* in the management of Fairs over a few years ago? It seems to me there is, and there is room for still more. “Young America” must be held in check, however, for “large receipts” are not the great object of Agricultural Fairs.—There may be success in “drawing a crowd,” which shall work great injury to the future of the cause.

DOMESTIC PIGEONS.—There is a suggestive paragraph at the close of this article on teaching children the habit of caring for animals. Pets of this kind

are of great use in this respect—and it is well that every child should have something to *call its own*,—something which is partially, at least, dependent on its care.

CUTTING UP CORN.—It saves some heavy lifting in binding corn, as described by "A. S. B.," to tie the corn *without taking up*,—a little care by the cutter will leave the stalks sufficiently even. I am *versus* topping in any case.

THE FARMER FOR 1858—Will be worthy of "new type and better paper," if of anything like the value of the present volume. That it will be better, we do not doubt in the least, and every present reader should subscribe and ask his neighbor to do likewise. He will benefit himself by increasing the editor's power to make the paper better, as well as by helping the cause of rural improvement.

MIND YOUR BUSINESS.—A truly suggestive Essay, this of friend SANFIELD'S. The farmer has business enough to occupy his hands, his head, and his heart—business for all his strength and skill—all his knowledge and intellect—all his moral powers and affections. Let him attend to it.

IMPROVE YOUR FOWLS.—Good advice, surely, but too many farmers need to improve materially in their estimate of the *needs* of poultry, or the best fowls would fail under their system of management. Hens should be cared for at all seasons of the year—should have proper food and shelter—and they will then prove profitable. We mean to try the Black Spanish for eggs, with the Dorkings for raising chickens.

GRAPES AND THEIR CULTURE.—I have tried several times, with but little success, to raise grape vines from cuttings. This year I layered a vine, and have five or six good plants. One old vine bore several bushels, but they ripened later than usual, and some were frosted. These were not lost, however, as they were picked immediately, and thawed in cold water, and came out fresh, and uninjured, at least, for preserving.

B.

Niagara Co., N. Y.

NOTES FOR THE MONTH.—BY S. W.

THE GENESEE FARMER AND ITS EDITOR.—When, in 1850, I read in the *Genesee Farmer* a very interesting, unique rural article, over the signature of JOSEPH HARRIS, I then set him down as an old, thoroughbred farmer, *au fait* of the chemistry, as well as of the practical and mechanical routine, of his high calling. What was my surprise, then, when, two or three years afterwards, I saw him for the first time, not an old, but a young man—an English farmer's son, not only to the manor born among his father's bovines of Herd Book pedigree, but with a vocation and love for his inherited calling rarely to be found even in a farmer's son. His three years' study and daily practice on the Rothamsted Experimental Farm, under the instructions of the indefatigable LAWES and the erudite GILBERT, had filled his mind with a love of truth as it is in nature, counting as nothing all theories that would not stand the test of experiment. Here, also, he acquired those habits of discrimination, and that logical acumen, which he now so often displays in his sometimes rather *unsparing* criticisms on the agricultural theories of others. He has ever been a watchful sentinel of farmers' interests—so unremitting in exposing the cheat in special manures, that he once doffed his pen and donned the

garb of an Irish laborer, to obtain admittance as a workman into a New Jersey superphosphate and guano *laboratory*, in order that he might discover the occult frauds, and refute the simulated affidavits by which his own arguments were attempted to be defeated, and the farmers stultified. This incident alone shows the indomitable character of the man, in his loyalty to the farmer's cause. But aside from his own editorial matter—which is admitted, even by his competing brethren of the craft, as standing at the head of our agricultural literature—the late extra contributions to the *Farmer* of Prize Essays by his practical farmer readers, male and female, are of great interest to every individual who lives by dairy or tillage. Hence, no matter how many other good agricultural papers the farmer takes—and they are all good—he should by no means neglect to join a club and pay the paltry sum of thirty-seven and a half cents for the *Genesee Farmer*.

Mr. HARRIS also publishes a *Rural Annual*, at twenty-five cents. No farmer and gardener should be without this well and late-posted and improved repertorial manual.

TURNIPS AMONG CORN—PRAIRIE GRASS, &c.—C. BRACKETT, of Fulton Co., Ind., is right when he sows turnip seed after the last working among corn—not to get edible turnips, but only that the plants may cover the ground when the corn is removed. Their tops then organize the ammonia of the atmosphere, and are afterwards to be eat down by sheep, whose excrements fertilize the soil. In reply to his query, I must say that all prairie grass which ever came under my notice was coarse. All the varieties of *Agrostis* and *Poa*s are much coarser than the grasses of the same family in this region, to say nothing of the great variety of wild flowering shrubs, which, when in bloom, appear in the distance to overshadow all that is green and edible.

THE ADVANTAGES OF A GRASS COUNTRY PROPER.—I asked a farmer neighbor, the other day, how a man of his experience came to make his first farm location (after leaving his fair island home) in the snowy regions of Madison county, where corn rarely ripened, and wheat was not. He replied that the town of Otselie was the most profitable dairying and stock-growing town in the State of New York. The five years he lived there he never saw pastures suffer from drouth, while here, with the single exception of the past summer, he never witnessed one summer without a trying drouth, which, although it ripened the corn, was always death on pastures, and often materially shortened the hay and oat crops. Again, he said they not only had double the crop of oats and grass there, but, when warmly stabled in winter, it took no more hay to winter cattle there than here. True, snow comes in November, and lies until near May; but it keeps the pastures warm, and they have grass there as early as here, and more of it—as our pastures are too often fed close, when theirs are protected from such bootless economy by the early and late snow.

SORGHUM DOES NOT RIPEN ITS SEED HERE.—I had two rows of thickly-planted Sorghum, which grew larger and taller than any I saw on exhibition at either our County or State Fair; but, although frost kept off till the 19th of October—a month after the seed and leaves came to a stand—the seed failed to represent those planted, both in color and farina. There can be no doubt that, with a powerful

crusher, to go by horse or steam power, this very sweet and juicy cane may be made profitable for syrup, even at the North. For coiling cows, it is altogether the most profitable and nutritious foraging plant known here. But how is a supply of plump, healthy seed to be obtained? Perhaps the far South can answer the query. I will bury a few joints of cane to plant next season, as an experiment. In the *Paris Bulletin d'Acclimatation* for September, 1856, we read that the Imphee of LEOPOLD WEAY—the *Sorgho de Caffres*—bears rich, farinaceous seed, and that the coolies on the plantations of Martinique prefer it to Chinese rice. But there can be no doubt that such seed is only formed at the expense of the sugar of the cane. M. HAYOT, of Martinique, commends the Imphee mainly for its cereal product, giving the juice no other character than that of making good flavored spirits, *tafia*. M. G. BALGUERIE also commends the Imphee as being earlier than the Chinese *Sorgho à Sucre*, which Mons. MARTIGNY had contributed to French agriculture from North China. Our seed, from the Patent Office, is of this variety.

THE TIMES AND THE CRISIS.—We too often hear the banks charged with causing the evils the present salutary revulsion brings with it; but the banks are only the tools which, when unskillfully used, bring mischief to those who use them, and death to such banks as have shaved or gambled themselves, or aided their customers to make railroads with paper devices, and build cities on land which had better been planted to corn. A purely metallic currency may do for a country where the few are privileged to trade, and the mass to labor for a daily pittance; but Young America needs a mixed and larger currency, because here we are all sovereigns, and feel ourselves such, no matter if we are sometimes poorer than the poorest of legitimate kings. One great blessing attendant on these times, is that retrenchment, reform, and ever-blessed domestic economy are now working such a protective and prohibitory *tariff on imports* as HERACE GREELY, and other high protectionists, never dreamed could be accomplished without the aid of legislation. But the end of the crisis has come; gold no longer bears a premium, and the banks will soon resume specie payments, when all legitimate business will go on again as usual; while speculation, over-trading and stock-gambling will remain in abeyance, for a few brief years at least. S. W.

Waterloo, N. Y.

SEEDING TO TIMOTHY GRASS.

THE fall of 1856, it will be remembered, was one of remarkable drouth; in fact, there was little rain of any amount from July to January. Consequently my experience in "Seeding to Timothy" must be taken with several "grains of allowance" for this state of things, as it might have been materially changed by a different season. So much of preliminary.

Spring seeding, with grain crops, I have observed often fails of success from drouth, from the growth of grain choking the grass, and from weeds, and, as a general rule, the first crop of grass is but a light one. So I thought, I would try seeding in August on oat stubble, first harrowing the same thoroughly. But after preparing the ground, I waited for rain until the 20th of September, at which time a slight shower occurred, when I sowed some six acres. Expecting

more rain soon, I did not harrow in the seed, as probably should have been done, and the growth was delayed for some weeks on that account. In the mellow spots, it came up promptly and thickly. So I am sure the seed was good, and think enough was sown for all practical purposes. Six quarts per acre, or even four, will cover the ground, and, by the next fall, give quite a sward, under favorable circumstances.

The continued drouth left the ground quite bare of grass, and, in the spring, it seemed entirely so. I ought to have said that the soil was clay, with some muck—originally a black ash swamp—and hence liable to winter-kill, or rather *spring-kill*, as it is March and April weather which does the business. But the favorable summer has brought on quite a growth of grass, mostly Timothy, and I see that I have about as good success as a neighbor who seeded when sowing his oats in the spring, instead of after harvesting them. There are still some bare spots, and many weeds were intermingled, so that the hay only paid for cutting; but the grass has grown well since mowed, and will, next year, I think, cover the whole surface.

If I had harrowed in my grass seed, it would have done altogether better; and had there been rain also, so that it could have grown fairly in the fall, my success would have been complete. On some loamy knolls, there is now a good sward of nearly pure Timothy. I see that wet land needs peculiar care in stocking, and that a moist season is essential to complete success. Draining would help on the matter materially; in fact, it is the groundwork of all improvement of such soils, and should be attended to, if practicable, the first thing in their cultivation.

A low corner of my barley lot was sown to Timothy in the spring, but "the catch" was a very slight one, and the clover sown on the upland did but poorly, on account of the extreme drouth. I shall continue my experiments in fall seeding, giving, if possible, better preparation of the ground, early sowing, harrowing in, and sufficient draining, at any rate, to carry off the surface water. An experiment in seeding on a marsh, with black muck soil, was rather more successful than the above. But my communication is already sufficiently "elongated" for your pages. B.

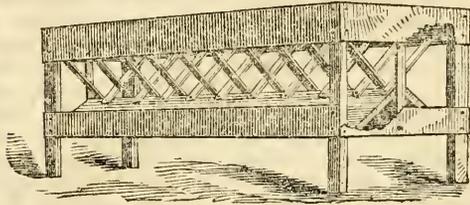
Royalton, N. Y.

FARMERS' DEBATING SOCIETIES.—Now is the time to establish a Farmers' Debating Society. Let it be got up in the manner of a Farmers' Club, where the residents of each district will meet and spend an evening every week, so as to enlighten each other in their individual experience in practical farming. Here we may discuss every subject connected with our calling, from the growing of a turnip to the rearing of an ox or a horse, including household duties, such as the making of butter and cheese, the best method of curing and preserving butter, hams, pork, &c. The best varieties of the various kinds of fruits, and the mode of culture, may be brought out to a great advantage, in such a manner as to be a lasting benefit to each member of such Club, instead of the useless (and sometimes worse than useless) subjects argued at the school-house by the Debating Society. D.

Gates, N. Y.

RACKS FOR FEEDING SHEEP.

EDS. GENESEE FARMER:—In the November number for 1856, a correspondent furnished you with a figure and description of one of the most convenient sheep racks with which I have any acquaintance. Please re-insert the cut in connection with my description, as it will make plainer an improvement I have effected.



The posts, 40 inches high, are 3 inch scantling. The top board 5 inches wide—the lower board 6 inches, and one foot from the ground. Bottom boards about 8 inches wide, are nailed on each side against the lower edge of the side boards; and two boards, about ten inches wide, the edges nailed together at right angles, are placed upon these in the centre of the rack, forming the remainder of the bottom. My improvement consists in putting in a wedge-shaped piece against the side of each post, so as to make the top of the rack flaring, and 4 inches wider than above represented. The top boards for the ends of the rack should be sawed diagonally at each end, (upper edge 30 inches—lower 26 inches,) instead of square as above. The frame is now ready for the slats, 2 inches wide and 22 inches long, headed at the top, and nailed against the lower part of the top board, inside, and to the slanting bottom boards in the centre. They are placed three inches apart, and I find sixpenny nails better than eights for nailing them. Ten feet long is perhaps as convenient as any length, on account of moving.

This "trough and rack combined" will pay for its cost by the saving of fodder in two months' use.—There can be no more wasteful method of farming than scattering hay about the yards for the sheep to trample upon until they utterly refuse to eat it. Last year I fed several hundred bushels of oat chaff to my sheep, in these racks, also bean straw, clover hay, oats and refuse beans, without a shilling's waste of fodder. Making the racks wider across the top renders them easier to fill—without increasing the chance for the falling of chaff and grass seed into the necks of the sheep. I hope other farmers will try them—I will warrant them to please. S. F. T.

Niagara Co., N. Y., Nov., 1857.

CHEAP FARM-LABORER.—Farmers find it difficult to get laborers; but there is one chap, who so far as he goes, is an admirable workman, whose services may be had for nothing. That is Jack Frost—who if allowed to operate, will reduce much hard, clayey soil of autumn, into a fine mellow condition by spring, if turned up by the plow for his harrow to pulverize. This tool of his is remarkable for its myriads of fine, needle-like teeth, which enter between the minutest particles and tear them assunder into powder.—[Tucker's Annual Register.

THE WEATHER AND CROPS OF 1857.

If your numerous contributors, in different parts of the country, would give an account of the weather and crops in their vicinity, it would aid us all in forming a correct estimate of the year's productiveness, and of the effects of different atmospherical conditions upon the same.

In this section, the early part of the season was wet and cold,—vegetation *very* backward. In June the lowlands were flooded, drowning out much of the growing crops.

Most of the months of July and August were quite dry, baking hard the heavy soils that were worked when wet in the spring. The months of September and October were mild and pleasant, (a little too much rain during the latter,) affording the corn crop the opportunity so much needed for maturing. Killing frosts held off until the 19th of October. On warm, naturally drained soils, corn is heavy; on cold, wet pieces, it is poor.

Wheat—a light yield of grain; straw heavy; berry, much injured by the midge. Fields drilled in, the best.

I wonder that a farmer of the intelligence and sagacity of JOHN JOHNSTON, had not discovered the merits of the grain-drill before this. I consider it one of the most useful of our many labor-saving farm implements.

Barley was less than half an average crop. There was an unusual breadth sown.

Oats—a fair yield, but barley had scarcely left it a growing place on the farm.

Buckwheat—a good crop, and an unusual large breadth sown, as there was much land too wet for spring sowing.

The hay crop has been the largest and most profitable one of the season. And now, if farmers are not too stupid to profit by the sad lessons of experience, stock will not look so miserable next spring as they did last.

Potatoes are a light yield, and on most farms badly diseased. Farmers must learn to plant potatoes on dry, sandy loam, that has not been recently manured. I never lose potatoes by the rot, except when I plant on sod or freshly manured ground. There is the briskest demand for potatoes in our market—Palmyra—of anything the farmer has to sell. I have just sold my Mercers and Carters for fifty cents per bushel, to be shipped to New York.

The products of the garden were not very abundant, especially early vegetables. Later ones were more plentiful.

There has been a rather scanty supply of fruit in this vicinity. Cherries were a failure. Strawberries nearly so. Other berries quite abundant. Peaches, in some favored localities, were a fair yield, but as a general thing the earlier and better varieties were scarce. Pears pretty good. Apples, except in orchards located on the east side of hills, were the lightest yield that I ever knew.

In the northern part of Wayne county, bordering the lake, I understand the apple crop was good. They have a grand fruit region down there.

Now, Messrs. Editors, I believe I have made quite a general view of the season now drawing to a close, as observed in the counties of Ontario and Wayne, (N. Y.)

I think we have a plenty of food to sustain us

until another harvest, and a small surplus to spare, which farmers are becoming quite ready to dispose of—even at the present reduced prices, so as to pay their debts, and do their part towards removing the heavy pressure resting upon the business of the country.

P. C. REYNOLDS.

Near Palmyra, N. Y., Nov. 6th, 1857.

A FEW THOUGHTS ON AGRICULTURE.

It is proposed, in this and succeeding papers, to give the readers of the GENESEE FARMER the theory and practice of one of its readers on the best method of conducting a farm, with the hope that some will be benefitted by it, and others led to give their views for the benefit of us all.

The farm should be so managed as to pay for all labor bestowed upon it, and ultimately pay for itself. Improvements that do not pay, ought, as a rule, to be discarded; and in order to know how that matter stands, every farmer should keep an exact account with every field on his farm.

The first great fault of American farmers is our greed for land. We all want more land, while there is nothing we need less. Full nine-tenths of us already possess double the land we can thoroughly and profitably cultivate: else why so many fence corners and fields filled with brush, weeds, briars, logs, stumps and stones?

The men who own such fields have got too much land. Whoever owns such a field, and cannot get time to clear it, and is too poor to hire it done, is too poor to own that field, and would be better off without it; and the man who has so much plowing, or mowing, or reaping to do that he cannot find time to mix muck with his manure and keep them properly sheltered, has got too much land.

I have known a good many farmers to be so hurried that they could not find time to put their manure on the land before seeding, and so raised mere shadows of crops—when, if they had expended the labor put on half of the land, in putting manure on the other half, they would have been the gainers. They have most decidedly got too much land.

I am well convinced, from what I have seen in travelling through most of the Northern States and Canada, that not one farm in fifty produces more than one-half what it might if properly cultivated. Thirty acres of land will furnish all the labor two good strong men can do. Not that no man should own more, but I do protest against farming one hundred acres with the labor that ought to be put on thirty. In fact, no man can afford to own any more land than he can keep well fenced, well tilled, and well supplied with buildings.

Lynn, Pa.

G. C. LYMAN.

RULES FOR FATTENING ANIMALS.—1. Let them have good, clean, nourishing food. 2. Feed them with the utmost regularity as to time—for “hope deferred” wastes flesh by fretting. 3. Feed often, and never give a surplus. 4. Let the pen or stable be kept clean and sweet—dirt or filth is always adverse to thrift. 5. Let the air be fresh and pure. 6. The water they drink must be pure. 7. They should have rest most of the time, and only very gentle exercise. 8. Keep them tranquil, and avoid fright and anxiety. If all these are carefully observed, they will make a vast difference in results.

[Tucker's Annual Register.

TO DESTROY CANADA THISTLES.

MESSRS. EDITORS:—“S.” in the *Farmer* of September, asks for information in destroying Canada Thistles. I have destroyed them in the following manner: The large patches I plowed early in the spring, and cross-plowed before the thistles made their appearance, and so continued to do until they disappeared entirely, which was about three months, I believe. The smaller patches I cover with old straw about eighteen inches deep, and turn the straw thoroughly once in about ten days, in order to keep the thistles under. They should not be allowed to show themselves above the straw, nor grow up far into it. This method, if well attended to, will destroy them in about two months. I think the best time to apply the straw is when they are about six inches high. By so doing they are dropped to a horizontal position, and are not likely to grow, and the top becoming sickly and souring, weakens the root.

Another method which I have tried on several small patches with good success, is, salt, say half a handful to each thistle. Stamp the thistle down to the ground, and drop the salt upon it. My experience with Canada Thistles was in Western New York. We are not troubled with that pest here.

Grand Rapids, Mich.

G. LORING.

GOOD CULTURE FOR CORN.

MESSRS. EDITORS:—I will give you my experience in corn raising, this wet, cold, backward season. I had four acres quite wet, flat sand wheat stubble. I put eighty loads barn-yard and cow-stable manure on the piece, and plowed it with Smith's double plow, fourteen inches deep, and planted the sixth of June, in good order. Well, it commenced to rain, and it rained for three weeks, and the corn grew slow, whilst many pieces that had been shallow plowed did not grow at all, only yellow. Mine kept its color, and as soon as it came dry, I put it in the cultivator and kept it growing, and now it is as heavy a piece of corn as you often see, whilst those that were croaking at me for only plowing from three quarters of an acre to one acre per day, and never getting ready to plant, can have the pleasure of harvesting nubbins. My husks have not grown long enough to cover the ears of corn. I planted the Ohio Dent.

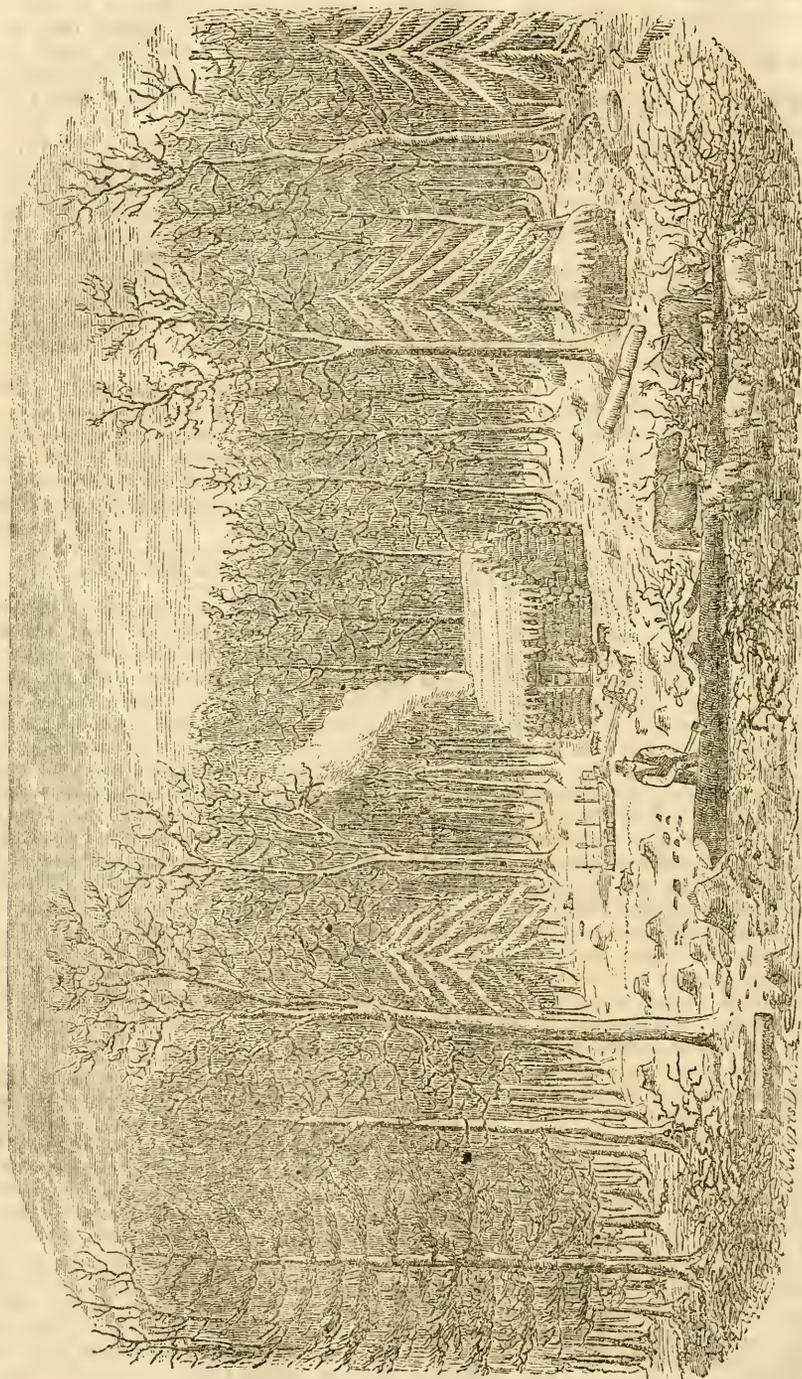
D. S.

Linesville, Pa.

RAISING CALVES.—The premium essay on the “Management of Calves,” in the October number of the *Farmer*, is to my mind correct in its principles, in these times of economy. It is the course I have pursued for quite a number of years past, with the slight variation of the addition of an egg beat up and incorporated with the milk at each feeding, until the calf is some ten or twelve weeks old. I then omit the egg, or give it only occasionally, as I think fitting the necessities of the calf, until I cease to feed, which is usually at about fifteen weeks. By this method, I think I usually succeed in raising calves as good as my neighbors who let their calves draw the milk from the cow twice a day; and at one year old, my calves are generally a *little* better—by which I mean, in the spring their coats are brighter and smoother, if their bodies are no larger.

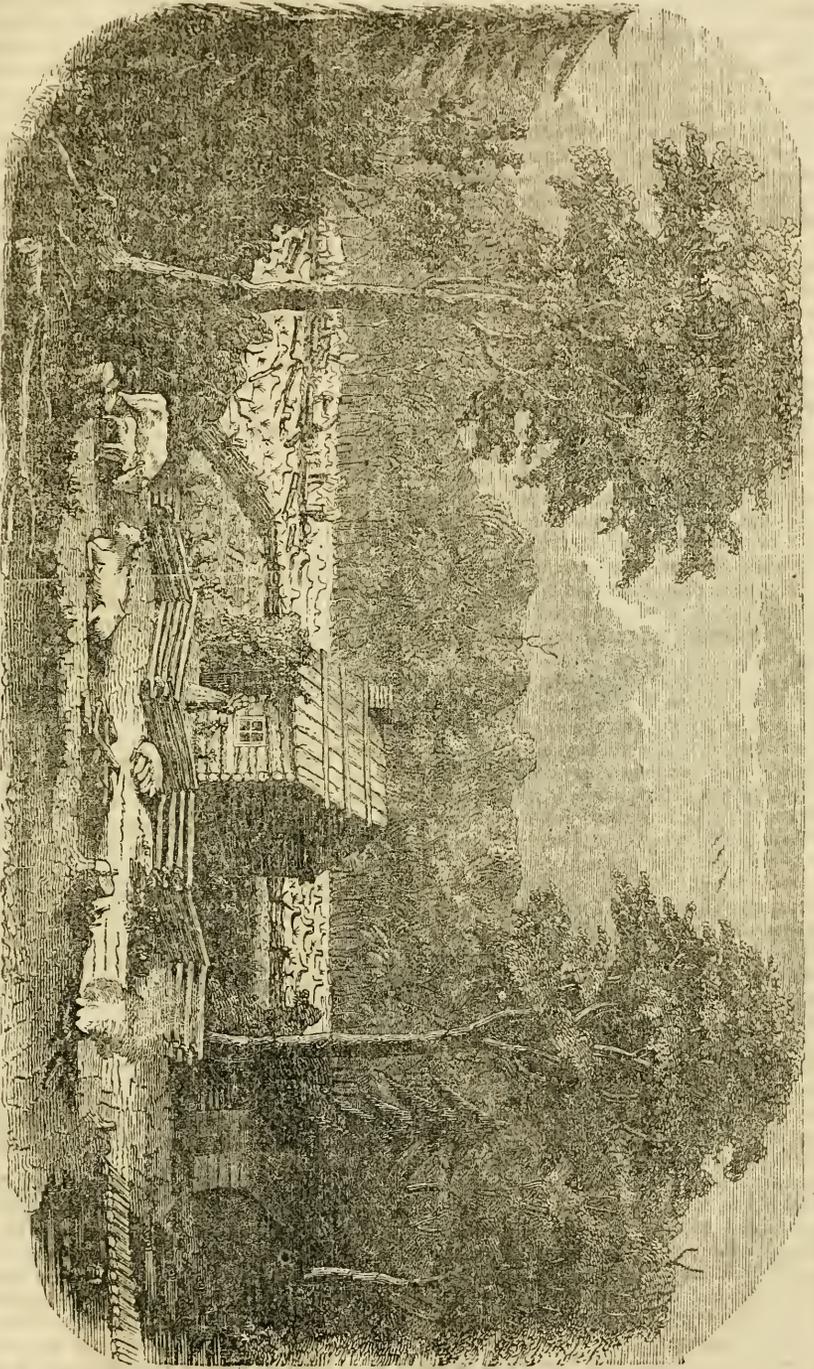
D.

Gates, N. Y.



COMMENCING A SETTLEMENT IN THE WILDERNESS.

THE PIONEER has built a rude log house; cold weather camp upon him before its completion, and froze the ground, so that he could not mix the straw mortar for his stick chimney, and that is dispensed with. He has taken possession of his new home. The oxen that are browsing with the cow and three sheep; the two pigs and three fowls that his young wife is feeding from her folded apron; these, with a bed, two chairs, a pot and kettle, and a few other indispensable articles for house-keeping, few and scanty altogether, as may be supposed; for all were brought in upon that ox sled, through an unperbrushed road; these constitute the bulk of his worldly wealth.



FIRST SUMMER AT THE SETTLEMENT.

THE PIONEER has now chopped down a few acres, enclosed them with a rail fence in front, run a brush fence on the sides and in the rear. Around the house he has a small plot cleared of the timber, sufficient for a garden; but upon most of the opening he has made, he has only buried the brush; and corn, potatoes, beans, pumpkins are growing among the logs. He has got a stick chimney added to his house. In the background of the picture, a logging bee is in progress. His wife is out, looking to the plants she has been sowing. A log bridge has been thrown across the stream. It is a rugged home in the wilderness as yet, but we have already the earnest of progress and improvement. (As a frontispiece to this volume, we give a cut showing the subsequent improvements at the settlement. It is a pleasing picture of pioneer life familiar to many of our readers.)

DISEASES OF THE HORSE.

THE following recipes are given for the most part on the authority of Mr. SPOONER, of England; and should be followed only in cases where the advice of a veterinary surgeon is not considered necessary:

MEGRIMS OR VERTIGO.—Giddiness, the result of determination of blood to the head, produced sometimes by a tight collar, often by high feeding. Immediate bleeding will restore the animal.

INFLAMMATION OF THE STOMACH.—Shown by dull appearance, with swollen eyelids—pulse 50 or 60 in a minute, and rather strong—abdomen rather distended, bowels costive, dung slimy, legs warm, appetite suspended, and sometimes great thirst, mouth very hot. Bleeding in the first instance, followed by oily purgatives, such as linseed oil, a pint of which may be given twice a day till the bowels are relaxed. Plenty of linseed gruel should be given, and with it a small dose of nitrate of potash, such as two drachms twice a day; also small doses of calomel and opium such as a scruple of each twice a-day.

STOMACH-STAGGERS consists in distention of the stomach with food, which, from sympathy, produces an oppression on the brain. Treatment.—Oily purgatives, assisted by draughts of warm water, and injections containing a purgative. Stomachics may also be given, such as carbonate of ammonia, two drachms; genitain, one drachm; with spirits of nitrous ether, one ounce twice a-day. The disease, however, is very obstinate and fatal, the stomach being frequently distended beyond its powers of contraction.

COLIC.—*Gripes; Fret.*—In flatulent colic the symptoms are sudden and acute pain, which causes the animal to lie down and roll violently, looking round and evincing paroxysms of the most intense agony. The abdomen is considerably distended, which, indeed, distinguishes it from *spasmodic colic*. *Stercoral colic* is gradual in its approach, and less violent in its symptoms, though, at the same time, longer in duration and more obstinate. The pulse in colic is not much increased, except during the paroxysms of pain, and this, together with the intermissions of pain, distinguishes it from inflammation of the bowels. A draught, containing an ounce of tincture of opium, with two ounces of spirit of nitrous ether, will sometimes afford immediate relief. In the flatulent variety, an ounce of sulphuric ether will be better than the nitrous ether, having a greater effect in condensing the gases; to this an ounce of tincture of aloes or valerian may be added. If relief do not soon follow, the horse should be bled rather copiously, and another draught administered, after which oily purgatives, such as linseed oil, one pound, may be given every four hours till three or four pounds are taken, combined with smaller doses of opium, and half a drachm each of calomel and tartarized antimony. In stercoral colic, the last mentioned treatment should be adopted at first. Frictions, and hot even fomentations to the abdomen, should follow in obstinate cases, with frequent and copious injections.

INFLAMMATION OF THE BOWELS is a much more dangerous disease. Symptoms.—Severe pain, though at first not so violent as in colic. The animal lies down mostly, and looks round at the sides. The pulse quick, and often small and thready; the extremities cold; the membranes of the eyelids and

nostrils intensely injected. Bleeding is our sheet anchor. As much blood should be taken as the animal can bear, and if the pulse be weak previous to bleeding, an ounce of spirit of nitrous ether, with the same of laudanum, should be given, after which the horse will bleed better than otherwise. Draughts of linseed oil should follow, and a solution of opium every four hours. Hot applications to the abdomen, and frictions to the extremities should be persisted in, with frequent and copious injections.

CATARRH, or GOLD, consists of inflammation of the membrane which lines the chambers of the nostrils and the throat. Very slight cases will recover without the aid of medical treatment, a few bran mashings being all that is necessary. In severer cases we must treat according to the urgency of the symptoms. If the pulse is rather strong, as well as accelerated, it is well to bleed. The throat should be well stimulated, externally, with tincture of cantharides. If the bowels are costive, two or three drachms of aloes may be given; but otherwise, the following ball may be resorted to at once, and administered night and morning for several days:

COUGH BALL.

Nitrate of potash,.....	2 drachms.
Tartarized antimony,.....	1 drachm.
Digitalis, powdered,.....	1 scruple.
Linseed meal,.....	3 drachms.

To be made into a ball with Barbadoes tar. Bran mashings, carrots, and other soft food should be given, and in severe cases oatmeal and linseed gruel.

BRONCHITIS, or inflammation of the mucous membrane lining the bronchial passages or air tubes in the lungs, is a very dangerous and insidious disease, often creeping on for several days in the form of a common cold, and at length, all at once, manifesting alarming symptoms, which terminate fatally. It is safer in this disease to abstain altogether from laxative medicine, and to bleed moderately, and with the finger on the pulse. We may give the same ball as in catarrh, and besides stimulating the throat and blistering the course of the windpipe, we should insert a seton in the brisket. In severe cases, counter-irritation should be actively resorted to. Good nursing is particularly called for; linseed and oatmeal gruel should be given with grass in summer, and carrots in winter. When the inflammatory symptoms are subdued, it is well to administer a mild tonic, such as the following:

TONIC BALL.

Gentian, powdered,.....	2 drachms.
Pimento, powdered,.....	1 drachm.
Sulphate of iron,.....	1 "

To be made into a ball with treacle, and given once a-day. Sometimes it may be prudent to omit the iron.

BROKEN WIND.—Treatment.—The horse should be brought and kept in the highest state of condition, so that he may be able to accomplish ordinary exertion with a less expenditure of muscular exertion, and consequently with less demand on the lungs. The food should be of a concentrated kind, so that the stomach should never be distended. Very little hay should be allowed, and no straw, but a fair portion of carrots may be given in the course of the day. If medicine is required, the cough ball recommended for the catarrh will be a useful form. Water should only be allowed in small quantities; and the feeding should be so managed, that the horse may not be called upon for much exertion with a loaded

stomach. By attention to to these measures, great relief can be afforded.

ROARING, if it succeeds an attack of catarrh or influenza, or is accompanied by a cough, is probably owing to thickening or ulceration of the membrane of the larynx; and we should then, by blisters or setons, do what we can to afford relief.

INFLUENZA.—This disease has raged as an epidemic from time to time. It appears to be a low nervous fever, attended with great prostration of strength, and affecting more particularly the mucous membranes, sometimes selecting the air-passages, and causing sore throat and bronchitis, and at others confining itself more to the alimentary tract, and producing loss of appetite, nausea, and irritable bowels. Treatment.—We cannot do better than commence by giving them diffusible stimulant, such as the following draught:

Spirit of nitric ether,..... 1 ounce.
 Potassio-tartrate of antimony,..... 1 drachm.
 Nitrate of potash,..... 4 drachms.
 Warm water,.....10 ounces.

This may be repeated if required. Unless the pulse is somewhat strong, it is better to avoid bleeding, and in all cases it should be practised with moderation. If the eyelids are much swollen, local bleeding from the lids and eye veins can be practiced with advantage. It is rarely necessary to administer aperients, unless there is much costiveness, and then a very mild laxative will be sufficient, such as two or three drachms of aloe, or five to ten drops of croton oil. After the draught has been administered six hours, the following ball may be given twice a-day, for several days:

Protochloride of mercury,.....2 scruples.
 Potassio-tartrate of antimony,.....2
 Nitrate of potash,.....2 drachms.
 Linseed meal,.....3 "

To be made into a ball with soft soap. When the fever is subdued, and debility and want of appetite remain, the following tonic may be administered twice a-day:

Gentian, powdered,.....1½ drachm.
 Pimento, powdered,..... ½ "
 Sulphate of iron,..... ½ "
 Linseed meal,.....2 drachms.

To be made into a ball with treacle. If there is sore throat and cough, a liquid blister, such as the acetous tincture of cantharides, should be well rubbed into the throat, and in severe cases a seton may be inserted. When the chest is much affected, the sides or brisket should be blistered.

MANGE is one of the most contagious diseases to which the horse is liable. It is owing to a very minute insect, called the *Acarus equi*, which burrows under the skin, and breeds with great rapidity. Treatment.—The skin should, in the first place, be cleared from all dirt, after which the following liniment should be thoroughly rubbed in, and it is better and safer that the whole of the body should receive a dressing:

Sulphur vivum,.....4 ounces.
 White hellebore,.....2 drachms.
 Oil of tar,.....4 ounces.
 Linseed oil,.....1 pound.

To be well mixed together. Plenty of friction should be employed in rubbing in the liniment, for this friction not only insures the better application of the ointment, but is in itself a part of the curative treatment. The liniment should be repeated daily for several days, after which the body should

be well washed with soap and water, and the application renewed. Of course the worst places should receive the strongest and most frequent applications. Bleeding and physic are useless in this disease.

CHAPPED HEELS consists of a breach in the continuity of the skin at the heels, and is produced by the application of wet and cold to the legs, so as to inflame the skin and parts beneath. Treatment.—The horse should be put under the action of a brisk purgative, during which linseed poultices should be placed on the heels. Forced exercise should be avoided, as the motion will prevent the wound from healing, but a loose box may be allowed. After two days, the following lotion should be applied to the heels, and also to the poultices, which may be continued for several days:

Sulphate of zinc,.....4 drachms.
 Alum, powdered,.....4 "
 Water,.....1 pint.

As soon as the physic has ceased to operate, diuretics may be given, and, if necessary, another purgative. After the irritation has been removed by the poultices and other treatment, the following powder may be applied daily to the chap:

Powdered chalk,.....1 ounce.
 Sulphate of zinc,.....1 drachm.
 Alum,.....1 "
 Bole Armenian,.....4 drachms.
 Mix.

GREASE consists in a very peculiar and offensive discharge from the heels. The treatment should be the same as we have advised for chapped heels, but requires to be more vigorously pushed and longer continued. The occasional application of charcoal will be found useful as an antiseptic, in addition to the other remedial agents. Chloride of lime will also be useful. When allowed to go unchecked, the heels become covered with excrescence, called *grapes*, which, when they do not occupy a very large extent of surface, may be removed by the knife and caustic, but when they occupy the whole surface of the skin, both of the heels and the leg, a cure is not to be anticipated.

WOUNDS.—The treatment of a simple incised wound consists in bringing the divided parts together, and retaining them in such position by sutures or bandages, plasters being for the most part precluded in the horse, in consequence of the hair. In contused and lacerated wounds, a poultice should be applied after the wound is properly cleaned, and the ragged parts removed with a sharp knife, the wound at the same time being sprinkled daily with a little powdered resin. When a healthy surface is secured, the wound may be stimulated daily with a little compound tincture of myrrh, and protected from the atmosphere by an astringent powder, such as the following:

Prepared chalk, powdered,.....1 ounce.
 Alum, powdered,.....1 drachm.
 Armenian bole, powdered,.....1 "
 Sulphate of zinc, powdered,.....1 scruple.

To be well mixed together. Under such simple treatment very formidable wounds may be cured.

TO DESTROY MITES IN CHEESE.—A piece of woollen cloth should be dipped in sweet oil, which should be well rubbed on the cheese. If one application be not sufficient to destroy the mites, this remedy may be used as often as they appear. The cheese shelves should be well washed with soap and water.

MANAGEMENT AND BREEDING OF SHEEP.

At this season of the year, sheep demand more than ordinary attention. The soil is saturated with water, the nights are cold, and the grass is so unnutritious that, no matter how abundant it may be, sheep will not thrive on it. They should be placed in the fold at night, and be allowed what straw or other dry food they will eat. If possible, let them run on the highest and driest land on the farm. Wet meadows are injurious to sheep at all times, but particularly so in the fall and spring of the year.

Wool is a drug, and many—unwisely, as we think—are slaughtering their sheep. If a farmer, however, thinks it is for his interest to lessen his flock, all very well, but let him guard against the error of disposing of his *best* sheep because their carcasses happen to command a little higher price. To carefully select out the best ewes and keep them for breeding, and sell the old and poor ones, would be better economy.

The high price of good mutton is drawing the attention of farmers to those breeds of sheep which mature early, and afford mutton rather than wool. No one can question that the Leicester or South Down sheep, or any of the breeds of "long" or "middle" wool sheep, will fat easier and produce more, not to say better mutton, *for the food consumed*, than the Merino or other fine woolled breeds.

Mutton is in demand, but wool can hardly be given away. In a year or two fine wool will also be in demand at fair prices. Under these circumstances it will be impolitic to sacrifice the fine woolled sheep and stock the farm with the coarse woolled mutton breeds; for before you have many for sale, fine wool may be again in the ascendant. Would it not be a wiser course to carefully examine, at this time, the flocks, and select out very poor sheep for immediate disposal? All the wethers that are in thriving condition should be placed by themselves, and allowed a liberal diet. Before next February they will command a high price for the butcher. The ewes we would divide into two lots. If the flock is derived from the common stock of the country, crossed with fine woolled bucks, you will find some ewes with fine and heavy fleeces, while others are larger and coarser, and possess more of the characteristics of the mutton breeds. The former should be placed by themselves, and at the proper season—say middle of December—have the best fine woolled buck at command placed with them. The others we would immediately put to a coarse woolled buck; South Down or Leicester. The lambs would come about the first of May, and if provided with dry, comfortable quarters, and nutritious food, would be worth by the first of July in any of our large cities from three to five dollars a head.

We know many farmers who have adopted this method with much success, and our principal object in throwing out these hasty remarks is to induce them to give their experience to our readers.

ANIMALS kept quiet, dry and warm, will require much less food and will do more work, keep in better condition, and yield much more profit than those exposed to the inclemency of the weather. Do, kind reader, remember this fact. It is unkind to starve your stock, and, what is a far more potent argument, *it is unprofitable.*

HINTS FOR DECEMBER.

LAY plans for future—arrange the farm for regular rotation—let regularity and system be fully carried out—examine the practice of the very best and most successful farmers in the country, by that most convenient and cheap method, the reading of an agricultural paper, and use judgment and discretion in reducing to practice the many valuable hints thus obtained.

Provide good shelter for domestic animals. Pursue strict regularity in feeding and watering. Have good feeding racks to prevent waste. Chop corn-stalks fine, that cattle may eat all. Mix cut or chopped hay with straw and with meal. Keep all stables clean, neat and comfortable. Give sheep good shelter, good hay, and chopped roots. Let stock be regularly salted. See that hay is not wasted under foot. Remember that filth and thrift are eternal opponents.—[Tucker's Annual Register.

ANIMALS IN WINTER.—Farmers do not sufficiently sub-divide their yards in winter. Large and small animals are turned in promiscuously together, and as every farmer knows, the larger ones are very ferocious and domineering towards those much inferior, but careful not to provoke the wrath of such as are nearly equal. Turn those together which are of similar size, and they will be more quiet all round. Calves generally are too much neglected,—and come out small and puny in spring. A good manager has constructed a spacious stable for calves in one of his sheds, moderately lighted, and well sheltered from all currents of wind. This apartment is kept clean, the calves fed on good hay, and supplied with good water. They present a very different appearance from other calves in spring.—[Tucker's Annual Register.

CHINESE SUGAR CANE IN CANADA.—I planted about the sixteenth part of an acre with seed of the Chinese Sugar Cane, on the 22d of May. It grew rather slow till the hot days in July. It then came on fast, and grew from ten to twelve feet high. I cut it about the 10th of October; fixed two small rollers to turn by hand; passed the cane through three times (but I think that one-half of the juice was left in the cane). I made five gallons of good syrup. I think I shall plant one acre next spring, to try for sugar making.

H. S. BURNES.

Delta, Leeds Co., C. W.

OINTMENT FOR WOUNDS, SORES OF ALL KINDS, and for horses when galled by the saddle or collar, and also for broken chilblains.—Take of honey, 12 oz.; yellow or bees'-wax, 4 oz.; compound of galbanum plaster, 6 oz.; sweet oil, half a pint. Put the honey into a jar by the fire; then melt the other ingredients, and mix them together; to be spread very thin on linen, and changed twice a day.

BONES.—The value of bones depends on the phosphate of lime and gelatine which they contain. If we burn bones the gelatine is driven off, while the phosphate of lime remains as ashes. Dry bones contain, in 100 lbs., about 50 lbs. of phosphate of lime, and gelatine equal to about 5 lbs. of ammonia. The commercial value of the former is about one cent per lb.; of the latter, twelve cents per lb.



Horticultural Department.

PROTECTING PLANTS FROM COLD.

* THERE is a large, and probably an increasing, number of persons who are disposed to give up the cultivation of all plants which require any artificial protection to enable them to withstand the cold of our climate. They argue, that there are enough good fruits and flowers that do not require this extra care, and that if the tender ones are dropped, some hardier ones will immediately take their places, and that unless we drop the tender ones, we shall never have a full supply of hardy ones.

There is certainly force enough in this reasoning to induce us to look for and give a preference to varieties which are perfectly hardy, where these can be had, and to encourage the production of hardy seedlings, to take the place of older sorts. But on looking the matter through, we find there are many articles of great beauty and value now found in our gardens which have no *hardy* substitute, and many others which, although considered hardy, because they will live through and grow after a severe winter, are yet so much benefitted by protection, that until a *perfectly hardy* one is found to fill its place, we cannot part with it, and to secure the full amount of good from it, we must shelter from the winds and sun of our northern winters.

Among the fruits generally cultivated and requiring this kind of care, we may mention, the Strawberry, the Raspberry, and the New Rochelle Blackberry—although this last may not stand quite so much in need of it as the others.

The Strawberry, in dry soils, seldom dies out from severe cold, except in the case of very tender sorts; but the vigor of the plants is much impaired, and the growth retarded for several days by want of covering. Plants which have had a covering during the winter will thus mature their fruit sooner than others, which is quite an advantage to the grower of this early fruit. The crop is also increased in value to an extent of more than ten times the cost of covering.

All that is necessary for the protection of Strawberry plants is to cover them with leaves to the depth of two or three inches, throwing a few limbs upon the leaves to keep the wind from blowing them off. Strawy manure is good, but a heavy covering of rank manure will smother the plants; apply manure thinly, if this is used.

Raspberries are commonly considered hardy, and for this reason we would be the more emphatic in our statement, that they *must be protected*. Many

cultivators of Raspberries do not get one-fourth of a crop, one year with another, because they do not protect the canes during the winter. Strawberries frequently get a good covering of snow, which saves them; but Raspberries seldom get much benefit in this way. The upper portion of the cane not being covered with snow, is nearly dead in the spring, and grows late and feebly, if at all.

The best way to protect them, where they are planted as they commonly are, in hills about four feet apart, is to remove all the old wood and all but four or six of the best young canes; then form a small mound of earth along the ground from one hill of plants to an adjoining one, and bending the canes of the two hills towards each other, and along the mound of earth,—which must reach quite from one hill to the other, and be highest next to and against the canes, peg them down and cover with a couple of inches of earth. If the work is done in a mild day, and care is taken to raise the earth well against the stems before binding down, no canes will be broken, and in the spring every bed will start early and vigorously.

The New Rochelle Blackberry has not been long enough in cultivation with us to show fully how hardy it may be, but the past two severe winters have evidently been too cold for its real good. The cane is so strong and large that it is difficult to tie up with straw, and too brittle to bear bending down with safety. Care should therefore be taken in planting, to locate these plants where they will be sheltered from west or south-west winds, by high fences or buildings.

Where plants of any kind have been covered during winter, the covering may remain upon them until just as vegetation begins to start in the spring. It is not well to remove it at the first breaking up of winter, as the return of cold weather in spring is quite as injurious as the severe cold of winter.

All fruit or ornamental plantations which are so located as to receive the sweep of prevailing winds, should, if possible, have the additional protection of a belt of trees planted thickly along the exposed side, but so far distant as not to shade, or injure by the spread of their roots, which is proved to be quite equal upon every side to the height of the tree. Belts or screens of this kind, formed of evergreens, are about the only practicable shelter to the larger and more important fruits, which are also more or less injured by such exposure.

It is a matter of quite common occurrence to see Isabella and other hardy grape vines considerably injured and enfeebled in their growth and fruiting, by severe winter; yet we are not prepared to advise the cultivator to pull down his vines from the trellis and cover them with leaves or earth; the cost and trouble although frequently less than the actual benefit, is so often unnecessary that it seems best to take the risk in most cases; yet if any man would insure himself a crop this is his best way. We are hopeful that some of the newer sorts will prove *perfectly hardy* in our latitude, which we cannot say of the Isabella.

The season is now so far advanced that these suggestions cannot all be carried into practice, but we hope all who read them will do what they can to secure the best possible crops next year. Strawberries can at least be covered while the ground is frozen, and Raspberries tied up with straw, if too late to be covered with earth.

H. E. H.

COMPOST FOR GARDENS.

As it is vain to expect successful gardening results, unless proper nourishment is supplied for the flowers or vegetables planted in the soil, a few hints may be useful, as to the means within reach of all housekeepers for making their little plot of ground, or their larger gardens, productive of beauty, and much real help in the housekeeping department. Without access to stable or farmyard manures, an excellent substitute may be made by carefully saving all refuse vegetable matter, weeds from the garden, potato rinds, leaves of vegetables, dead flowers, the contents of the dust pan, all useless bones, cracked or pounded, wood ashes, cleanings of fish and poultry, useless fat, waste of candlesticks, a mixture of the fine dust from coal ashes. Over this collecting heap pour from day to day all greasy water, and every slop from the house, from bed-rooms as well as kitchen; soapy water is a valuable help; and, should opportunity offer, add any road scrapings within reach. When the heap has been collecting for a year, turn it once or twice; this may be done in January, at a spare time, and this will soon render it sufficiently dry to be riddled through a rather coarse cinder riddle; it should now be kept dry, and be used to enrich the soil in sowing the spring or summer crops, and being mixed with the mould five or six inches deep, or more as your plants may require, it will produce a very fine show of bloom in the flower garden. Large crops of vegetables of the best quality, and flowers in great perfection, have been grown on poor land improved by the means above described; this alone as manure, together with deep cultivation, by digging and trenching the garden patches in autumn, and constant stirring and weeding in summer between the growing crops will materially assist their growth, as well as tend to the permanent improvement of the soil.

HORTICULTURAL OPERATIONS FOR DECEMBER.

THERE is sometimes a good part of the month of December in which such work as trenching, draining, making roads and preparing ground for spring planting, &c., may be proceeded with. All such work, that can be done in the fall and winter, should never be put off till the spring. The great multitude of little things necessary to be done all at one time, when spring opens late, generally hinders such work being done properly. Where draining is to be done, the main drains may be laid about fifty yards apart, and the cross or lateral drains about twenty-seven feet apart. The main drains should be laid down the lowest part of the ground, and not less than three feet deep, and opening into an outlet that will carry off the water. The lateral or cross drains should not be less than two feet deep at their upper ends, and gradually descending to the level of the main drains. This falling of the drains gives an impetus to the water that will clear out any sand or sediment that may filter through the openings of the tiles. Where trenching is to be done, and not laid up in ridges, the ground should be left as rough as possible; and, if for spring planting, of young trees, the holes may be prepared at the same time. The holes should not be less than two feet wide and one foot deep, for young trees, of one and two years old. The mould that comes out of the hole should be

left in a little mound on one side of it; the winter's frost will meliorate the mould, and greatly enrich it for the benefit of the trees at planting. Where roads and walks are to be made about a garden, in order to have them dry and comfortable to walk upon at all seasons of the year, they should be dug out at least one foot or eighteen inches deep, and filled with large rough stones, brick-bats, &c., to within four or six inches of the top, and then covered with gravel, the coarse being raked upon the rough stones in the bottom, and the fine gravel left upon the top, and well rolled with an iron roller, if it can be had.

MOULDING UP NEWLY PLANTED TREES.—All newly planted trees, if not previously done, should now be moulded up for the winter; that is, throw a little mound of earth up round the stems of all newly planted trees, about six or eight inches high. This prevents heaving by the winter's freezing, and in a great measure their being girdled by the mice. Mice generally commit their depredations beneath the snow, and the snow being blown off these little mounds, and left bare, the mice do not work round them much if at all. The pruning of large trees may be done at all favorable opportunities during winter. The pruning of large fruit trees will consist, generally, in cutting out all the little twiggy shoots which grow up from the main arms in the body of the tree, and any branches that may cross each other, or any straggling branches, to bring the tree into better shape. Hot-bed frames and sashes, barrows and all tools, should be carried under cover, and cleaned, and painted, and repaired, at odd times, and put in good condition for the spring use; but especially the hot-bed frames and sashes should be carefully painted and puttied, and repaired, so as to make them as perfect as possible.

JOSIAH SALTER.

THE VALUE OF THE RURAL ANNUAL.

EDITORS GENESEE FARMER:—We have had a very pleasant and fine summer, cool, and plenty rain at all times, and a fine haying and harvest season. The hay and oat crops have been very heavy. The wheat crop rather light, but of good quality. The corn is generally good. The fruit crop is fair. I had a large crop of plums and pears. Apples good. Small fruit good. Out-door grapes were poorly grown; a good many rotted, and what escaped did not ripen. In the cold graperly the Black Hamburg and White Muscat were very fine. The Chinese Sugar Cane proved a failure with me, the seed not coming up, and what did come up grew poorly; yet I had enough to satisfy me that it is a valuable acquisition to the northern farmer. The problem is now solved, that we can raise our own sugar and molasses, which I consider of great importance. The recently sowed wheat looks remarkably well at this time, and promises well for another year.

And now for a short account of my experiments, for which your RURAL ANNUAL for 1857 came to hand just in time to be invaluable. About three years ago I had constructed a cold graperly, and planted some Black Hamburg and White Muscat of Alexandria grapes. This season they bore the first fruit—and fine it was. The RURAL ANNUAL came to hand just in time, with instructions to manage

them properly. If they had had the right treatment before, they would have done better. Last spring, a year ago, I planted an Osage Orange hedge. I happened to prepare the ground and plant them right, and cultivated them in the best manner, and here came the RURAL ANNUAL, just at the time it was needed. The idea of summer pruning never entered my head until I saw it recommended in the RURAL ANNUAL. I trimmed it in the spring, cutting off all the new wood except about two inches. I cut it back the last of June, and again the last of August. I now have the best foundation for a hedge that could be imagined—about one foot high and eighteen inches wide; and if another year does not find me with a tolerably good fence I am mistaken. So much for your RURAL ANNUAL in this particular.

Last fall, or about a year ago, I planted two dozen Blackberry plants. When the RURAL came to hand it directed them to be planted only in the spring. I was fearful I should lose them, but they all grew except three, and some of them grew seven feet high in the main stem, and, with the branches, made about fifteen feet of wood, which may seem impossible, but is nevertheless true, and two of them bore a few berries. Here, too, the RURAL ANNUAL came to my assistance. Now judge ye, whether the RURAL ANNUAL for 1857 will be worth \$100 to me or not? I am certain I would not, for such a hedge as I fancy I shall have—forty perches long in one line—take \$100; beside all the grapes and fruits I may, by its aid, obtain. I have not only read and scanned over its pages, but studied it thoroughly and carefully, and am particularly benefitted by it. It may be many years before you will hit upon a work as valuable as the last ANNUAL. But I want the next as soon as possible. BENJ. F. BARTOLET.

Pughtown, Chester Co., Pa., Nov. 4, 1857.

[We are glad to hear that the RURAL ANNUAL for 1857 was of so much benefit to our esteemed correspondent. We hope, and believe, the volume for 1858 (now published) will prove no less so.—Eds.]

THE RESULT OF CARE IN SETTING OUT PEACH TREES.

EDITORS GENESEE FARMER:—Last spring, after peach trees had mostly leafed out, and after those who had counted on success had already procured and set their trees, I bethought myself of filling out a couple of unoccupied rows in my fruit garden with a choice selection of peach trees. I was laughed at by some who thought they knew about this matter, and told that I should not be able to make one-third of them live. I knew very well that it was pretty late in the season to attempt setting trees, but none too late, I thought, to try an experiment. And now for the result.

I proceeded to a responsible nurseryman, and inquired for peach trees. Those standing in the nursery rows were already beginning to leaf out, and the nurseryman told me that it would never pay to remove them. He then pointed out to me a lot of shriveled trees, the remains of his spring sales, which had been taken from the nursery rows early in the spring, and having been placed in large bunches, were then buried in the dry sand. They were indeed poor apologies for peach trees, and not one in a hundred would ever have thought of transplanting

such trees, even if they could have had them given to them; but as I had great confidence in the success of good management, I concluded to run the risk of making them live.

Having procured the trees for a mere trifle, I took them home, cut off the tap-root several inches, and the laterals to within five inches of the main root, thus retaining those only which were sound and uninjured. The tops were pruned pretty close, so that they might bear a reasonable proportion to the roots, the first branches being eighteen inches from the ground. I then proceeded to the fruit garden, taking a quantity of small stakes with me, which I placed just where I wanted to set the trees. I then took a spade and dug for each tree a hole (not a post hole) but one to two feet across from side to side, and six or eight inches deep. I took particular pains to have the dirt at the bottom loose and fine. I then procured a pail of water, and having placed the tree in the middle of the hole and spread over the roots a little fine dirt, poured on half the quantity of water—then filled up with dirt even with the top, but was very careful to have the dirt worked around the roots, so that they would not be pressed out of their proper place by the weight of the soil above. Thus I proceeded with each tree, and a short time sufficed to place them in their proper places. The next day I took a wheel-barrow and put around each tree a few forkfuls of coarse, strawy manure, pressing it down with my foot, so that it might lie close to the soil.

This is all the care they have received so far this season, besides a little trimming to shape the tops, and every one of those, (twenty in number) treated as above, have lived and made an extraordinary growth, while one in the same rows, treated in the ordinary manner of setting trees, did not survive half the season. My mind had been made up before, but the opinion which I hold is still farther strengthened by the result of this experiment. I am well satisfied that a little extra care and attention in transplanting fruit trees always pays, and that when they have been exposed to unfavorable influences for any length of time, is absolutely necessary. M. L. PARKS.

Lyndonville, N. Y., Oct. 30th, 1857.

PLANTING ORCHARDS.

IN providing for an orchard, the first and most essential thing is a thorough preparation of the soil, to fit it for the introduction of the trees. The next is to provide shelter for them. The soil best suited to most kinds of fruit trees is a good loam, which should be neither too wet nor too dry, but they will thrive well in soils naturally heavy, if thoroughly prepared. The best location for an orchard is on the east side of a wood or belt of timber, where the young trees may be screened from the west winds. It makes but little difference whether the surface is even or undulating, or situated on the side of a hill or on level ground, if the details are attended to. If the ground to be appropriated to an orchard is a good loam, with a gravelly sub-soil, draining may not be absolutely necessary, but it should be thoroughly manured and trenched, or sub-soiled two feet or two and one half feet deep. If the soil is cold and heavy, it should be thoroughly drained, trenched and manured, and if cropped for one season with potatoes, and kept clean, it will be all the better.

The best time for planting an orchard in the Middle States is in October or November, and in the Western States in the spring. The best time to take up the trees is late in the fall, after the wood is well ripened. When the trees are taken up, see that the roots are injured as little as possible, and allow them to be exposed to the air no longer than is absolutely necessary to effect their removal. If they are to be transported any distance, see that they are securely packed in moderate sized cases or packages, with a sufficient quantity of moss about their roots, to keep them from drying; and whenever the cases are opened, have the trees placed temporarily in the ground with as little delay as possible. All fruit trees which are removed from the Eastern nurseries to the Western States in the fall, should be heeled in and covered with litter of some kind for the winter, where they will remain in good order, and be ready for early planting in the spring. One great drawback attending the removal of fruit trees from the East to the West in spring, is, that the season is usually too far advanced before they reach their destination.

If the foregoing directions have been attended to, the trees will be in good order for planting whenever the ground is fit to receive them. When the trees are removed from their temporary quarters, see that the roots are in good order, for all trees, in the process of removal, have their roots more or less injured; they should therefore be thoroughly examined, and those which have been mutilated should be cut back to a sound part, with a sharp knife. The holes should be made large enough to admit of the roots being spread out horizontally without touching the sides, and planted no deeper than is necessary to cover all the roots. Tread the ground around the tree moderately, not too hard, but sufficient to keep the tree firmly in its place. Insert a good strong stake firmly in the ground by the side of each tree, and tie the tree securely to it. At the time of planting, some of the trees will require a slight pruning, but only just so much as is necessary to adjust the head to the roots; and, finally, previous to the setting in of dry weather, every tree should be well mulched with hay or straw, or any kind of litter; by this means a proper degree of moisture may always be retained about the roots of the trees. This mode will be found far preferable to watering.

SPECTATOR.

IS IT DESIRABLE TO PLANT FRUIT TREES IN THE HIGHWAY.

I ANSWER yes, for several reasons; the first is, there is a lack of fruit in this country, the demand being much greater than the supply; and every fruit tree that is planted and properly taken care of will bear fruit sometime, and of course *help* to supply the demand. Another reason is, trees properly planted and arranged on the side of the highway help to beautify it, and make it pleasant for those who travel on it, besides being an addition to the farm upon which they are planted, and a source of constant pleasure to the owner.

Now, while I write this, I have a *particular kind of fruit tree* in view, and that is the Cherry;—not that there no others as good, but because there is the greatest lack of fruit at the season of the year when cherries are ripe, and because they supply food for those true friends of the farmer, the birds. As it

is now, there is a continual warfare against the birds, which ought to cease, as they do more towards destroying insects and worms which spoil the fruit than almost anything else. Who ever heard of any body that had too many cherries being troubled by the birds getting them? Let the birds have the first that get ripe, as they most always see the wormy ones, and they will put a check upon the worms for another year.

In conclusion, let me say, get some nice Cherry trees; some of as good a variety as there is, that is known to be hardy, and which will ripen at about the same time as those in your orchard or garden, and plant them by the side of the highway, and dedicate them to the birds, or anybody else that has a mind to *ask* for a few to eat (as every person will that has good manners), and they will be a source of enjoyment which you will not willingly part with.

H. B. S.

BONES AND BLACKBERRY PLANTS.

EDITORS GENESEE FARMER:—In your valuable *Rural Annual* for 1858 I see that the article on manures speaks highly of superphosphate of lime and bones. The strong desire which plants seem to have for bones, and the attraction by which the roots are drawn to osseous substances is very remarkable.

We have all read the article which not long since went the rounds of the newspapers, stating how straight a grape vine would send out a root toward a bone placed near it, and with what apparent avidity that root would entwine its fibres around the bone, and completely enfold it in its embrace.

In digging some of my New Rochelle Blackberry plants for sale, the other day, we found a singular lump at the end of one of the roots, which, on examination, proved to be a good sized beef bone. The root had gone nearly two feet from the plant to the bone; but, as the latter lay in the earth broadside to the plant, the root had gone around to the end of the bone, had then entered and traversed the whole length of the cancellated structure of the centre, throwing out its fibres inside, as the grape vine above mentioned is said to have done outside.

This shows that the grape is not alone in its craving for the phosphate, and all farmers should carefully economize what is now too often thrown away; the very aliment most desired by many of the plants in their gardens.

C. P. BISSELL.

Rochester, N. Y., Nov. 10, 1857.

TO DRY PARSLEY FOR WINTER USE.—Choose a dry, warm day, when the leaves are free from moisture. Gather as much fresh, good parsley as you can spare; cut off the stems, and place it lightly on sheets of newspaper, in an oven not very hot, where it will dry gradually. It should remain until crisp; and the heat should not have been sufficient to remove the green colour. When cold, put it in jars or wide-mouthed bottles, and well cork it down. It is most useful as a winter store. Lemon thyme, mint and sage, may be similarly kept, until the young shoots give a supply in the spring.

If apples do not fall from the trees of themselves, they should be shaken or knocked off. Letting them remain on the trees all winter is one great cause of the numerous skin diseases now so prevalent in neglected orchards.

Ladies' Department.

ORIGINAL DOMESTIC RECEIPTS.

MESSES. EDITORS:—I am much interested in the *Genesee Farmer*, especially in the Ladies' Department. The receipts you publish are most of them new to me, and those which I have tried have proved excellent. I do not know that I can send any that are "original," but I have concluded to write out a few which I know to be good, and which I have used for some time. M. T.

Berkenhead, Eng., Oct. 10, 1857.

LEMON CHEESE CAKES.—One lb. of sugar broken small, six eggs, leaving out the whites of two, the juice of three fine lemons, and the rinds of two grated, and one-fourth of a pound of fresh butter. Put these ingredients into a pan and boil them gently over a slow fire until as thick as honey. Pour it into a small jar and tie it down with brandy paper.—One tea-spoonful is sufficient for a cheese cake. It will keep good two years.

WINCHESTER PUDDING.—Half pound of suet, half pound of sugar, and half pound of bread crumbled with four eggs and the rind and juice of one lemon.

MINCE MEAT.—Four pounds of suet, four pounds currants, two pounds raisins, three pounds sugar, eight lemons, one-fourth of a pound of candied peel and a few apples.

CALVES FOOT JELLY.—Four feet, one gallon of water boiled to one-half do., and stew all night; add the juice of four lemons, and the rind of one cut very thin; the whites of nine eggs and shells well beaten together; one-half pound lump sugar; a pint and a half of sherry, one-fourth of a pint of brandy.

FRENCH ROLLS.—Rub an ounce of butter into a pound of flour; mix one egg beaten, a little yeast that is not bitter, and as much milk as will make a dough of a middling stiffness. Beat it well, but do not knead; half fill the tins, let it rise, and bake till brown.

TEA CAKES.—Six tea-cupfuls of flour, two ounces butter, two ounces sugar, two table-spoonfuls of yeast, and one ounce of caraway seeds; dissolve the butter in half a pint of new milk, let it heave half an hour; then stir it lightly till well mixed; half fill your tins, and let them rise until quite full, then bake in a quick oven till brown.

APPLE MARMALADE.—Cut apples (all of the same kind and that will become clear in boiling) into long thin slices; put them into cold water, take them up, weigh them, and put them into the preserving pan, with an equal quantity of sugar broken into small pieces; to every three pounds of apples add the peel of one lemon, chopped very fine, and two thirds of an ounce of ginger, cut in pieces the size of a small nutmeg; boil over a slow but clear fire, keeping them stirred until the apples are quite clear; cayenne pepper is an improvement.

SODA CAKE.—One pound of flour, three eggs, three teaspoonfuls of carbonate of soda, half a pound of butter, half a pound of raisins, half a pound of currants, one-fourth of a pound of lump sugar, some nutmeg and candied lemon peel. Mix the above with half a pint of new milk. You may add a table spoonful of brandy or sherry.

MACCAROONS.—Half a pound of lump sugar, half a pound of almonds, and the whites of two eggs; wafer paper must be used.

The following receipts have never before been published. They are furnished us by a lady who pronounces them excellent.

HASHED MUTTON.—Mutton and beef should be done very rare, they are so much better to hash.—Take two or three slices of pork, fry them out, take them out, slice two onions into the pork fat, flour the fat and let it brown; turn in all the gravy left, add catsup and wine to your taste, and simmer the mutton till boiling hot.

EXCELLENT CLAM CAKES.—Twenty nice clams washed and put over the fire in a pot till they open; then take them out and chop them fine; add two eggs and thicken the liquor with flour as thick as pancake batter; fry in lard.

SCRAMBLED EGGS.—Put a tea cup full of milk on to boil; put in a piece of butter the size of a walnut; salt and dredge in a little flour; have three eggs well beaten and stir them in quickly when it boils; stir till it is thickened, not curdled—it is much improved by being turned over buttered toast in a deep dish.

BREAD CAKE.—Five tea cups well-raised bread dough, three heaping cups of sugar, two even cups of butter, five eggs, a glass of brandy and a nutmeg; fruit as you like.

DOUGH NUTS.—One pint bowl of raised dough wet with milk; knead in a tea cup of sifted sugar, two eggs, and a heaping tablespoonful of butter; let it rise again, roll and fry; fresh-chopped orange peel is the best seasoning.

EXETER GINGERBREAD.—One cup butter, one do. sour milk or cream, one do. sugar, two do. syrup—molasses will do, three eggs, five cups flour, one tea-spoonful of saleratus in the milk, ginger to your taste.

INDIAN CAKE.—One coffee-cup buttermilk, one do. sour milk, one tea-spoonful of saleratus; salt and three eggs. Make a tolerably thick batter of Indian meal.

COCOA NUT CAKES.—To two grated nuts, an equal weight of powdered white sugar, the whites of three eggs well beaten; make them the size of a half dollar and bake on buttered tins.

DELICIOUS DROP CAKE.—One pint of cream, three eggs, and salt; thicken with fine rye till a spoon will stand upright in it, and drop on a well buttered iron pan, which must be hot in the oven. They may be made thinner and baked in buttered cups.

SAUCE FOR MISS HANNAH.—Half a tea-cup full of butter, one and a half of sugar well worked together, and a glass of wine; turn boiling water to this a little while before it is wanted.

ANOTHER.—Drawn butter, not very thick, sweetened well, season with nutmeg and rose water; it must boil after the sugar goes in.

MRS. CORNELIUS' WHEAT BISCUIT.—One pint well raised bread dough, one egg, and a piece of butter the size of an egg, well worked in; cut the biscuits, let them rise an hour or two before baking.

Editor's Table.

New Advertisements this Month.

Prospectus of the Saturday Evening Post.—Deacon & Peterson, Philadelphia.

Webster's Quarto Dictionary.—G. & C. Merriam, Springfield, Mass.

A New Animal for Farmers.—Isaac Lehmann, New York.

The Rural Annual and Horticultural Directory for 1858.—Joseph Harris, Rochester, N. Y.

CLOSE OF THE VOLUME.—The present number concludes the Eighteenth Volume, Second Series of the *Genesee Farmer*. During the past year we have endeavored to conduct it in accordance with its motto, "The Practical and Scientific Farmers' Own Paper." How far we have succeeded must be determined by our readers. We have heard no complaints, and have received many cheering commendations. We have aimed to make the paper useful,—if we have succeeded, the credit is mainly due to our able correspondents. Those of our readers who have been pleased with the paper the present year, will, we trust, subscribe without delay for our next volume, which we hope to make even still more worthy of their patronage. We do not wish to lose a single reader. Thanks to the disinterested efforts of our friends who act as agents, our circulation the present year has nearly doubled. Encouraged by this greatly increased circulation, we have determined to make great improvements in our next volume. We have procured an entire new dress of type, and have made arrangements for a supply of much better paper. We shall continue to offer prizes for short Essays, on any subject which our readers may suggest, and shall spare no expense in procuring appropriate illustrations.

By a little timely effort our friends will greatly increase the circulation and usefulness of the *Farmer* the ensuing year. The old prejudice against "book farming" has in a great measure died out, and there are few farmers who would not willingly subscribe to a good agricultural paper were they requested to do so. The *Genesee Farmer* is so cheap that all can afford to take it, even though they already subscribe for several other papers.

At many post-offices we have but one or two subscribers. If such have been pleased with the paper the present year, will they not manifest their approbation by forming a club?

We feel deeply grateful to those friends who have acted as agents, and who have done so much to promote the usefulness and circulation of the paper. We cannot repay them. The consciousness of their own disinterested motives must be their only recompense. We trust that their love for agricultural and horticultural improvement will still prompt them to continue their efforts in procuring subscribers, and that they will be enabled to increase their lists. We think that our premiums are so numerous that no one who tries can fail to procure one. We hope they will lose no time in procuring and forwarding the names of subscribers. Our January number will be issued by the middle of December. Farmers should subscribe early, so that they can have the paper during the leisure season of the year. Thousands of our readers

neglect to send in their names till the winter is past, forgetting, it may be, that we never, under any circumstances, send the paper till ordered to do so. Our object in offering "January Premiums" is to correct this as much as possible. The fact, however, cannot be disguised, that few compete for these premiums. It cannot be that they consider a good Agricultural Library not worth a little effort in procuring and forwarding the names of subscribers early enough to compete for these premiums? We think it must be owing to an impression that they cannot obtain sufficient subscribers to enable them to take a premium. This is certainly a mistake. Our premiums are so numerous that a very small club will in all probability be required. We feel satisfied, from past experience, that those who really try, will be successful. *Let all commence without delay.*

Again thanking our agents for their efforts on our behalf, and our numerous correspondents for their able and interesting communications, and our readers generally for their encouraging support, we bid them temporarily good bye, hoping that if our company the present year has been agreeable, it may be speedily renewed, and that we shall have the pleasure of wishing each and all, and thousands more, a "Happy New Year" in our January number.

TO OUR CANADIAN FRIENDS.—During nine months of the present year we have sent our paper to Canada by express, and we understand that considerable delay has been the result, and that in some cases a few of the papers have been lost. These we will cheerfully supply. *We shall send the next volume by mail and prepay the American postage,* and hope there will be no delay or inconvenience in future. Our circulation is now very large in Canada, and we believe the paper gives very general satisfaction; if so we hope all our Canadian friends will continue with us another year, and also do what they can to introduce it to new reader. The climate and soil of Upper Canada are very similar to those of Western New York, and the *Farmer* is as well adapted to Canada as to any of the States. The extent of our circulation in Canada is good evidence that this is well understood, and we hope for a greatly increased list the coming year.

KIND READER! if you have been pleased with the *Genesee Farmer* during the past year—if you think it is doing anything to advance the great agricultural and horticultural interests of the country, aid us by sending in your subscription for another volume as early as possible, and if you can induce any of your neighbors and friends to subscribe we venture to say they will not regret it.—Speak to them at once. We will gladly send show bills and specimen numbers to any who are disposed to raise a club for our next year's volume.

CHEAP READING FOR FARMERS.—One volume of the *Genesee Farmer* contains 384 pages, the *Rural Annual* 120 pages. In clubs of eight, we send the two for fifty cents. *Five hundred and four pages for half a dollar!* Can any one desire cheaper reading?

MISSING NUMBERS.—We will gladly supply any missing or damaged numbers of the *Genesee Farmer*, to any who wish to preserve the volume.

THE RURAL ANNUAL AND HORTICULTURAL DIRECTORY FOR 1853.—This beautiful work is now published. To those who have seen the previous volumes, it will be sufficient to say that the present volume is fully equal to its predecessors. *No farmer or fruit grower should be without it.* It contains carefully written treatises on manures for the orchard and garden; on the cultivation of fruit for market; on birds injurious and beneficial to the horticulturist; on the cultivation of grapes in the open air; on garden furniture; on rural architecture; on the cultivation of dwarf and standard pears; on transplanting vegetables, &c., &c. It is illustrated with appropriate and beautiful engravings, and is alike attractive and useful. The articles are all written expressly for its pages by able, practical men. It is not, as some suppose, a new edition of last year's volume. *Every line is new.* It will be found invaluable to the fruit grower, and useful to every one interested in rural pursuits.

It will be sent, postage paid, to any address, on the receipt of twenty-five cents in postage stamps. Address, JOSEPH HARRIS, Rochester, N. Y.

PEACH TREES FOR FIRE WOOD.—The *California Farmer* recommends the farmers of the Golden State to plant peach trees for firewood, and says, "Those who have been to the Buenos Ayres country will easily remember that the principal firewood used is peach wood, and the vast plains beyond the city and port, are one wide extended peach forest, the trees grown principally for fire wood; and so rapid is the growth of the peach tree, that nothing can be more profitable, and there are those now in that country who have made fortunes by this business. The trees grow rapidly, bear abundantly; the food is used for swine, and for drying and shipping. Such a similar kind of business do we look forward to, here in California."

RURAL AFFAIRS.—Such is the title of a handsome volume published by L. TUCKER & SON, of Albany, N. Y., and sent, postage paid, to any address for \$1. It consists of three numbers of that admirable serial, the *Illustrated Annual Register*, and is a work which we can cordially recommend to all interested in "rural affairs."

TUCKER'S ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS.—The fourth number of this admirable work (for 1853), has appeared, and cannot be too highly recommended. Sent postage paid on the receipt of 25 cents.—Address the publishers, L. TUCKER & SON, Albany, N. Y.

CORRECTION.—In the receipt "To Make Crackers," published in the last number, page 353, it should read *nine* cups of flour, instead of "two." The good lady who furnished the receipt thinks this "a sad mistake for the kneader."

If any of our readers have friends who are not acquainted with the *Genesee Farmer*, we will gladly send them, pre-paid, specimen copies of the paper, if they will furnish us their names.

LARGE APPLE.—The *California Farmer* says a Gloria Mundi apple was recently shown in San Francisco which weighed thirty-seven ounces!

The article on the Cultivation of Winter Wheat, in the present number, was published in the September number of last year. We publish it again by request.

The Genesee Farmer-

COME all ye people, old and young, who knowledge would command,
Subscribe and take the FARMER, the paper of the land;
There is the knowledge which you need to make your farming pay,
In first rate shape, for all to read, and learn from day to day.

Now, if you'll listen, I will tell a few of its good features—
It's destined to promote the good of brother human creatures;
You need not look, for you'll not find delusions of the charm
But good substantial truths, to fill the mind of every farmer.

It tells about that crop of grass—also that piece of peas—
Of squashes that are growing fast, and various kinds of trees;
Then there's the sugar cane, and oats—the melons, and the honey—
And all the various ways to make the farmer's honest money.

I can't enumerate one-half of the good things it teaches
About the cultivation of the apples, pears and peaches—
The raising and sustaining of the finest breeds of swine,
Of geese, and ducks, and hens, and sheep, also the stately lina.

It tells about a Shetland cow, just thirty inches high,
That gives six quarts of milk a day, (that is, when she's not dry);
Also about the draining of your wet and mucky land,
To make it bear the finest grain, as tall as it can stand.

And there you'll find receipts to make those puddings, cakes and pies
That cannot fail to please the taste of every one that tries.
But I will close, for, writing more, I might your mind embarrass;
Just send your fifty cents right on to Mr. JOSEPH HARRIS,

And then you will be sure to get a copy of the FARMER—
The weather it will make no odds, for be it cold or warmer,
It's sure to come for every month, for there is no delay.
And now I'll close by bidding all of you, my friends, good day.
Homer, N. Y. H.

Inquiries and Answers.

CABBAGES, GRAPE VINES & C.—(J. B.)—The best manure for cabbages is well rotted stable manure, black from old hot-beds. The cabbages not all heading alike is more the fault of the seed than the ground. Grape vines may be set out either in the fall or spring; if planted in the fall, and the soil is moist, they will require a little mulching with leaves, saw-dust, chips, or anything that will prevent the plants being heaved by freezing; they will start earlier than when planted in spring. Graft in the spring after the vines have begun to grow, or when they have made leaves as large as a half dollar. Graft on the side of the stock near the ground, and allow the heel of the stock to remain on until the scion has taken out the top of the stock. But vines are difficult to graft from their excessive bleeding. They are much more readily multiplied from layers. Every branch laid in the ground and covered three inches with fine earth will root. Cuttings are also difficult to root with unpractised hands.

OSAGE ORANGE SEED.—(C. N. H.)—If Osage Orange seed be mixed with moist sand immediately after cleaning from the fruit, and kept moist all winter, and allowed to freeze a little, it will need no soaking before sowing; but if it has been kept in a dry place during winter it will require soaking in warm water three or four days before sowing. Soak in rain water and keep about 100° three to six days, or until the germ begins to start. Then sow in drills in deep, rich soil; bury the seed one inch and protect from mice.

HOT BEDS.—The size of the hot-bed will depend upon the size of the frame that is to stand upon it. The bed should be about one foot larger every way than the frame. If for an early bed it should be sheltered in every way from cold winds, yet exposed to the sun. The manure should be prepared at least two weeks before wanted to make into the bed. It should be well mixed in an old shed, or if out of doors, well protected with old boards and long litter, or it will not ferment well and evenly, which is very essential. It should be turned and mixed twice, with the manure fork, before making up into the bed. If the manure be prepared about the fifteenth of February it will be ready to make the first of March, and ready to sow upon in one week from making up. It should be made about three feet high at that time of year, which will settle down to two feet. It must be well mixed and beaten down with the fork, *not trodden with the feet*. There is nothing better than good stable manure well prepared.—The frame should be a box made of two inch boards, nicely fitted and tight, twenty inches deep at the back, and one foot deep at the front. The sashes should be well made and nicely glazed.

PACKING TREES.—(C. TERRILL, Kingsville, Ohio.)—You had better lay your trees in fine, soft earth or moist sand, in a cool cellar, where the mercury will be about the freezing point. You can then get them at any time in the winter to pack. If their roots be just covered with the earth it will be enough. When you move to Iowa pack them in cases in dry moss, if you can get it, or very dry leaves, or dry litter. They will then remain safe for two or three weeks.

ENGLISH AGRICULTURAL AND HORTICULTURAL PAPERS.—(W. EMMONS.) The *Mark Lane Express* is published at 246, Strand, London. It is the best English agricultural paper, and the very highest authority on the grain market. Price, \$3 per annum, sent pre-paid by mail.

The *Cottage Gardener* we regard as one of the best English horticultural journals. It is published weekly at No. 20, Paternoster Row, London. Price, \$4.25 per annum. Sent prepaid by mail.

BACK VOLUMES.—(M. S.) We have but few of the back volumes of the *Genesee Farmer* on hand; but if members of your club wish the unbound volumes for 1856 or 1857, they can be supplied for the present at 50 cents per volume. Bound in paper, they will be sent, postage paid, for 75 cents per volume, and bound in cloth, for \$1 per volume.

GUM IN PEACH TREES.—(ALEX TEMPLE, Victoria, C. W.)—The gum exuding from the collar of peach trees is caused by the grub you have found there; and the only effectual remedy of ridding the trees of them is to cut them out with the point of a strong knife, in early summer, say last week in June, and first of July.

CANDLE WICK.—(R. S.) Steep wicks in lime-water and saltpetre, and dry them. The flame is clearer, and the tallow will not run. *First-rate* cotton wicking, and clear, pure tallow, are all essential. Lamps will have a less disagreeable smell by dipping the wick-yarn in strong, hot vinegar, and drying it.

PRUNING TREES.—Will you allow me to ask for information I cannot obtain in the books within my reach?

1st. On pruning generally.

2d. Pruning of forest trees, planted as ornamental, such as maples, birches, beeches, butternut, hickories, &c., and the best time or season to do it.

3d. Pruning evergreens, such as the pines, spruces, hemlock, cedar, balsam of fir, and *tamarac*. By what name is the latter known in the old country? What is the botanical name of our white cedar growing so plentifully in Canada—and the best season to prune all these.

4th. Pruning fruit trees—such as apples, pears, and the best time to do it.

5th. Pruning cherries, plums, and all *stone* fruits. Also, the hawthorns, and the best season to prune. Last spring I lost several cherry and plum trees I had pruned the spring before.

I do not want to trespass on your politeness, but I believe such would be acceptable to numbers of the readers of your *Genesee Farmer*. A. LA FONTAINE, *Aylmer, Ottawa Co., C. E.*

Will some of our experienced correspondents answer the above? The botanical name for the true White cedar is *Cupressus thyoides*. The tree known as the white cedar in Canada and in Western New York is not properly a cedar. It is the American Arbor Vitæ (*Thuja occidentalis*.)

ADVERTISEMENTS,

To secure insertion in the *FARMER*, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to farmers. TERMS—Two Dollars for every hundred words, each insertion, PAID IN ADVANCE.

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Containing THREE TIMES the matter found in any other English Dictionary compiled in this country, or ANY ABRIDGEMENT OF THIS WORK.

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at their elbows. And while you are about it, *get the best*; that Dictionary is

NOAH WEBSTER'S,

the *great work unabridged*. If you are too poor, save the amount from off your back, and put it into your head."—*Phrenological Journal*.

"ANY MAN WHO WOULD KNOW EVERYTHING, OR ANYTHING, AS HE OUGHT TO KNOW, MUST OWN WEBSTER'S LARGE DICTIONARY. It is a great light, and he that will not avail himself of it, must walk in darkness. Every young housekeeper should lay it in, to occupy the place which was formerly filled with decanters and wine glasses.

"Every farmer should give his sons two or three square rods of ground, well prepared, with the avails of which they may buy it. Every mechanic should put a receiving box in some conspicuous place in the house, to catch the stray pennies, for the like purpose.

"Lay it upon your table by the side of the Bible—it is a better expounder than many which claim to be expounders.

"It is a great labor-saver—it has saved us time enough in one year's use to pay for itself; and that must be deemed good property, which will clear itself once a year. If you have any doubt about the precise meaning of the word *clear*, in the last sentence, look at Webster's thirteen definitions of the *v. t.*"—*Massachusetts Life Boat*.

December 1.—It.

BOOKS FOR THE FARMERS!

FURNISHED BY THE PROPRIETOR OF GENESEE FARMER

- The Farm Engineer. By Ritchie. Price \$3.
- Gunn's Domestic Medicine. Price \$3.
- The Cow, Dairy Husbandry, and Cattle Breeding. Price 25 cts.
- Every Lady her own Flower Gardener. Price 25 cents.
- The American Rose Cultiver. Price 25 cents.
- Prize Essay on Manures. By S. L. Dana. Price 25 cents.
- The Pests of the Farm, with directions for extirpation. Price 25 cents.
- Horses—their Varieties, Breeding, Management, &c. Price 25 cents.
- The Hive and Honey Bee—their Diseases and Remedies. Price 45 cents.
- The Hog—its Diseases and Management. Price 25 cents.
- The American Bird Fancier—Breeding, Raising, &c. 25 cts.
- Domestic Fowls and Ornamental Poultry. Price 25 cents.
- Chemistry made Easy for the Use of Farmers. Price 25 cts.
- The American Poultry Yard. Price \$1.
- The American Field Book of Manures. Embracing all the Ferulists known, with directions for use. By Browne. \$1.25.
- Stockhart's Chemical Field Lectures. Price \$1.
- Wilson on the Cultivation of Flax. Price 25 cents.
- The Farmer's Cyclopaedia. By Blake. Price \$1.25.
- Allen's Rural Architecture. Price \$1.25.
- Phelps's Bee Keeper's Chart. Illustrated. Price 25 cents.
- Johnston's Agricultural Chemistry. Price \$1.25.
- Johnston's Elements of Agricultural Chemistry and Geology. Price \$1.
- Randall's Sheep Husbandry. Price \$1.25.
- Miner's American Bee-Keeper's Manual. Price \$1.
- Fessenden's Complete Farmer and Gardener. 1 vol. Price \$1.25.
- Allen's Treatise on the Culture of the Grape. Price \$1.
- Youatt on the Breeds and Management of Sheep. Price 75 cts.
- Youatt on the Hog. Complete. Price 60 cents.
- Youatt and Martin on Cattle. By Stevens. Price \$1.25.
- The Shepherd's own Book. Edited by Youatt, Skinner and Randall. Price \$2.
- Allen's American Farm Book. Price \$1.
- The American Florist's Guide. Price 75 cents.
- The Cottage and Farm Bee-Keeper. Price 50 cents.
- Country Dwellings; or the American Architect. Price \$6.
- Nash's Progressive Farmer. A book for every boy in the country. Price 50 cents.
- Beattie's Southern Agriculture. Price \$1.
- Smith's Landscape Gardening. Containing hints on arranging Parks, Pleasure Grounds, &c. Edited by Lewis F. Allen. Price \$1.25.
- The American Fruit Grower's Guide in Orchard and Garden. Price \$1.25.
- Thomas' Farm Implements. Price \$1.
- Beecher's Domestic Receipt Book. Price 75 cents.
- " Economy. Price 75 cents.
- Bement's American Poulterers' Companion. Price \$1.25.
- The Chinese Sugar Cane and Sugar Making. Price 25 cents.
- Linsley's Morgan Horses. Price \$1.
- Liebig's Animal Chemistry. Price 25 cents.
- Mysteries of Bee-keeping Explained. Price \$1.
- Reemelin's Vine Dressers' Manual. Price 50 cents.
- Chorlton's Grape Growers' Guide. Price 60 cents.
- Miner's American Poultry Book. Price 50 cents.
- Guenon's Treatise on Milch Cows. Price 38 cents.
- The Ladies' Guide, or Skillful Housewife. Price 25 cents.
- Liebig's Familiar Letters on Chemistry. Price 12½ cents.
- Skinner's Elements of Agriculture. Price 25 cents.
- The Horse's Foot, and How to Keep it Sound. Price 25 cents.
- Johnston's Catechism of Agricultural Chemistry and Geology. Price 25 cents.
- Genesee Farmer for 1856. Bound in paper, 75 cents; in half calf, \$1.
- The Principles of Agriculture. Price \$2.
- Downing's Landscape Gardening and Rural Architecture. Price \$3.50.
- Cobbett's American Gardener. Price 50 cents.
- Breck's Flower Garden. Price \$1.
- Cranberry Culture. Price 50 cents.
- Pardee on Strawberry Culture. Price 60 cents.
- Chorlton's Exotic Grapes. Price 50 cents.
- Warring's Elements of Agriculture. Price 75 cents.
- Cole's American Fruit Book. Price 50 cents.
- Cole's Diseases of Animals. Price 50 cents.
- Schenck's Gardener's Text Book. Price 50 cents.
- The Farmer's Land Measurer. Price 50 cents.
- Rodger's Scientific Agriculture. Price 75 cents.
- Dana's Muck Manual. Price \$1.
- How to Build and Ventilate Hot-houses, Graperies, &c. Price \$1.25.
- Thompson on the Food of Animals. Price 75 cents.
- Stewart's Stable Book. Price \$1.00.
- Dadd's Anatomy and Physiology of the Horse. Price \$2.
- Youatt on the Horse. Price \$1.25.
- Norton's Scientific Agriculture. Price 60 cents.
- Bridgeman's Young Gardener's Assistant. Price \$1.50.
- Bridgeman's Kitchen Gardener's Instructor. Price 50 cents.
- Bridgeman's Fruit Cultivator's Manual. Price 50 cents.

Bridgeman's Florist's Guide (an excellent work). Price 50 cents.
 New Process for the Culture of the Vine. Price 25 cents.
 Liebig's Reply to Lawes. Price 25 cents.
 Liebig's Researches on the Motion of the Juices in the Animal Body, and Effect of Evaporation of Plants. Price 25 cents.
 Rural Annual and Horticultural Directory. Price 20 cents. Do. in cloth, 50 cents.
 The above will be sent free upon receipt of price annexed.

"EVERY BODY SHOULD HAVE A COPY."

THE
Rural Annual and Horticultural Directory
 FOR 1858.

THIS work was started in 1856, by the publisher of the *Genesee Farmer*. Its great success affords conclusive evidence, not only of its intrinsic merit, but of its adaptability to the wants of the rural population. A new volume, prepared with great care and replete with new and valuable matter, is issued each year. The third volume, for 1858, has appeared, and is a book which cannot be too highly recommended—alike beautiful, interesting, and useful. The articles are all written expressly for its pages by men of experience. It is well illustrated with seventy-eight appropriate and beautiful engravings.

Among its contents may be mentioned able treatises on Manures for the Orchard and Garden, on the cultivation of Fruit for Market, on Birds, injurious and beneficial to the Horticulturist, (with portraits drawn from life,) on the cultivation of Grapes in the open air, on Garden Furniture, on the cultivation of Dwarf and Standard Pears, on transplanting Vegetables, &c., &c. It also contains a very full and correct list of the Nurserymen and Agricultural Implement Makers in the United States and Canada, prepared with great care.

The work will be found invaluable to the Fruit Grower, and useful to every one interested in Rural affairs.

It is furnished at the low price of Twenty-five Cents,—while it contains as much matter as many dollar books. *Every one who owns a rod of ground should have it.* It is sent pre-paid by mail to any address on the receipt of twenty-five cents in coin or postage stamps. Address

JOSEPH HARRIS,
 Publisher and Proprietor
 of the *Genesee Farmer* and *Rural Annual*,
 Rochester, N. Y.

The back numbers, for 1856 and 1857, can be furnished at 25 cents each, postage paid.



THESE MACHINES are unquestionably the BEST in the market. No well regulated family can afford to do without a GROVER & BAKER SEWING MACHINE, made expressly for FAMILY SEWING.

Merchants in good standing from abroad visiting New York or Boston, can now secure the sale of Grover & Baker's Sewing Machines in their several localities, with great profit to themselves and advantage to their customers. GROVER & BAKER,

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October 1.—3t.

A. LONGETT,
 No. 34 CLIFF STREET, NEW YORK,

DEALER in Peruvian, Colombian and Mexican Guano, Superphosphate of Lime, and Bone Dust.
 November 1, 1857.—1y.

THE GENESEE FARMER FOR 1858.

DURING the present year, the circulation of the *Genesee Farmer* has nearly doubled. We believe it has now a larger list of subscribers than that of any similar journal in the world. This is mainly due to the voluntary efforts of the friends of Agricultural and Horticultural Improvement, who have kindly consented to act as agents, in procuring and forwarding the names of subscribers in their respective districts. To Postmasters, especially, we are under great obligations, for their disinterested labors in increasing the circulation of the *Farmer* and *Rural Annual*.

Grateful for past favors, and hoping for a continuance of them, we have determined to make great improvements in the volume for 1858. We have purchased an entire dress of new type, have made arrangements for a supply of better paper, and intend to spare no expense in procuring engravings of Farm Houses, Buildings, Animals, Machines, Implements, new Fruit Trees, Shrubs, &c. The *Genesee Farmer* is the only fifty cent agricultural paper in this country that is not made up from a weekly paper. It contains as much matter as any of the dollar monthlies, and much more than many of them. It has a larger and more extensive list of correspondents than any similar journal in the world. It is published in one of the finest agricultural and fruit growing sections in the United States, and we number among our correspondents many of the best practical farmers and gardeners in the country. The paper is not local in its character. No farmer nor fruit grower in any section of the Union, or in the adjoining Provinces, can read a single number without getting some hint that may prove valuable.

Encouraged by past favors, we have determined to offer a much more extended

LIST OF PREMIUMS FOR 1858. SPECIFIC PREMIUMS.

1. To every person who sends EIGHT Subscribers, (at our lowest terms of thirty-seven and a half cents each,) we will send, postage paid, a copy of our beautiful twenty-five cent book the *Rural Annual* for 1858.
2. To every person who sends us SIXTEEN subscribers, (at our lowest club terms of thirty-seven and a half cents each,) one extra copy of the *Genesee Farmer*, and one copy of the *Rural Annual*.
3. To every person sending us TWENTY-FOUR subscribers, as above, two copies of the *Rural Annual*, and one extra copy of the *Farmer*, or any agricultural work valued at 50 cents, postage paid.
4. To any person ordering THIRTY-TWO copies of the *Farmer*, as above, three copies of the *Rural Annual* and one extra copy of the *Farmer*, or any agricultural book valued at 75 cents, postage paid.
5. For FORTY, four copies of the *Rural Annual* and one extra copy of the *Farmer*, or any agricultural book valued at \$1, postage paid, or four extra copies of the *Farmer*.
6. For FORTY-EIGHT, five copies of the *Rural Annual* and one extra copy of the *Farmer*, or any agricultural book valued at \$1.25, postage paid, or five extra copies of the *Farmer*.

For larger numbers, books or papers given in the same proportion.

To save expense to our friends, we pay the postage on all these works, and persons entitled will state what they wish sent, and make their selections when they send orders; or if their list is not complete, if wished, we will delay sending until the club is full.

JANUARY PREMIUMS! For the Greatest Number of Subscribers.

In order to excite a little competition among our friends everywhere, as well as to reward them for their voluntary labors in behalf of our journal, we make the following liberal offers. Those

who do not get the premiums offered below are sure of the above, so that we have no blanks.

1. TWENTY DOLLARS in Agricultural Books, to the person sending us the largest number of subscribers (at the lowest club price of thirty-seven and a half cents each), before the *fourteenth day of January*, 1858, so that we can announce the successful competitors in the February number. (The order with the money must be received, not mailed, before the fourteenth of January. Last year many of our agents mailed letters on the fourteenth, thinking they would be in time to compete for the January Premiums.)
2. FIFTEEN DOLLARS in Agricultural Books to the person sending us the *Second* highest list, as above.
3. FOURTEEN DOLLARS in Agricultural Books to the person sending us the *Third* highest list, as above.
4. THIRTEEN DOLLARS in Agricultural Books to the person sending us the *Fourth* highest list, as above.
5. TWELVE DOLLARS in Agricultural Books to the person sending us the *Fifth* highest list, as above.
6. ELEVEN DOLLARS in Agricultural Books to the person sending us the *Sixth* highest list, as above.
7. TEN DOLLARS in Agricultural Books to the person sending us the *Seventh* highest list, as above.
8. NINE DOLLARS in Agricultural Books to the person sending us the *Eighth* highest list, as above.
9. EIGHT DOLLARS in Agricultural Books, to the person sending us the *Ninth* highest list, as above.
10. SEVEN DOLLARS in Agricultural Books, to the person sending us the *Tenth* highest list, as above.
11. SIX DOLLARS in Agricultural Books, to the person sending us the *Eleventh* highest list, as above.
12. FIVE DOLLARS in Agricultural Books, to the person sending us the *Twelfth* highest list, as above.

There is not a town in the United States where any person, by showing his neighbors a copy of the paper and asking them to subscribe, might not take some of the above January Premiums. The Premiums will be promptly paid. The Books can be selected by the person taking a premium from the very complete list which we publish in our advertising columns, or we will get any works which are required, and furnish them at the lowest retail price of the publishers.

Our object in offering Books is to increase their circulation throughout the country.

LARGE APRIL PREMIUMS

For the Greatest Number of Subscribers.

1. FIFTY DOLLARS, in Agricultural Books (at the lowest prices,) to the person who shall send us the largest number of subscribers at the lowest club price of 37½ cents, before the 15th day of April next, so that we may announce the successful competitors in the May number.
 2. THIRTY DOLLARS, in Agricultural Books, to the person who shall send us the second highest list, as above.
 3. TWENTY FIVE DOLLARS, in Agricultural Books to the person who shall send the third highest list, as above.
 4. FIFTEEN DOLLARS, in Agricultural Books, to the person who shall send us the fourth highest list, as above.
 5. FOURTEEN DOLLARS in Agricultural Books, to the person who shall send us the fifth highest list, as above.
 6. THIRTEEN DOLLARS in Agricultural Books, to the person who shall send us the sixth highest list, as above.
 7. TWELVE DOLLARS in Agricultural Books, to the person who shall send us the seventh highest list, as above.
 8. ELEVEN DOLLARS in Agricultural Books, to the person who will send us the eighth highest list, as above.
 9. TEN DOLLARS in Agricultural Books, to the person who shall send us the ninth highest list, as above.
- Those who compete for the January Premiums can also compete for the April Premiums, and in this way it is not impossible that TWO PREMIUMS will be obtained for the same list of subscribers.
- CLUBS are not required to be at one Post Office, or sent to one address. We send wherever the members of the club may desire.

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Every Subscriber to the *Farmer* should have a copy of the *Rural Annual*. In clubs of eight, we send the *Farmer* for one year, and a copy of the *Rural Annual* for fifty cents. In other words, for FOUR DOLLARS we will send eight copies of the *Farmer* for one year, and eight copies of the *Rural Annual*. For EIGHT DOLLARS we will send sixteen copies of the *Genesee Farmer* and sixteen copies of the *Rural Annual*, and one extra copy of each for the person who gets up the club.

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Address,
November, 1857.

JOSEPH HARRIS,
Rochester, N.Y. }

PROSPECTUS FOR 1858.

THE SATURDAY EVENING POST.

ESTABLISHED AUG. 4, 1821.

THE PAPER THAT NEVER SUSPENDS.

A FAMILY WEEKLY—DEVOTED TO LITERATURE AND THE NEWS.

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WILLIAM HOWITT, ALICE CARY, T. S. ARTHUR, GRACE GREENWOOD, ANNA BLACKWELL, AUGUSTINE DUGANNE, MRS. M. A. DENISON, EMMA ALICE BROWNE, The Author of “AN EXTRA-JUDICIAL STATEMENT,” The Author of “ZILLAH, THE CHILD MEDIUM,” &c. &c. &c.

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And which will purify and instruct, instead of demoralizing and corrupting, the youthful mind. Especially will its conductors avoid, in the publication of the weekly news, all those long and disgusting reports—unfortunately now so common—of

VILE CRIMINAL CASES;

Believing, as they do, that the practice of publishing the details of such loathsome cases, and of the criminal trials resulting therefrom, is a fruitful cause of the recent alarming increase of vice and crime in the community. Like begets like—and what the mind feeds upon, that will it grow to resemble.

CHOICE SELECTIONS

of all kinds, from the BEST FOREIGN AND DOMESTIC SOURCES, shall continue to be, as heretofore, a leading feature of THE POST. The Stories, Essays, Sketches, Agricultural and Scientific Facts, &c. &c. obtained in this way for the readers of THE POST, are among the most instructive as well as interesting portion of its contents.

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☞ TO EDITORS.—Editors who give the above one insertion, or condense the material portions of it for their *editorial* columns shall be entitled to an exchange, by sending us a marked copy of the paper containing the advertisement or notice.
December 1.—11.

Prices of Agricultural Products at the Principal Markets in the United States, Canada and England.

	NEW YORK, Nov. 16th.	PHILADELPHIA, Nov. 16th.	ROCHESTER, Nov. 16th.	CHICAGO, Nov. 12th.	TORONTO, Nov. 17th.	LONDON, ENG., Nov. 2d.
Beef, per 100 lbs.,		\$7.00 @ \$9.00	\$5.00 @ \$6.00		\$4.50 @ \$5.50	\$8.25 @ \$13.00
do mess, per bbl.,	\$9.50 @ \$25.00	17.00 18.00		\$10.00 @ \$11.00		
Pork, per 100 lbs.,	6.50 7.50	7.00 8.00	7.00 7.50		5.00 6.00	10.50 15.00
do mess, per bbl.,	19.60 19.75	21.00 22.00	20.00 22.00	17.00 19.00		
Lard, per lb.,	.12 .13	.10 .18	.12½ .18	.12½ .18		.13 .17
Butter, do	.12 .22	.10 .16	.14 .18	.15 .21	.20 .25	.18 .26
Cheese, do	.06 .08½	.07 .09	.07 .08	.10 .12	.07½ .09	.11 .17
Flour, per bbl.,	4.80 7.75	5.25 8.00	4.75 6.50	4.00 6.00	4.00 4.50	7.20 8.16
Wheat, per bush.,	1.04 1.30	1.24 1.85	1.10 1.15	.64 .65	.65 1.10	1.44 1.98
Corn, shelled, per bu.,	.76 .89	.56 .80	.63 .65	.47 .50		1.08 1.17
Eye, do	.70 .76			.50 .55	.60 .60	.90 1.14
Oats, do	.95 .47	.33 .34	.34 .34	.26 .27	.35 .40	.60 1.02
Barley, do	.75 .90	.70 .85	.56 .63	.30 .50	.40 .40	.78 1.98
Clover Seed, do		5.00 5.25	6.50 7.00	6.50 7.00		
Timothy Seed, do		2.00 2.25	3.00 3.75	1.75 .80		
Flax Seed, do	1.35 1.87½	1.40				2.18 2.16
Hay, per ton,	11.00 18.00		7.00 11.00	6.00 7.00	10.00 17.00	
Wool, per lb.,		.23 .50	.30 .40		.20	
Wood, hard, per cord,			4.50 5.50	4.00 7.00		

Contents of this Number.

Have we made any progress in Agriculture during the present year, 361

Cultivation of Winter Wheat, 363

Winters Management of Horses, 364

Churning in Winter, 365

To Prepare Rennet, 365

Wintering Sheep in Winter, 365

Items Suggested by the November Number, 365

Notes for the Month, by S. W., 366

Seeding to Timothy Grass, 367

Farmers' Debating Societies, 367

Racks for Feeding Sheep, 368

Cheap Farm Laborer, 368

The Weather and the Crops of 1857, 368

A few Thoughts on Agriculture, 369

Rules for Fattening Animals, 369

Good Culture for Corn, 369

Raising Calves, 369

Commencing a Settlement in the Wilderness, 370

First Summer at the Settlement, 371

Diseases of the Horse, 372

To Destroy Mites in Cheese, 373

Management and Breeding of Sheep, 374

Hints for December, 374

Animals in Winter, 374

Chinese Sugar Cane in Canada, 374

Ointment for Wounds, Sores, &c., 374

HORTICULTURAL DEPARTMENT.

Protecting Plants from Cold, 375

Compost for Gardens, 376

Horticultural Operations for December, 376

The Value of the Rural Annual, 376

The Result of Care in Setting out Peach Trees, 377

Planting Orchards, 377

Is it Desirable to Plant Fruit Trees in the Highway? 378

Bones and Blackberry Plants, 378

To Dry Parsley for Winter Use, 378

LADIES' DEPARTMENT.

Original Domestic Receipts, 379

EDITOR'S TABLE.

Close of the Volume, 380

To our Canadian Friends, 380

Cheap Reading for Farmers, 380

Missing Numbers, 381

The Rural Annual for 1858, 381

Peach Trees for Fire Wood, 381

Rural Affairs, 381

Tucker's Illustrated Annual Register of Rural Affairs, 381

Correction, 381

Large Apple, 381

The Genesee Farmer, (poetry,) 381

Inquiries and Answers, 381

ILLUSTRATIONS.

Sheep Rack, 368

Commencing a Settlement in the Wilderness, 370

First Summer at the Settlement, 371

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THE subscriber has the satisfaction to announce to the farmers of the United States, that he expects to receive shortly, as consignee for the owners, about one hundred and fifty LLAMAS, which at last dates had reached Panama from Equador and Peru. These animals are believed to be well adapted to the use of the farmers of this country; they are hardy, docile, capable of much labor, require a very small amount of sustenance and no water where the herbage is good. They are also believed to be as profitable an animal as any now kept upon the farm; the work which they can perform scarcely equaling the profit from the protection of the wool or hair which constitute the fabric of the well-known alpaca. Due notice will be given of their arrival, and orders for them, addressed to the undersigned, will be carefully attended to. Any farther information will be communicated to applicants.

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