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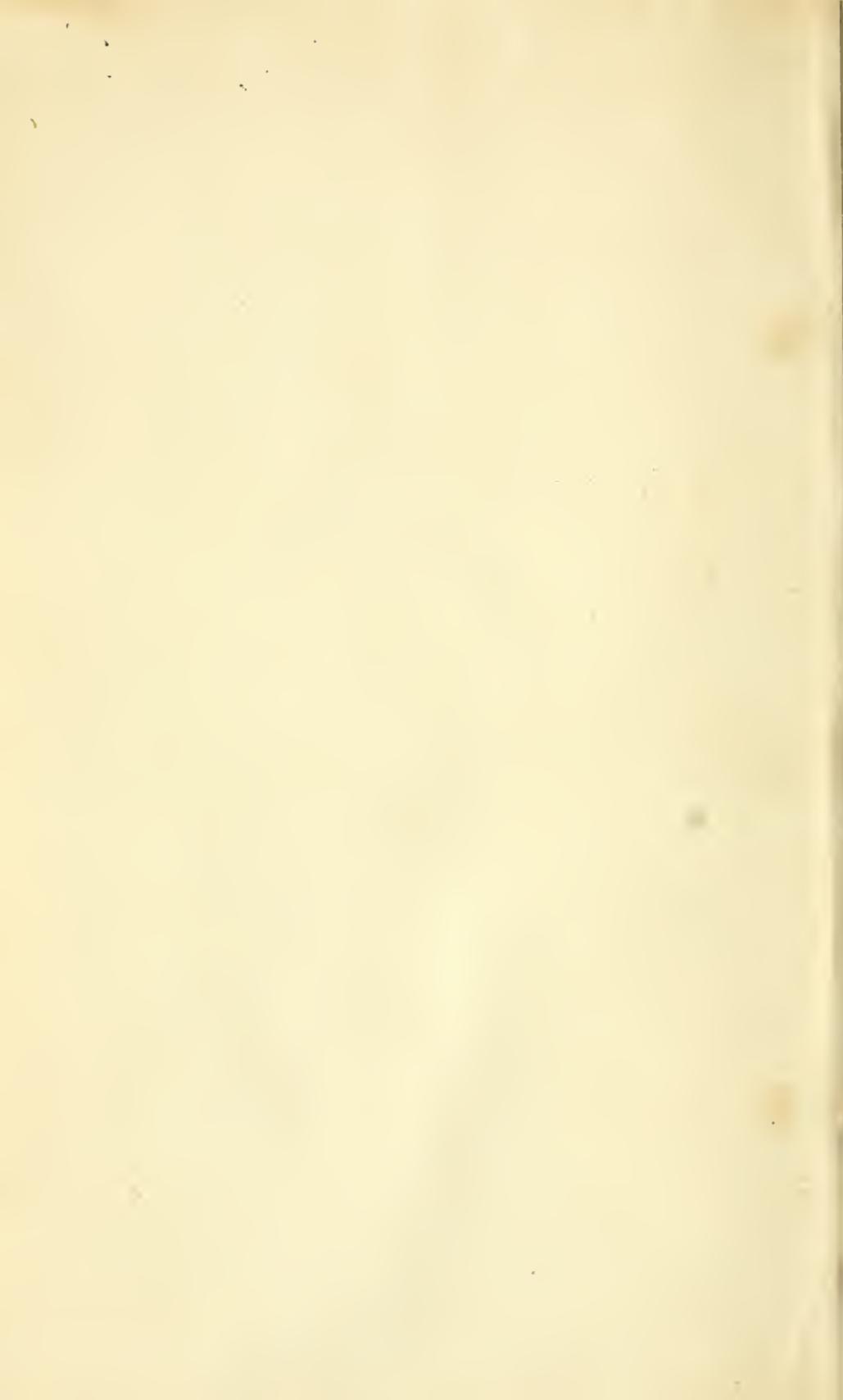
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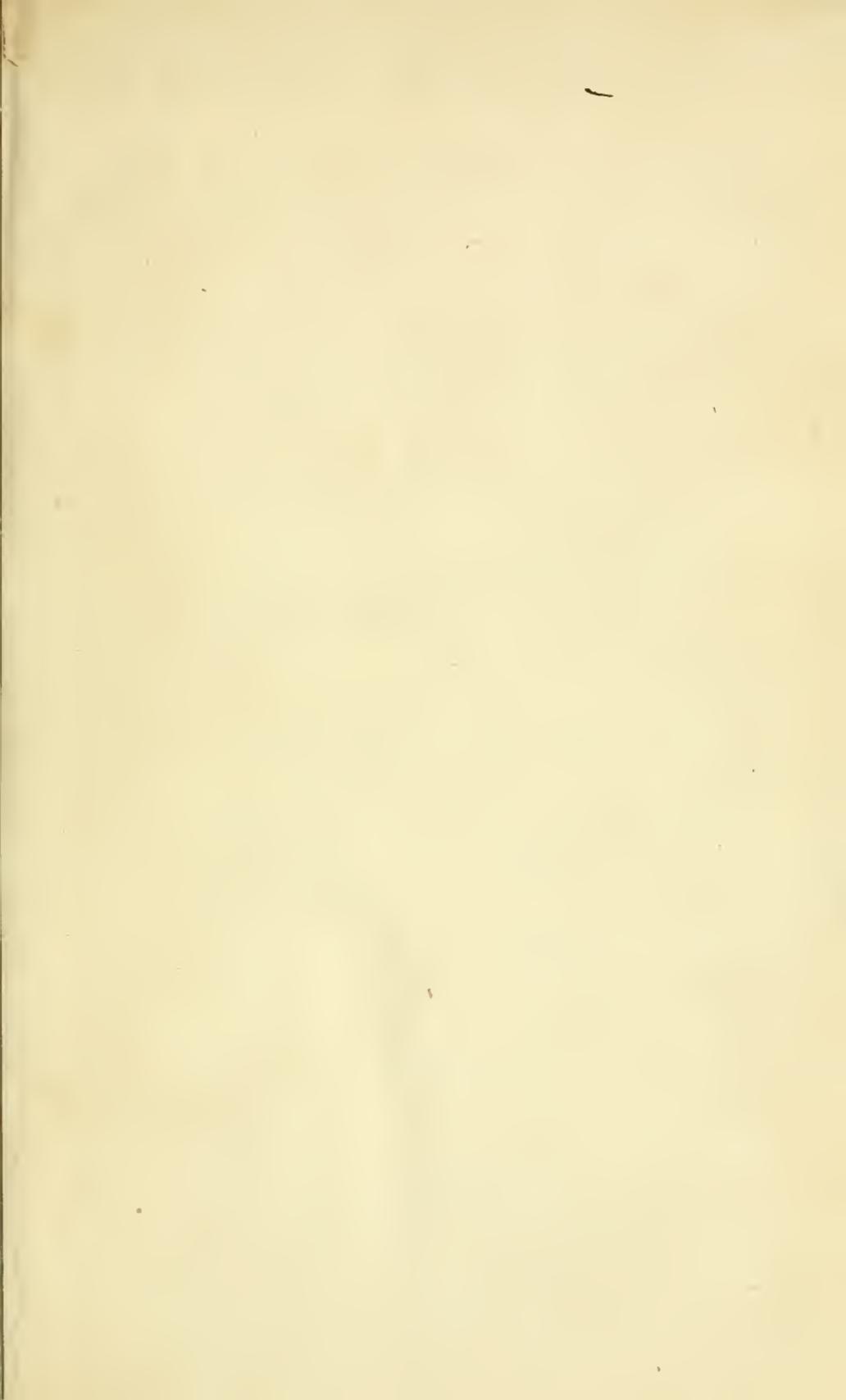
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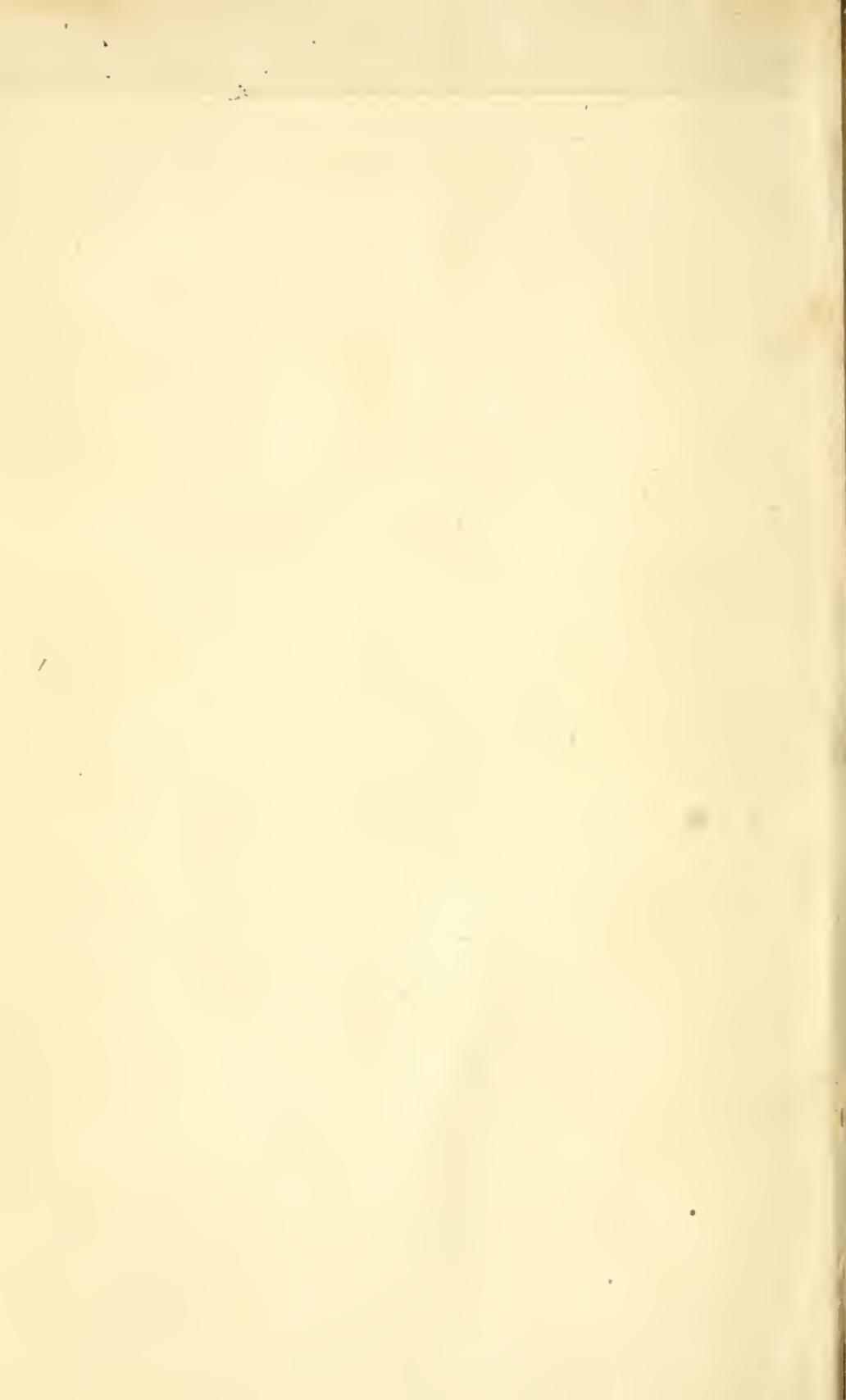


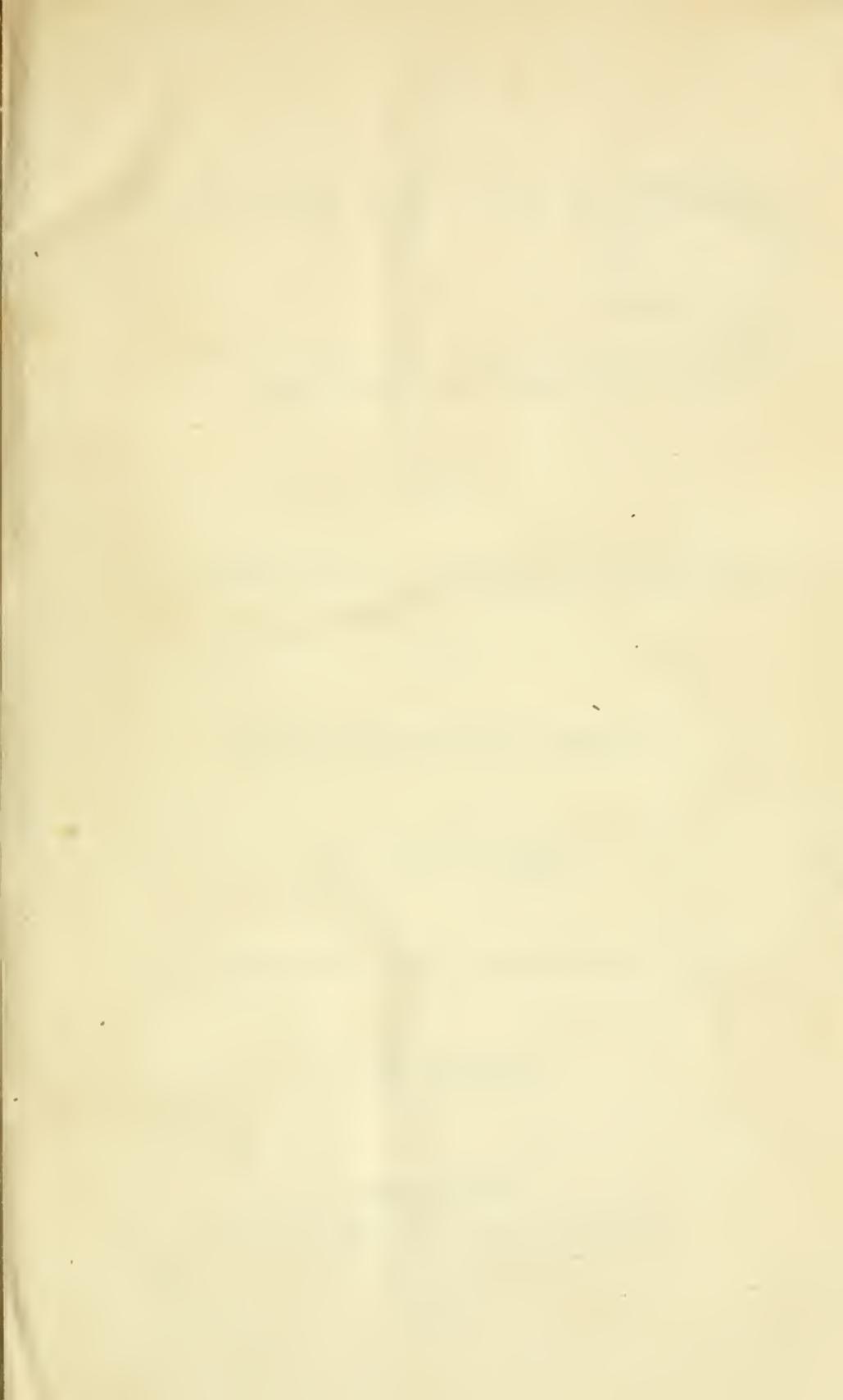
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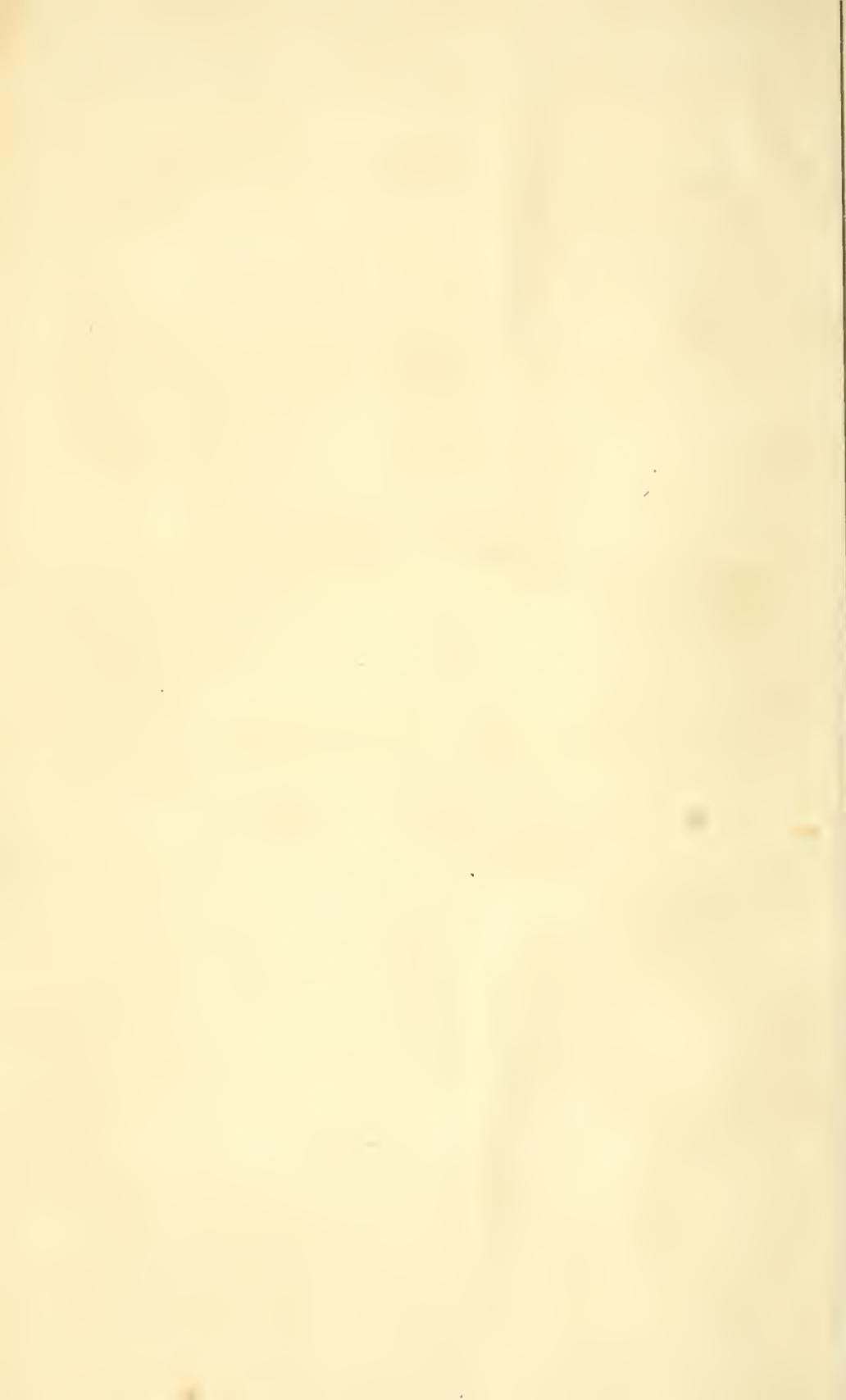
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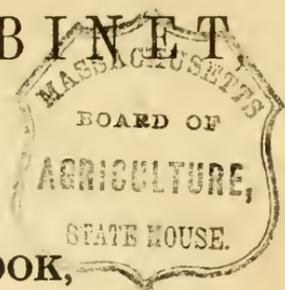








THE  
FARMERS' CABINET



AND  
AMERICAN HERD-BOOK,

DEVOTED TO  
AGRICULTURE, HORTICULTURE

AND  
RURAL AND DOMESTIC AFFAIRS.

~~~~~  
BY JOSIAH TATUM.  
~~~~~

Perfect Agriculture is the true foundation of all trade and industry.—LIEBIG.

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Vol. X.—1845—1846.

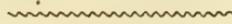
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and a half feet wide for two cows to stand in, runs along the sides, to which they are fastened by chains and rings running on upright iron rods in each corner. A trough, formed of Welch slate bedded in cement, its upper edge eighteen inches from the ground, is fixed at the head of each animal to hold its food. The sheds are placed adjoining and parallel to each other, with openings in the walls opposite each cow, one foot wide and four feet high, in which is placed the iron trough to contain the drinking water, calculated to serve two cows in different sheds, but opposite to each other, which water is supplied from one large cistern by pipes; each iron trough has a wooden cover, which is shut down during feeding time, to prevent the water being dirtied. At the upper end of the sheds is the dairy, consisting of three rooms; the one a measuring room, where all the milk that is sold and goes out is first measured; the other a scalding room, with boiler and fire place; and the third a room where all the surplus milk is strained up and set away for cream and butter. At the lower end of the sheds are two yards surrounded by sheds also, the one for fattening the cows off when they become dry, and the other for store and breeding pigs. The pigs consume the skim milk remaining on hand, which is kept in a well made of brick laid in cement, twelve feet deep and six and a half in diameter, in which it soon becomes sour, and then fed to the pigs, as it is well known to be more nourishing when given in that state, than when sweet. The principal stock of pigs are breeding sows, as the sucking pigs sold for roasting are found to be much the most profitable. The dung is all emptied into a pit for that purpose, off a platform at the bottom of the yards. Within the last ten years there have been constructed in the rear of the sheds several large pits 10 feet wide, 12 feet deep, and 20 feet long, made of brick, bedded in cement, into which are packed several months' supply of brewers and distillers' grains, which form the chief food for the cows, and which can only be had during the winter months. The grains are firmly *tramped* into those pits, and each layer of about one foot in thickness is well salted; when filled, the top is covered over with boards, and on those is put a thickness of earth, compactly beaten down, sufficient to perfectly exclude the air as well as the frost. Grains packed in this way have been opened in four or five years, and found to be fresh and good food, and as eagerly eaten by the cows as those that had just been carted in from the brewery. There are also on the premises a large stock yard, sheds, and pits

for roots and straw, a large room for cutting hay and clover into chaff, cart-sheds, stables, a neat and spacious counting-house, with a large well ventilated room over head, containing several iron bedsteads, with hair mattress and pillow to each, where the regular work-hands belonging to the establishment, who are single men, sleep.

The cows in this establishment are all bought newly calved in the cow market held in Islington every Monday. They are kept as long as they continue to give *not less than two gallons of milk a day*, and are then fattened off for the butcher on oil cake, grains, and cut clover hay. All breeds are to be found here to some extent, but the Short-horns are preferred, and are greatly in the majority; they are generally found to be more abundant milkers, the shortness of their horns, too, admits of their being placed closer together, and another reason is because this breed is more frequently brought to market than any other. The Ayrshire breed was tried to some extent, and highly approved, as giving very rich cream, fattening in a very short time when they left off giving milk, and particularly for producing a quality of beef which sold much higher than that of the Short-horns; but the difficulty in procuring this breed was so great that they abandoned the idea of keeping them. The length of time during which a cow, treated as in this establishment, continues to give milk, varies from six months up to two years; the large majority overgoing twelve months.

The treatment in this establishment differs from that in most others. The cows are *never untied* during the whole time they remain in the house, having clean fresh water to drink constantly before them. They are kept very clean; the sheds are well ventilated by the openings in the roofs, which is certainly far preferable to the usual horizontal entrances for air, by holes through the side walls. The principal food of the cows, as in all other London dairies, consists of grains, that is, malt after it has been used by the brewer or the distiller; distillers' wash, which is the remainder after distillation of a decoction of ground malt and oatmeal, is also given to the cows, but more frequently to those that are fattening, than to such as are in milk; the average price of brewers' grains is about four pence, or eight cents per bushel; distillers' grains, on account of the meal which they contain, about double, or sixteen cents per bushel; the wash usually sells at six pence, or twelve cents for thirty-six gallons. Salt is given at the rate of two ounces to each cow daily in this establishment, mixed with the grains given

before milking, at three o'clock in the morning and about two o'clock in the afternoon. A portion of green food or roots is supplied alternately with the grains, and in winter, when tares or green grass cannot be procured, after the potatoes, turnips, or mangel wurtzel have been eaten, a portion of hay is given.

The produce of Rhodes's dairy is entirely milk and cream for private families and for public hospitals. A number of public institutions are supplied directly from this dairy by contract; private families are supplied by milk dealers, who have what is called milk-walks, that is a certain number of customers whom they supply twice a day; they are thus enabled to ascertain the average of what their customers require, and they contract with Messrs. Rhodes for this average. The latter calculate the number of cows sufficient to give the dealer the supply wanted, and this number the dealer undertakes to milk twice a day, at three o'clock in the morning and at three o'clock in the afternoon. The milk is measured to the dealer, and should he have milked more than his quantity, it remains with the dairy; but should the cows be deficient in quantity, it is made up from the milk of other cows milked on account of the contracts of the establishment. As the supply of the cows and the demand of the dealers is constantly varying, large quantities of milk remain on the dairyman's hands, frequently as high as seventy to eighty gallons, which is strained up in shallow earthen vessels for cream, the cream is churned, the butter sold, and the skim-milk as well as the buttermilk is put into the milk well for the pigs.

The management of the whole is committed to three persons: a clerk, who keeps the books, collects the debts, and pays and receives all moneys; a man who superintends the feeding and treatment of the stock, and who has the general care of the premises; and a woman who measures the milk to the dealers, and superintends the dairy. The cows are all purchased and sold by a regular salesman.

Laycock's dairy is also at Islington, nearly on the opposite side of the way to Rhodes's, but stands on a greater number of acres. The number of cows kept in Laycock's, is about the same as that kept by Rhodes; but in treatment they differ some little. I will notice only those particulars in which this establishment differs from Rhodes's. The cows are fed in the same way, with the exception of not getting any salt on their grains, but the hay is salted when put in the rick. They are turned out once a day to drink from troughs in the yards, remain-

ing out from half an hour to three hours, according to the weather and season of the year; from the end of June till Michaelmas, the cows are turned into the fields from six o'clock in the morning until eleven, and from about two o'clock in the afternoon until about three the following morning. The remaining hours they are in the sheds for the purpose of being milked. The cows in this establishment are, on an average, kept in use longer than in Mr. Rhodes's; those which become dry are fattened in the same way, with the addition of boiled flaxseed, which is found to be a valuable assistant. The mode of using it was to me quite novel, as was its use at all for the purpose of fattening; it is boiled in a common boiler, and when reduced to a pulp let out into large wooden cisterns by tubes, where it was mixed with clover chaff roughly cut, and sometimes with grains; and when cool given to the cows, who eat in this way with great avidity. In this establishment those cows which are good milkers, are allowed to take the bull, for which purpose eight bulls were kept on the premises. The usual period of keeping the cows is from four to five years; the calves are sold in Smithfield cattle market, the market next after they are calved, to those who make it a business to take them to the country and fatten them for the butcher. There are three extensive farms belonging to this establishment, but a few miles distant, at one or other of which the cows in calf are kept when dry. The hair of the tails is kept closely trimmed off, to prevent the risk of dirtying the milk, and their bodies are curried over once every day. The pigs, in addition to sour milk, get also ground linseed and grains.

In addition to this dairy establishment, Mr. Laycock has a series of enclosed yards, about half an acre each in size, with open sheds sufficient to shelter from eight thousand to nine thousand head of cattle, which are appropriated to taking in stock for the nights previous to the days on which Smithfield market is held, which are on Monday and Friday of every week in the year. For this purpose the situation is admirably adapted, lying on the great North road, and being within a short and straight drive of the market, which, singular enough, is situated in the very heart of the most thickly populated part of that immense city. Those layers and this dairy establishment may be considered as a central farm-yard to the three hay farms which they amply supply with immense quantities of the finest manure for top-dressings.

The whole is under the management of the two brothers, assisted by a clerk and a

very active dairymaid. The proprietors of those, the two most extensive milk establishments in the world, are near and intimate friends and neighbours from their birth, are on the best possible terms, and have as free recourse to either establishment as though they belonged to the same person; they frequently compare notes as to the management and expenses, and they both still rigidly adhere to their own particular management, each contending for his superiority and offering to prove it by a reference to their books. All I can say is, that both are managed with great care and attention, systematized in every department; they have been carried on successfully and profitably for more than half a century by the fathers, and subsequently by their sons; and I have little doubt that, in a century from now, whoever lives to see it, will find the same successful operation, and both under the management of the great grandchildren or immediate descendants of the original founders.

The Metropolitan Dairy is the next largest establishment of the kind in London; it is situated on the Edgware road—the north-western suburb of the city—and was founded some twenty-five years since by the late Mr. Rhodes. It was sold by him some few years after, to one of the bubble companies of that day, from which its present name is derived. By them it was sold to Mr. Wilberforce, and is now his property. It stands on about one acre of ground, and is calculated to contain about four hundred cows. The cow-houses are in parallel ranges, twenty-four feet wide, and side walls eight feet high; the space allowed here for each cow is three feet nine inches, and the greater number of the cow houses are without stalls. As in Mr. Rhodes's establishment, the cows here are never untied, except to remove them to the fattening sheds or to send them to the country to remain till calving time. A cow, so treated, seldom produces more than two calves—remainings, after each calf, an average of 18 months in milk.

The cows are milked at three in the morning and two in the afternoon, and the milk disposed of to dealers as before described. The food is principally grains, which, instead of being kept in pits in the open air as at Rhodes's, are preserved in the cellar of a large building about 14 feet deep, and are covered, when packed down, to the depth of one foot with cow-dung, to protect them from the influence of the air. Dry hay is seldom given in this establishment, the chaff of clover hay being always mixed with the grains or wash. The cows are never turned out to water, but from a

large cistern, pipes are conducted to every cow house, and at certain hours each day, the water is turned into the manger, which is on a perfect level, and it runs slowly past each cow, so that she drinks at pleasure. When any cow gets sick, she is bled, and is purged by giving her one pound of *epsom* salt, with two ounces of flour of sulphur, and an abundance of warm water. The mode of treatment seldom or never fails. Four bulls are kept for the cows, and, as they become dry or nearly so, they are sent out to a grass farm till calving time. The quantity of salt given the cows in their food here, does not exceed one ounce daily, on account, as they assert, of its drying quality, a complaint I never heard made but in this establishment, and with which I cannot concur. The manure of this establishment is disposed of in a singular and interesting manner—all the fluid part is discharged by sewers into a large brick cistern laid in cement, and sold by the hogshead to the hay farmers in the neighbourhood, to manure their meadows with, which is done with the common watering-cart used for the streets. The solid manure is compressed into small squares or cakes by a hydraulic press, and is all shipped to Norfolk and to Yorkshire; the computation is that a two-horse cart-load of dung is reduced to the size of a cubic foot by this means.

There are many minor dairy establishments in and about London, none of which are worthy of notice, save one at Little Acton, about five miles from Hyde Park corner, under the sole management of a maiden lady, Mrs. Cook, and stands on a farm of two hundred acres, the whole of which is devoted to meadow. There are two hundred and fifty cows in three sheds, standing head to head, with a passage of five feet between the troughs. The cows here are never untied except for about two months in the autumn, when they are let out after each milking, for about two hours, to fill themselves off the after grass. Water is supplied to them in their troughs twice a day, through pipes from a fine spring adjacent. Grains, with roots and other green meat, are the principal food of the cows; and Mrs. Cook considers it much more economical to turn the entire of her farm to meadow, and with the extra produce to purchase the other food wanted for the cows, rather than multiply her expenses and increase her own trouble and cares, by placing it under a system of agricultural courses. There is no doubt but Mrs. Cook's establishment, for its size, returns, under her peculiar management, a better profit than any other in London or its neighbourhood. Her

cows are all milked by her own men at 2 o'clock every morning, and 2 every afternoon, and the produce sent in six gallon block-tin cans, on a superior two-horse "C" spring carriage,—with scarcely any motion to it—to a West-end milk-dealer, in Edward street, Portman square, who contracts for the whole. This establishment is characterized beyond any other I have ever seen, by its great neatness and cleanliness, both as regards the premises, the cattle themselves, and all those who attend upon them.

It is worthy of remark that, in no instance, is there to be found a milk wagon used for the delivery of the milk to the families: it is always carried in tin cans, suspended from a wooden yoke, that fits over the shoulder, by either women or men, who generally distribute in this way from 20 to 24 gallons within two hours. It is considered, and with some truth too, that jolting the milk in wagons has an injurious effect upon it, certainly tending to make it sour and rendering it entirely unfit to set for cream. This mode of delivery causes the milk dealers to have a better understanding amongst themselves as to the distribution of their customers, the same person being generally found to serve with milk every house that takes any in the same street, and consequently rendering the labour much less.

—*Louisville Journal.*

For the Farmers' Cabinet.

### On early Autumnal Ploughing.

MR. EDITOR.—Your correspondent, H. Cazier's experience in early autumnal ploughing, for the destruction of those pests of our corn crops, the heart, wire, and cut-worm,\* is but that of hundreds of our practical men; yet I should not suppose it quite necessary for the success of the practice, to confine it strictly to the month of September; the early part of October, one would suppose, would be found about as effectual. At the same time, your personal experience, Mr. Editor, goes to prove, that a "very late autumnal ploughing," any more than a "fourth month's" turning would be of no avail. I remember once paying a visit to Mr. H. Eachus, of Delaware county, when he was plastering his corn in the hill on a large field, that had been turned for experiment, one half in early autumn, and the other in spring, and take upon me to say, that on the spring ploughed sod there were twenty-five cut-worms for one, on that autumn-turned; and many other cases might be

cited as proof of the general fact; amongst the rest, that of him who confessed "he did not see any other advantage in early autumnal ploughing, than the destruction of the cut-worm!" I remember, at the time of my visit, dropping a line on the subject, which appeared in the Cabinet, vol. 6, page 253, over the signature of C. W., in answer to a correspondent, Mr. Johnson, page 231; and which those of your readers who have that volume may turn to:—may I be permitted to add, at the present moment, it appears to me about all that need be said on the subject.

I there observe, "In the way in which ploughing is generally performed, it will oftentimes be found of little avail, one half the earth remaining unremoved after the passage of the plough," and the time that has since elapsed has only added to the conviction, that success depends very much on the manner in which the turning of the sod is accomplished; first, in the care bestowed, and next, in the proper construction of the plough used for that purpose; for I consider the *cutting plough* in common use, exceedingly improper; my opinion being, that the eggs of the worm are deposited in the earth, and that they are destroyed by a winter's *exposure*; to cut smoothly, therefore, the bottom and side of the furrow-slice and to lay it gently over without breaking, at an angle of 45 degrees, or thereabouts, is, in a great measure merely to transplant the eggs; and where, in such a case, one is destroyed, one dozen may be preserved unmolested, to come into existence in the spring! The plough, therefore, that pulverizes the land, turning it topsy-turvy, and throwing it up high and dry and broken into small particles, shaking, as it were, the eggs out of their envelope, must be the best adapted for this, as for that other purpose, the exposition of the greatest number of its particles to amelioration during the frosts and thaws of winter. And I must be permitted to add, from long experience and practical information, I know of no plough so proper for these purposes, as the Prouty or Centre-draught, the irons of which being cast on the self-sharpening principle, constitute it rather a *breaking* than a *cutting* plough; the resistance offered being just sufficient to render its operations a spade-labour business, which is the perfection of good husbandry.

In conclusion I would observe, the crops of Dr. Noble, Bryan Jackson, and John Jones, the present year, are after the Centre-draught plough, which I consider "praise enough for one day."

C. W.

\* See page 370, last No. of the Cabinet.

For the Farmers' Cabinet.

### The Late Frost.

TO THE EDITOR.—In the Cabinet for the present month, page 375, we find some account of the disastrous frost which occurred on the 31st of May last, and the writer intimates a desire to be informed of the result in other portions of the county. In compliance with the intimation of your Chester county correspondent, I send you the result of my observations as regards the effect of this untimely visitation in this neighbourhood. They agree in almost every respect with those mentioned in the statement above referred to.

I was in Philadelphia when it occurred, and leaving the city a few days after by the Downingtown rail-road, I did not, by the rapidity of conveyance, have an opportunity of examining the effects of the frost on the passage. My impression was, that but little injury was experienced in the vicinity of the city.

On arriving at home, about fifty miles N. W. from Philadelphia, and about four miles from Church-town, the Conestoga creek running through the farm, I was struck with the appearance of the corn, which was almost entirely cut down to the ground. The leaves wilted and the verdure entirely changed to a brownish hue; a great part appeared as if scalded, many of the hills being so much frozen that the plants never recovered. After some days the young corn appeared to show symptoms of vitality. The upper ends of the plants being quite dead, coiled their leaves about the young and tender part, and retarded the growth of the same, which I endeavoured to relieve by clipping the ends of the adhering leaves, and I think it had a good effect. The corn has since grown pretty well, but owing to the cold and dry season previous to the frost, and that being of so killing a nature, the crop will not be so full and large as in ordinary seasons.

With regard to the wheat crop, it fared much worse than the corn. The frost struck it with such intensity, that of about 80 acres of most promising grain on this farm, which might have yielded about 2000 bushels, we shall thresh scarcely 200 bushels of good wheat. Part of this wheat was Mediterranean, and part the Red-bearded. The Mediterranean was not so much affected by the frost, as the other kind, being sowed somewhat earlier, and the field being somewhat more elevated. Along the flat and level ground the grain was entirely killed. Where a shade tree occurred, there was a visible protection from the effects of the frost, and

where the ground rose to any thing like an elevated ridge, the grain was not much injured. Along the water courses, and flat damp places, the wheat has suffered most. On hilly, gravelly, and sandstone lands, neither corn nor wheat has been much injured by the frost. The limestone vallies in grain as well as grass, have suffered most severely. Owing to the adverse season, the crop of hay will be very short in this part of Lancaster county.

The tender vegetables and delicate plants of the garden were almost all destroyed by this unseasonable frost. Early potatoes, which might have been in maturity about the middle of June, after the frost struck them never grew; and the small potatoes gathered, were about the size of marbles. It is fortunate for the country that the effects of this disastrous frost have not been general. A great part of this county had excellent crops of wheat, which will make up for the deficiency in others. I understand some of the farmers who had housed their frost bitten grain, or rather straw, have been obliged to take it out of their barns, as it began to heat and ferment. B.

Spring-grove Farm, July 21st, 1845.

### Society of Land Improvers.

THE subject of the allotment and improvement of waste lands, is one which has at various times deservedly claimed a share of public attention. Numerous reports have been published descriptive of the beneficial results which have followed the application of the system in different localities; in some, the success has been complete—in others the experiment has partially failed, owing to the incompetence of the parties on whom the management devolved, or to the unwillingness of the labourers to undergo the requisite exertion. Ireland is a country possessing, as is generally allowed, peculiar claims upon active philanthropy; and among the schemes suggested or undertaken for her improvement, none have met with so favourable a reception, as that for the reclamation of the neglected and uncultivated portions of her soil, conducted by an institution called the Irish Waste Land Improvement Society.

This Society, it appears, with the Earl of Devon at its head, was formed in 1836, and being incorporated by act of Parliament, it obtained the possession of many thousands of acres of waste land—mountain, and peat moss or bog—on leases of 99 years, at a very low rent, averaging about 1s. 10d. per statute acre. The plan of the company was not to speculate in farming themselves, but re-let the whole in farms of 15 to 25 acres,

on leases of 31 years, at a rent varying from 4s. to 10s. per acre, undertaking at the same time to make all the roads, main drains, and fences, at their own cost. In the present day, when almost every town has its improvement society, which does little else than talk, it is cheering to find that there is at least one institution, which actually works—really tries to accomplish what others only are contented with projecting.

Nor has this Improvement Society acted rashly in its operations; great caution has been employed in every step of its progress. The first purchase was a small mountain tract in Galway; the second in the county of Limerick; the third in Sligo; and lastly, a wild district in Connemara, comprising more than 7000 acres, was taken about three years since. It is a favourable feature of the proceedings, that the calls upon the shareholders have been made at long intervals; no more than £8 per share, has been paid up to the present time. The aggregate amount received, about £25,000, has enabled the Society to place the four estates, comprehending 10,000 acres, in a forward state of cultivation. The estate of Glencask, in the county of Sligo, consists of 5639 statute acres, and is beautifully situated on the south-eastern slope of the Slieve Gauff mountains, commonly known as the Lurgan Hills. Their height is about 1000 feet above the level of the sea, and they overlook a valley nearly seven miles in length, watered by numerous mountain streams. The soil is described as "pure unmitigated *peat-bog*, from two to eight feet in depth, with a substratum of clay or gravel." A portion of the upper slopes is laid out in pasture, well adapted for rearing the Highland breed of cattle, of which the Society possesses a thriving herd. The steward of the estate, Mr. Lermont, is an industrious North Briton. With his wife and two daughters, he occupied the house adjoining the model farm, where, upon a piece of bog reclaimed within two years, were growing as fine Swedish turnips as could be found in the fertile barony of Cork. Near the entrance gate, standing on the Society's land, are several whitewashed buildings; these are a police station-house, porter's lodge, chapel, and national school. Proceeding onwards along a fine wide gravelled road, the plan of the allotments becomes visible, marked out by open drains and green banks of sod, crowned by clipped hedges of furze. The dwellings of the servants are built facing the road, with which they communicate by narrow walks, bordered with the alder and Lombardy poplar. The houses of the tenants are 30 feet long, 13 feet wide, and 8 feet

high; they are built of stone, and divided into two rooms, thatched and glazed; the cost of each to the Society being £16 5s. The expense is greater than it otherwise would be, owing to the great depth to which it is necessary to dig for the foundation, which must be carried through the bog. The company do not, however, build for every tenant; they prefer to induce the settler to build for himself, giving him assistance from their supply of timber. This plan has been found to attach the occupant to the soil more securely than if he had been provided with a dwelling, while at the same time it serves to quicken and stimulate his exertions for the improvement of the property. The Society offers powerful inducements in furtherance of this object: it gives a prize of £2 for every acre of reclaimed land, which is equal to four years' rent at the higher rate. This plan is found to succeed, as, by the improved system of drainage, the unproductive bog soon becomes a flourishing field.

On every farm held by the smaller occupiers, turnips and clover were growing, and in many instances rape and vetches. The potatoes—lumpers, Peelers, and Americans—were everywhere excellent, and the presence of two or three head of cattle on each holding, showed that the accumulation of manure was certain. The main drains are made from four to six feet wide at top, two and a half to three and a half at bottom, and from three to five feet in depth; the thorough drains are two feet wide at top and bottom, with a small channel in the centre from six to eight inches in width, covered closely by a sod turned the green side downwards. The firmness of the soil is such, that the drains require no lining except in the clayey ground, where they are filled with stones. After draining, the surface is burned and limed, when two successive crops of potatoes are taken, then a crop of Aberdeen turnips, followed by oats laid down in clover. Recent analysis by Professor Kane, has shown a rich bed of marl in the neighbourhood to contain some of the most important elements which can be applied to the fertilization of peat. In some cases turnips have been raised as a *first* crop, thus proving the productive nature of the land. It is, however, recommended in preference to this method, to follow the plan of culture above described. Much difficulty was experienced in persuading the ignorant Irish cottier to take the necessary steps to insure a good crop of turnips. Mr. Lermont says, "When I insisted on the plants being thinned out to nine inches distance, and showed them the distance by pulling up a few myself, it was

like pulling the hair out of their heads—some actually cried!”

The indispensable necessity of cleanliness, and the absence of all extraneous lumber in the dairy, to say nothing of the filthiness of keeping animals in the dwelling-house, are points strongly impressed upon the minds of the tenants by the managing director and the ever-watchful steward. Those who prove refractory are debarred from participating in the prizes which are given annually for draining, green crops, cattle, cleanliness, &c. Great emulation is excited among the tenantry by these premiums, of which the agricultural are paid in money, the household in kind; and a gown or shawl to the “good wife” is found more effective than the purchase money, where shops are so distant. The personal appearance and costume of the female peasantry in this mountain district, contrast strikingly with those of Munster: small regular features are much more frequent; and the slovenly flounced cap is never seen but on married women and the aged; spinsters wear their hair exposed, and in neat order. The Sunday appearance of both males and females, is not only respectable but picturesque, reminding one of the Alpine Sabbath in more favoured lands. Scarlet and bright blue are the favourite colours of the females.

Father Matthew has not overlooked Gleneask; nearly all the tenants are “teetotalers;” and illicit distillation, once so prevalent in the district, is now of rare occurrence.

The unavoidable difficulties of a new settler during the first year are most considerably met by the admirable system of Colonel Robinson, the director, which provides him with the means of subsistence by employment, in making the main drains and fences by his own allotment, thus rendering him independent of the land, until it is made, by his own labour, to produce a crop. The rate of wages is 8*d.* per day; 10*d.* per perch is paid for the fences; 4*d.* per perch for the larger main drains, and 2*d.* for the smaller. Some good attempts at a dairy have been made by several of the small holders, and Miss Lermont is indefatigable in her efforts to instruct them in the making of cheese, storage for which is provided at the farmery.

The want of capital is often talked of as the cause of defective farming among the occupying tenants in Ireland; but what would capital avail them without the knowledge of its application? whereas personal instruction and encouragement would make their present capital—their labour—produce fourfold. Agricultural societies may do much for those who are able to read, and are otherwise more enlightened than their neighbors:

but what have they effected, comparatively, for the cotter tenant, unable to read—perhaps, like some of the Gleneask tenants, unable to understand English? He may doubtless see the *results* of good farming at the annual shows, and, if he can afford it, hear the speeches and dissertations at the agricultural dinners; but will this induce him to thorough drain, subsoil plough, or sow turnips? or, if he were willing to learn, instruct him how the work should be done? Practical, sound instruction, is the only mode suited to the small farmer. It is not only necessary to tell him, but to show him how the work is to be done: the stimulants of precept and reward are insufficient—personal instruction, encouragement, and superintendance, are wanting. To supply those wants, is one of the main subjects of the Irish Waste Land Improvement Society. Col. Robinson is not satisfied with the ordinary statement of rent and arrears, but examines personally every cottage, goes over every acre of reclaimed land, directs, corrects, and encourages. A cheerful recognition, a good humoured reproof, a friendly jest or encouraging remark, play upon the surface of a well considered system of moral and physical improvement. Human nature, in whatever grade, requires some stimulant for the development of her faculties; and whether it be wealth or power, prize or honour, or even the lowly stimulant of the poor Irish cotter—mere subsistence—where the pressure is not felt, the machinery becomes inert, and the “time enough” and “well enough” assume the places of labour and activity.

This no doubt involves labour and agricultural knowledge on the part of those entrusted with the management of estates; but men qualified to undertake such duties are not wanting; and how gratifying must be the sensations of that landlord who can point to a large tract of reclaimed mountain, or a recent moor teeming with profitable vegetation, and say—These once sterile acres afford now food and shelter to a thriving peasantry, blessing, like the quality of mercy—

“Loth him that gives, and him that takes.”

*Chambers' Journal.*

**FINE COW.**—A late number of the *Massachusetts Ploughman* gives an account of a native cow, belonging to the Editor, which gave recently fifteen and a quarter pounds of butter from the milk of one week. The quantity of milk was not near so large as that of some others, it being but 108½ qts. in the week. Her live weight is about 950 lbs.

From the Southern Cultivator.

### Bread-stuffs--A Contrast.

The knowledge of a disease is said to be half a cure. We cheerfully send abroad the following plain statements, with a hope that wherever they may be really applicable, they may prove advantageous.—Ed.

ANY one who has occasion to visit the Northern States, observes, on returning homeward, a fact that startles him, in the difference presented to the eye, in the two sections of country. *There*, he sees an appearance of comfort; men of very moderate means live in neat houses; those of greater wealth in splendid ones; there seems to be a place for everything, and everything is in its place. *Here*, the picture is altogether different; people seem to regard their places of abode as necessary evils, and pay as little attention to making them either neat or comfortable as possible. They seem to esteem a house and its fixtures like an Arab does his tent, as something that is to be occupied for only a brief moment, and any pains and expense in adapting it to comfortable living, as an unnecessary waste of time and money. As to ornamenting the grounds around it, with trees and shrubbery, such an idea does not seem to have occurred to the occupant.

*There*, if you have occasion to stop at a house in the country, you find at the table food prepared properly; and butter, milk, and seasonable vegetables are set before you. *Here*, you have that perpetual dish—fried bacon, or pork, if it is winter, swimming in grease, "and nothing else," except "long collards" and bread. The owner may have his principal wealth in cattle, to the amount of many hundred, as is the case in some places, and if it is winter or spring, he has not an ounce of butter to offer you, and rarely even milk enough to put in your coffee.

Inquire the price of building a house *there*, and the amount is small. *Here*, the cost is so great, as to deter any one from building a good one any where else than in a large town. It would be thought extravagance to entertain the idea in the country.

There is a cause for this disparity in the condition and appearance of these two sections of the same country. What is that cause? This question has been often asked in our presence, and the answer has always involved some abstrusity wholly irrelevant to the subject, in our view of the case. Are we less intelligent than our neighbours? Has a genial sun rendered us less capable of the use of our mental faculties than they? This will hardly be admitted. The real cause, from its very obviousness, seems to

have been overlooked in searching after remote ones. *It is because they produce bread and meat in abundance, and we do not.* That there are other auxiliary causes, in the way of unequal revenue laws, &c., which tend to raise one section and depress another, we doubt not; but the radical cause is the one we have stated.

In order to see its effect readily, let us suppose you have a house to build. You must have lumber, brick and lime; a carpenter is to be employed to build the house, a bricklayer to make the chimnies and plaster the walls. The sawyer asks you a price for the lumber that appears high, when taken in connection with the plenty and cheapness of water power and pine timber, but he solves the difficulty very soon, by telling you the price he has to pay for corn, to subsist himself, his hands, and his mules, which haul the stocks to the mill and the lumber away from it. Each mule, purchased from a Kentuckian, costs him \$75 or \$80, and the corn to feed them costs him, to assume the current rates in Macon at this date, 75 cents per bushel. It is easy to see the effect of this on lumber. The same reasons apply with the brick-maker and lime-burner, precisely. Then go to the carpenter and brick-layer, and tell them the price of building a house and a chimney, and of plastering at the North, and ask them why they cannot afford to work at the same rates. They will tell you that living is cheap at the North, it is dear here. And you have a solution of the whole mystery, and build your house at twice the cost which would be necessary, if you lived in a country where provisions were plenty and cheap.

But here the farmer turns upon us, and asks, what is to become of me if I can get but 25 cents for my corn? We answer, that with an abundance of corn at that price, and every thing else at a proportionate rate, you will live more plentifully, more comfortably and independently in every respect; yourself, and the whole face of the country and its population, from the pettifogger to the pig, inclusively, will be better off and happier. What is the difference to the farmer in dollars and cents, if he gets 25 cents for his corn, and can build a house for \$400, or if he gets 75 cents, and the house costs him \$1200? It is as broad as it is long, so far as cost is concerned. But as to his comfort and the general prosperity of the country, there is a great difference.

There is this essential difference in the habits of a Northern and a Southern man. *The one*, whether in Connecticut or in Georgia, if he removes here permanently, thinks in the first place of making himself,

as Baillie Nicol Jarvie says, "what he calls comfortable." Then he looks out as keenly as other men for the ways and means of getting rich, but he must be comfortable while he is doing it. Every thing must be neat and *tidy* about him. *The other*, without any systematic economy, is indifferent about the present, and lives altogether in the hope of realising a fortune in the future, when he expects to live as he pleases. And when that time arrives, habit has grown to be second nature, and as to the enjoyments of life he is no better off than when he began—"Always to be, but never blest." Frequently careless even in his personal attire, and always slovenly in the arrangement of his house, out-houses, gates, fences and grounds.

With every element of prosperity a country could ask, we of the Southern States are the most dependent on others, of any people within our knowledge; and the face of the land presents to a stranger the most poverty-stricken aspect of any that meets his eye anywhere. This is a humiliating confession from a son of the soil, "one to the manor born," but however disagreeable, it is a truth that must be known and felt by all before the evil can be obviated. We scourge our lands by continuous crops of cotton, without a year of rest or rotation, and buy everything; while others improve their lands and make everything at home they can. Not to speak of wearing apparel, and other like articles of necessary use, every one of which, coarse and fine, is made elsewhere, and is a source of drain to the industry of this section. But look on your tables and see if your meat does not come from Tennessee; look at your ploughs and see if every mule that draws them is not bought of Kentucky; even the horses which draw your carriages come from there.

Many pursue a line of policy on this subject, the very reverse of their own interests, from a mistaken idea of what their true interest is; others do so from sheer inertness and a want of reflection; some from being deluded by maxims applicable to particular situations and necessities, and not capable of general application. The Island of Malta imports all its bread stuffs, and why? Because it is a rock, and incapable from its want of soil, as well as size, to raise them. Is that the case here? England imports bread stuffs and yet prospers; and what is the reason? By her gigantic power having, through a credit system of her own, made herself the heart of the monetary world, she can display an appearance of prosperity, in despite, and not by reason, of that deficiency, in the capacity of the realm, to produce provisions sufficient for its accumu-

lated population. Some of the West India Islands, and some plantations on the Mississippi, do not raise their provisions, but the reasons which may be good there, do not hold here. We, to be prosperous, must make bread and meat plenty and cheap. Turn the question as you will, it resolves itself into this.

J. B. L.

Macon, Ga.

Communicated for the Cabinet.

### Improvement of Crops by judicious Selection.

By JAMES MEASE, M. D., Pres. of the Philad'a. Society for Promoting Agriculture. Read Nov. 3, 1841.

The following paragraph appeared in the "Examiner," of Frederick, Maryland, in the year 1840:—

"*The Rock Wheat*—Mr. Smeltzer, of the Middletown valley, who was the first person of this county to raise the Rock Wheat, informs us that at the last fall he put out about 10 bushels of that seed, which he obtained from Mr. Stonebraker of Washington county, and which now gives him a return of about 200 bushels and a little upward—being about 40 bushels to the acre, and weighing about 63 lbs. to the bushel. He is selling it very fast at \$2 50 per bushel, for seed. Mr. Stonebraker of Washington county, from the two original heads which were found in a cleft of rocks, and which he obtained, raised in four sowings 168 bushels, which he sold at \$3 per bushel. As far as we have heard, these 168 bushels which were put out last fall, have yielded 20 bushels for one sown, leaving now in the country 3,360 bushels of this wheat, which will no doubt be principally used for seed, and which is already scattered far and wide through the country. Thus from two heads of wheat, accidentally discovered and cultivated, what immense benefits may flow."

Mr. Smeltzer deserves the thanks of farmers for his good sense in saving the two original heads of wheat, and for his patience in continuing the propagation of the seed from them. His example ought to be followed upon every occasion when a thrifty vegetable is observed in the garden, or the field. Not a summer passes without notices in the country newspapers of Pennsylvania, of uncommonly prolific and large heads of wheat, rye, oats, or timothy grass (*Phleum Pratense*) or of immense beets, turnips, pumpkins, &c., and to the statement is invariably appended the "lengthy" and luminous commentary by the editor, "BEAT THIS." The wonderful article is left with him, and we hear no more of it; whereas upon every such occasion the production ought to be

saved for future sowings, and the annual product carefully preserved and propagated until a crop is obtained; because the presumption is, that as "like produces like," the valuable property of the original seeds will be retained, provided they be managed properly, and thus a source of profit be obtained by the farmer, and a real benefit result to the agricultural interests generally.

In this way, Mr. Isbel, a farmer of Caroline county, Virginia, more than forty years since, from the heads of two stalks of wheat which grew very large and ripened more early than the rest of the field, introduced the wheat which long bore his name, and commanded a higher price than the other varieties of wheat generally sown in that section of country. I obtained several bushels of this wheat from the late Col. John Taylor, of Caroline county, (Senator of the United States,) and introduced it in the year 1807, into Upper Darby township, Delaware county, and sold part of the first product to the late Bernard M'Mahon, for seed. It weighed 64 lbs. to the bushel, ripened before any other wheat in the vicinity, yielded 20 bushels to the acre, and made beautiful white flour. I think I have preserved in a note book an account of the sale.

In like manner a farmer of Falls township, Bucks county, (Pennsbury Manor) Pa., about the date of Mr. Isbel's experiment, picked off two very luxuriant heads of wheat, which he perceived in his field, sowed them the same year, and the product for several successive years until he had enough for a whole field. This wheat for several years was in great demand for seed, and the flour made from it brought one dollar per barrel more than any other in the market. If I do not mistake, Mr. Ely—now retired—was the commission merchant who sold it.

Lastly, the late excellent man, and well-known improver, the late Joseph Cooper, of New Jersey, in a highly interesting paper on this very subject,—the improvement and naturalization of seeds—inserted in the first volume of the *Memoirs* of our society, says, that "For many years since he had renewed the whole seed of his winter grain—wheat—from a single plant which he had observed to be more productive, and of a better quality than the rest, a practice which he was satisfied, had been of great use." he adds, "I am fully of opinion, that all kinds of garden vegetables may be thus improved, care being also taken, that different kinds of the same species of vegetables are not in bloom at the same time near together, as they thus mix and degenerate."

**DOGS AND SHEEP.**—We regret to learn that a few nights ago, Mr. Edward Payne, of Fayette county, had forty sheep killed and twenty wounded, by domesticated wolves, commonly called dogs. We understand that fifty dogs in the neighbourhood were killed in consequence.

We understand that our neighbour, Gen. Ambrose W. Dudley, has lost forty sheep this season, by dogs, and that sundry other farmers of Woodford and Franklin, have suffered seriously in the same way. About forty dogs have been caught and killed. About two hundred thousand more dogs ought to be killed in this State. The surplus dogs, over and above those which are useful, destroy enough to feed all the paupers sent here from Europe to be fed by us. We believe such dogs in Kentucky cost the country more than the expenses of government. We not only hear continually of the destruction of flocks of sheep by them, but of many excellent farmers utterly abandoning sheep husbandry because they cannot preserve their flocks from destruction by dogs. There never was a country better adapted for sheep husbandry than Kentucky; there never was a time when that branch could be made more profitable; there are hundreds of thousands of waste acres in Kentucky, admirably fit for sheep walks, but fit for little else, that would produce millions of wealth annually; but the extension of the business is a dead failure almost, because of the ravages of the dogs. When and how is this enormous evil to be remedied?—*Frankfort Commonwealth.*

**BROOM CORN.**—The seed is excellent to fatten sheep. Albert Hibbard, of North Hadley, tells us he makes use of the seed of his Broom corn to fatten sheep: that they are very fond of it, and will fatten better on this than on Indian corn. Broom corn is raised in great quantities in the river towns, where the brooms are made up and distributed to all parts of the country. We have often raised the corn for the sake of the brush, but we have never made much account of the seed, though we think it has seldom been converted to meal for hogs. Mr. Hibbard thinks the Broom corn seed more valuable for sheep, than oats, or any grain, pound for pound.—*Massachusetts Ploughman.*

**MILK.**—This well-known fluid may be said to combine in itself all the organic principles and mineral substances which enter into the constitution of organized beings.

Communicated for the Farmers' Cabinet.

**On the Kyloe breed of Cattle—Loss in Feeding very large Cattle for a long time.**

BY JAMES MEASE, M. D.

Read before the Philadelphia Society for Promoting Agriculture, Feb. 1st, 1843.

I BEG leave to call the attention of the Society to the portrait of a West Highland Heifer Kyloë, whose breed commends itself strongly to every grazier, and especially to the extensive breeders of stock in New York and the Western States.

This breed is a native of the Western Islands, and the West Highlands of Scotland, whence the stock is annually brought to the Lowlands and to Liverpool, and after being kept over winter, are turned out to pasture in the spring, and made fat by the months of August and September. It is the nature of this breed to take on flesh and fat speedily, and produces highly flavoured beef, which is much esteemed, and preferred to that of any other. I was informed of these facts many years since by a gentleman from Liverpool, and I am pleased to find them confirmed by Youatt, in his recent excellent work on cattle. Their hardy constitution enables them also to bear the severe treatment they receive during the winter in their native places, from exposure to the elements, and from scanty food.

The portrait before the Society is a fair specimen of the breed, as to form, and from the account attached, it appears that the heifer was five years old, bred in the Isle of Skye, and fed by Mr. H. Middleton, of Newton, near Darlington, in the county of Durham, measured only three feet five inches in height, and weighed upwards of 105 stone, 8 pounds to the stone, (840 lbs.)

The necessity of this breed in the United States, and the chance of the profit arising from its propagation, may be judged of from the following fact. When the Society for the Improvement of Cattle was formed in Philadelphia, in the year 1809, our President, the late no less extensive grazier than excellent man, Lawrence Seckel, mentioned to me that during the summer and month of September, good beef became scarce, owing to the large cattle of the preceding season having all been killed, and those then grazing not having reached the "sticking point;" and that a small breed was much wanted, which would supply the vacancy in the market with good fresh beef. I at once informed him of the Kyloe breed, as the identical stock, capable of fulfilling his wishes, and a premium of \$100 was offered by the Society, which included the Kyloes, but no one applied for it.

The introduction of this breed, as before said, commends itself particularly to the great breeders of stock in New York and the Western States, and would pay them well for the expense incurred by any in accomplishing the useful project. From Liverpool, the passage to Glasgow is speedy, and thence to the Highlands, or to the Western Islands, no less frequent. To any one desirous of undertaking the voyage, useful hints would be given if required.

The difference in profit from feeding animals which become so speedily ripe for market as the Kyloes, and the very large cattle that require two or more years to bring them to perfection,—that is, to distend the hide with layers of fat to the utmost possible extent, and to line their interior with loads of it—is immense. In the one case, the animal is kept over winter on hay, beets, pumpkins, or other juicy food, and after four or five months grazing, is next year sold to a butcher, and the first cost returned with profit; but in the other, two or more years are required before the animal is offered for sale, and if sold, the price obtained is sometimes less than the actual cost of feed, to say nothing of the expense of attending to his or their requirements during the long process of cramming they have undergone. If left on the hands of the owner, as has happened, the outlay for feed to prevent his falling away, will require to be continued, or he must be slaughtered and sold to the best bidders for the account of the owner.

Another objection to long and over-fed animals is, that the beef is not so sweet as that of others which are rapidly brought to maturity. The first fact I heard on this point was long before I had turned my attention to agricultural concerns, and was revived in my memory when an occasion required many years after. It was of the very excellent beef made by an old dry cow, from having the exclusive use of a clover field. The secret was the rapid conversion into muscle and fat of the nourishment from which they had been derived. The inconsistency of some farmers is also strongly evinced in respect to their over-feeding, for the same man who, upon common occasions, discovers the greatest reluctance to part with a dollar, even when obviously necessary, will not hesitate to disburse most freely for an over-fed animal, which is ultimately to bring him in debt, merely for the gratification of his pride, to bring a steer to the stalls so loaded with fat, that it is difficult to find a piece sufficiently lean to eat. I do not think that any steer will pay, unless in the best of times, for more than one winter's keep, one summer's pasture, and another

winter's stall-feeding. An animal thus treated, will have his beef well marbled with fat, and no more is required by those who are to regale on it.

Having, in the fifth volume of the Memoirs of this Society, given my sentiments fully on the subject of over-feeding cattle, I shall only refer to two large animals to which my remarks will apply. The first is the ox Columbus, which was raised in Greenland, New Hampshire, and afterwards shown and slaughtered in Philadelphia, a few years since. His live weight was 4000 pounds, and, as was said at the time, did not repay the purchasers. The second was the N. J., (Salem) ox, in the year 1818, seven years old, which from his fourth year had been daily pastured and fed with corn meal, and with hay and the same addition in winter; the precise amount not stated; dead weight 2,165 pounds, rough fat 136 pounds. His portrait is on our walls, and in the fourth volume of the Society's Memoirs.

The little attention paid to the cultivation of root crops, besides potatoes, for feeding not only cattle but horses, by farmers, was mentioned and dwelt on by the members whose ample experience enabled them to speak with confidence on the economy of so doing, and of the ease with which they may be raised. No food yields a greater return, or pays better than carrots, parsnips, sugar beets, and turnips. They require to be sown in rows, for which drills may be bought at a moderate price, at the Agricultural Ware Houses in Philadelphia.

Mr. Richie, of Philadelphia county, stated that a volunteer red cherry had made its appearance on his farm, which promises to be an acquisition, as it possesses the lively acidity of the well known "pie cherry," and is *as yet* unaffected by the insect which has proved so deadly an enemy to the latter. He offered to supply grafts to the members, and will doubtless do so to others. This "new comer" here, is doubtless a variety produced from the accidental dropping of a "pie cherry," and the fact of its growth and merits lead to an expression of regret for the marked neglect of the cultivation of fruit in Pennsylvania, although it is well known that nothing on a farm pays better, or requires so little trouble. Farmers in the New England States bestow attention to fruit, and had it not been for their very abundant supply of apples during the last autumn, Philadelphia would have been deprived of a wholesome luxury. They were not only handsome in appearance, but some of great size and cheap, while those brought to market from Pennsylvania were few in

number, unattractive in appearance, and dear. A farmer could not more surely provide a good revenue for an infant child, than by setting out four or five acres of the Marshal apple, or of the Rhode Island Greening, and one or more acres of the Prune Plum.

Mr. Uhler, Assistant Secretary, made a verbal statement of his analysis of the marl of New Jersey, which has done so much for the barren sands, and unproductive soils of that State, and gave the theory of the action of its component parts. At the request of the Society, he promised to produce a written article on the subject at the next meeting. The attention of the Society was early called to the operation of this marl, and knowing that in no other way than by analysis could the principle of its fertilizing property be ascertained, and the various results from its use be accounted for, Mr. Henry Seybert, at the request of the Society, made a masterly Chemical examination of it, which was inserted in the fifth volume of the Society's Memoirs. He first ascertained that it generally contained nine or ten per cent. of potash; and hence its fertilizing effects when applied to soils deficient therein. Mr. Uhler will explain its mode of action.

DAHLIA.—Too richly manured a soil gives too much vigor to the stem and leaf. I raise them in soil without manure, and when they begin to bud, I cover the soil around them with about two inches thick of well digested manure. This causes the flowers to come forth with surprising quantity and of great size. I also cut off superfluous branches and buds. I have used with great success the ammoniacal water which flows from the gas distillation of coal. I found that five parts of water to one part of the gas water, was best for the Dahlias.

GYPSUM IN SOUTH CAROLINA.—The Southern Agriculturist says, "a specimen of gypsum was lately sent to Dr. Gibbs, of Columbia, from Mr. Ingraham's, on Cooper river. It resembles the gypsum of the Paris basin, which is extensively quarried for the manufacture of plaster of Paris, and as the geological position is the same, it is hoped it will be found in abundance."

It was well said by a sagacious observer, that "mankind might do without physicians, if they would observe the laws of health; without lawyers, if they would keep their tempers; without soldiers, if they would observe the laws of peace; but there is no doing without *farmers*."

From the Cultivator.

### Making Sugar from Corn-stalks.

A SHORT time since I met with Mr. Adams' account of his experiment in manufacturing corn-stalk sugar, undertaken from the inducements offered by the New York State Agricultural Society, and for which they awarded him a premium of one hundred dollars. I was much interested in its perusal, as it strongly reminded me of the difficulties and discouragements experienced in the earlier stages of the same inquiry, when experiment was the only available source of knowledge to which we could turn for assistance in our exertions. As I have pursued this subject with unabated confidence and reasonable success, since its commencement, my experience may perhaps be useful to Mr. Adams and others engaged in perfecting this important and interesting manufacture.

Before proceeding further, I must find a little fault with your Agricultural Society. Its premium was offered for the "maximum quantity of sugar made from an acre of northern corn." It appears to me that the great object to attain, is a plan by which sugar may be made *profitably*. It is very possible to expend more labour in the manufacture than the article would be worth; such a plan would of course be worthless practically, whatever might be the *amount* produced. Secondly, in planting corn for sugar, I should prefer seed that had ripened in a more southern latitude, as less liable to run to ear early in the season. In raising this crop, the great end to secure, is the perfect growth of the plant in every particular, except in the formation of its seed. No plan ever yet tried has succeeded completely in effecting this object. Those stalks which—from some cause yet unknown—have shown no disposition to form grain, are always far more juicy, and yield a much larger quantity of sugar than those from which the ear has been removed. As soon as this hitherto accidental condition of the plant is brought by persevering efforts, within our control, I confidently expect that the corn-stalk will not merely rival but exceed the sugar-cane in the amount of saccharine matter it will yield. The past season, a small lot of corn was planted in rows three feet apart and about six inches asunder in the row. As soon as the tassels appeared they were pulled out. The result of this experiment was encouraging, but not entirely satisfactory; another lot of corn growing within one hundred yards, was allowed to tassel, and this perhaps caused the partial failure. In order to try this plan fairly, the

corn should be grown distant from any other, and the tassels pulled out before any of their pollen has been shed. Very thick planting, in order to prevent earing, is objectionable, as it renders the crop more liable to be prostrated by storms; and the stalks being small, the labour of handling them is increased; they should not be less than one inch in diameter, or about the size of broom handles; the distances in planting in order to produce this size, will vary according to the quality of the soil. Whatever plan is adopted to prevent earing, it must be attended to, or the sugar of the stalk will be expended in the formation of grain.

When the corn is ripe—which will happen about the usual time of cutting corn—cut off the tops at the point where the ear generally forms; the leaves on the stalk below this, are few in number and mostly dead; they may be sufficiently removed by simply passing the knife from top to bottom on each side of the stalk. By pursuing this plan, the formidable labour of stripping the stalks, which has been complained of, is greatly lessened, and the whole business put in a practicable shape.

The method of curing "tops and blades" is so well understood by farmers, that nothing need be said about it here. Experience has proved that the extras of this crop—the tops, blades, crushed stalks, &c.—are worth more, when properly secured, than the whole labour required in growing and manufacturing, provided this labour is economised, in the way pointed out. In the list of plants cultivated for forage, there is not in the whole world, another one that is equal to this in the amount of nutriment which it contains. It is well worth cultivating for the fodder alone; the stalks therefore cost nothing; every farmer may see from this, how—if he chooses—to steer clear from his grocery bill.

The mill for grinding, best suited for the farmer, is a simple one, and need not cost more than \$10.

The boiling apparatus should consist, 1st, of two defecating kettles; they may be of cast iron, and capable of holding as much juice as the mill will press out in fifteen or twenty minutes; these kettles must be placed so that a quick and strong fire can be made under them; and so arranged that they can be emptied at a moment's warning. 2nd. Two or three evaporating pans; a single sheet of Russia iron, bent up six inches at the sides and ends, and riveted, makes an excellent pan of this description. 3rd. Two copper or tin pans for finishing; these should be flat bottomed, six inches deep, and so arranged that they can be removed from the

fire instantly when the charge is finished. They should never have much over two inches in depth of syrup placed in them at one time, and should each be of such a size that a charge of three or four gallons will not fill it deeper than this.

The difficulty of manufacturing sugar to the *best advantage*, has always been considerable. This has grown out of the foreign substances always found connected with it in the juices of plants. Sugar is one of the most easily decomposed substances in nature. The juice of a plant may be very rich in sugar, yet when slowly evaporated, the residue will not show a single trace of saccharine. In the process of vegetation, as the plant approaches maturity, sugar is changed into starch. In the germination of the seed, a contrary change occurs, and starch is converted into sugar. I took a portion of sprouted corn, and macerated it in water until the sugar was extracted; the liquid then strikingly resembled both in taste and smell, the juice of corn-stalk after it has been clarified; it was then set to evaporate over a slow fire; it gradually grew darker in colour, and in a short time it appeared very much like beet juice. Before the evaporation was finished, every particle of sugar had disappeared, and from being sweet and pleasant to the taste, it had become black, bitter and nauseous. The same experiment was repeated under the same circumstances, except that a small portion of starch was added to the water; in this case, the sugar was not decomposed, but retained its distinctive qualities throughout evaporation. The chemical reasons for this, it is needless now to discuss; the simple fact, and its application, are sufficient for our purpose. Wheat flour consists principally of starch, and was used with good success, though perhaps pure starch would be better. One pint of flour was mixed with two gallons of skim milk, and one pint of this mixture was added to 30 gallons of juice. These proportions are not given as best, for many more experiments will be necessary before they can be determined accurately.

As the juice comes from the mill, it should run into a receiver which will hold just enough to fill one of the defecating kettles; while in this receiver, the mixture of flour and milk, and also the necessary quantity of lime water must be added and well stirred in. It is then poured at once into the defecating kettle and heat applied; a very firm thick scum is by this means separated, and the juice becomes clear; it is next run through a flannel strainer into one of the evaporating pans, and the boiling kept up briskly. Take a shovel full of red hot coals

from the furnace, and after blowing the ashes off, throw them into the pan: as you put in more juice, add more coal; as the pan becomes filled with coal, take out that which has been in longest. From this pan the juice is run in succession through the others—straining it when convenient—until it is finished.

WM. WEBB.

Wilmington, Del., March 14th, 1845.

### Kerry Cows.

*Great yield of Butter.*—In the rough and mountainous parts of Ireland, there is a small race of cattle called the Kerry breed. They are considered indigenous to the country, and are much esteemed for their good qualities—especially for the dairy. From the descriptions and engravings given of them by writers, particularly by Youatt, and by Low, in his “Illustrations of British Cattle,” they appear to be a beautiful as well as hardy and useful variety. Mr. Youatt says—“The cow of Kerry is truly a poor man’s cow, living everywhere, hardy, yielding for her size abundance of milk of a good quality, and fattening rapidly when required.”

Mr. Colman, in his late speech at Sir Charles Morgan’s cattle show, spoke of the Kerry cow as follows:—“He found in Ireland a dairy consisting of five dairy cows, from which the owner had sent to Liverpool, twenty-five firkins, of butter, averaging 64 lbs. a firkin, and that was 320 lbs. of butter to each cow for the season. He conceived a stock of dairy cows worthy as much attention as a stock of fat cows. He believed from observation, and observation not confined to a few years, that in many localities, the farmer’s best property, would be a good stock of dairy cows.” (Report of Mr. Colman’s speech in the London Farmer’s Journal, Dec. 30th, 1844.) In the Journal of the Royal Agricultural Society, we find an account of a trial made between three Ayrshires, three Galloways, and three Kerry cows. The Ayrshires gave rather most milk, but the Kerries exceeded them all in butter.—*Cultivator.*

*YELLOW LOCUST.*—If you have but little fencing timber fit for posts on your farm, sow a few pounds of yellow locust seed, and when the plants are two years old they may be transplanted. In twelve years from the time the seed is sown, you may begin to cut them for posts.

*ABORTION AMONG COWS.*—Earl Spencer says, that since he placed lumps of rock salt in his pasture lands, none of his cows have suffered abortion.

### Rotation of Crops.

WHEN a succession of crops is grown upon fertile land without renewal of manure, the produce gradually diminishes; and after a certain period, if it be grain, the quantity which at the outset was eight or nine times the amount of the seed, will be reduced to three times or even to twice the seed. Thus crops impair the fertility of the soil, and eventually exhaust it.

It has been long admitted, that different species of plants manifest great diversity in their powers of exhaustion. Certain kinds, indeed, as trefoil and lucerne, far from exhausting it, communicate new vigor. As a general rule, however, every plant may be said to impoverish the soil in which it grows. This impoverishment is always manifest when the plant after maturity is completely removed, but is less sensible when much rubbish is left. Thus, for example, clover, after yielding two crops, which are generally cut as fodder, might still yield a third; this last, however, is generally ploughed into the ground as manure, being buried along with a considerable quantity of roots. This plan of meliorating the soil by the cultivation of trefoil, is what is called *manuring by smothering*; a method practised from a remote period in the south of Europe, and which offers decided advantages in those districts where there is abundance of pasture land. Hence, in smothering trefoil, the soil is amended at the expense of the nutritive matter it contains.

In discussing the advantage of one course of crops over another, the question always hinges upon that of exhaustion. Wherever an unlimited supply of dung and of handiwork can be procured, there is no absolute necessity for following any regular system of rotation. Under such favourable circumstances it is expedient to ascertain what kind of cultivation is, commercially speaking, best suited to the climate and the soil. There is little to fear that by a continued succession of similar crops, the fields will get infested with noxious weeds, because this inconvenience may be obviated by labour. Nor is impoverishment of the soil to be dreaded, since that can be remedied by the purchase of manure. The whole craft of agriculture is reducible to comparison of the probable value of the crop with the cost of manure, labour, &c. Farming of this sort excludes the keep and propagation of cattle, and may be strictly regarded more as gardening than as agriculture.

But where manure cannot be had from without, things must be reduced to a system; and the amount of produce which it

is possible to export each year is fixed within bounds, which cannot be exceeded with impunity.

When by judicious cultivation land is rendered fertile, it is necessary, towards securing its fertility, to supply after every succession of crops equal quantities of manure. In considering this in a purely chemical point of view, it may be said that the produce which can be taken away without damaging the fertility of the land, is the organic matter contained in the crops, abstraction made of that present in the manure. Indeed, this latter substance must in some form or other return to the soil to fecundate it anew. It is capital placed in the ground, the interest of which is represented by the commercial value of the produce of all the other agricultural operations.

Where lands are extensive, population scattered, and means of communication difficult, there is less necessity for being tied down to systematic cultivation. There is always enough for a scanty population. A field yields grain, and after the harvest is converted for a series of years into meadowland; such is the pastoral system in all its simplicity. To this primitive state of husbandry may be referred those plantations on cleared land in countries covered with forests. When the trees are felled and burned upon the spot, the soil yields for a long time and without manure, crops of maize and of wheat of surprising quality, at the cost of the fecundity acquired during ages of repose.

But when from increased population the land becomes more valuable, a larger amount of produce is demanded. Imperfect culture would prove inadequate. Accordingly a triennial rotation of crops was very anciently adopted in the north of Europe, consisting as is well known, of fallow land frequently ploughed during summer, followed by two years of grain. The fallow land received a certain quantity of manure to repair the exhaustion occasioned by the two crops of grain; hence when this mode of rotation is adopted there should be always sufficient meadow land to supply manure.

Leaving waste one-third of the surface has always been held a grave objection against triennial rotation. Hence various attempts have been made to get rid of the summer fallow. Some encouragement was given to these attempts from what occurs in horticulture, where the ground is rendered continually productive. In certain countries, moreover, tillage is only interrupted by severe weather.

On the other hand, it has been long remarked that it is not always beneficial to

grow grain during several consecutive years in the same ground, even when it is fertile and manure is abundant, owing to the almost insurmountable difficulty of destroying weeds. The fallow was justly considered the most efficient and economic means of getting rid of these. For this purpose *fallow crops*, as they were called, were introduced. Peas, beans, vetches, were at first the only plants used as fallow crops.

However, it was soon perceived that the fallow crops occasioned a very sensible diminution in the produce of corn; to counteract this inconvenience, recourse was had to a surcharge of manure; but as this cannot always be obtained, it was necessary either to reduce the cultivated surface or to appropriate a certain amount of meadow. Still the fallow crops had this advantage, that they enabled the farmer to derive from land a greater amount of produce in a given time without prejudice to the raising of corn. Hence the plan of turning the fallow to account was soon generally adopted.

The introduction of clover so modified the system of fallow crops as at one time to induce the belief, that the point of perfection had been attained in agriculture. This was when it was ascertained that trefoil, which had hitherto been only cultivated in small enclosures, might be sown in spring upon corn land, and occupy next year the place of the fallow in the triennial rotation. Trefoil, so far from exhausting the soil, was found to give it new fertility, and the succeeding corn crop yielded a plentiful harvest.—*Boussingault's Rural Economy.*

For the Farmers' Cabinet.

### A Covering to the Ground useful.

DEAR SIR,—In all the essays I have seen on the application of manure, no account has been made of the advantage the soil receives from a covering. I have noticed that a spot covered by a board, a pile of rails, a heap of stones—in short, no matter what, on removing the encumbrance which has occupied the ground for two or three months, and cultivating it, it is found much better than the adjoining land. Observe a forest tree standing in a field—if of tolerable size and thrifty, it will impoverish a quarter of an acre or more, yet the same kind of trees will grow close together and vigorously in the forest, where their leaves form a close covering to the ground, and at the same time the soil will be improved. Acting on these suggestions, I have for some years put my manure on clover in the spring, which I designed to turn under for wheat in the fall, giving the land the benefit of the covering

of both the manure and the clover during the summer; and I think a given quantity of manure does more good to my land in this way than in any other that I have applied it. I state these things to you, Sir, that the attention of scientific men may be turned to this question. Does not a covering act so as to prevent the escape of ammonia and other substances beneficial to the soil?

Yours, &c.,

HENRY VAN DYKE.

Kingston, N. J., June, 23rd, 1845.

**SPARE THE BIRDS.**—Travellers in the north of France cannot but perceive the almost total absence of birds in that district. The country is open and rarely broken by a hedge-row; and thus shelter being denied them, they seek more favoured spots. The effect is as obvious as it is injurious, for there is no limit set to the ravages of the caterpillar, or the destruction of the grub. The *Pontia rapæ*, or small cabbage butterfly, swarms to an extent which must be seen to be believed. The *Scarabæus milolantha*, too, flies in myriads; and there are no rooks to follow the plough.—*Eng. paper.*

### The Alpaca.

*Its naturalization in the British isles considered as a national benefit, and as an object of immediate utility to the farmer and manufacturer: by Wm. Walton.*

For most of our cultivated plants, and, indeed, for many of our domestic animals also, we are indebted to other countries. With regard to the former, the history of their introduction is, in many cases, well established in detail; but it is so long since the latest of them—the potatoe, the turnip, or the mangel-wurzel, or carrot, for instance—was first cultivated in our country, that farmers have fairly settled down into the belief that they must make the best of the subjects they have on hand, for that Nature has nothing further in her stores suited, in our climate, for the wants of man or beast. And with regard to the latter, the introduction of the very latest, dates so much further back, that we must estimate the prejudice as stronger still, which scouts at the idea of any further addition being made to our stock of domestic animals from the lists of other countries. Of course, in speaking of this universal prejudice, we allude simply to the generality of those who at present occupy and cultivate our soil, and who form their opinion, probably, without very well knowing the grounds upon which it rests.

There is very probably, notwithstanding the general notion to the contrary, that a

useful addition will shortly be made to our stock of domestic animals. The alpaca, from the experience of it which has been compiled from various quarters in this country by Mr. Walton, really seems likely hereafter to play an important part in the stock-farming of the hilly districts of the kingdom. This animal is indigenous in the mountainous regions of Peru, where two domesticated species of it occur. The one, receiving the name of llama, is used as a beast of burden; the other, the alpaca, to which we at present allude, is a wool-bearing animal, and of it large flocks were formerly possessed by the Incas, sovereigns in former days of that country, and by other wealthy inhabitants of it. The climate of the districts in which this animal flourishes is described by Mr. Walton as follows:

“The woolly natives possess a hardness of constitution, and a peculiarity of structure, admirably well adapted to the nature of their birth-place. There, during half the year, snow and hail fall incessantly; whilst in the higher regions, as before noticed, nearly every night the thermometer falls below the freezing point, and the peaks, consequently, are constantly covered with an accumulation of ice. The wet season succeeds,” &c.

On the applicability of the alpaca to our soil and circumstances, we quote the following remarks:

“The hardy nature and contented disposition of the alpaca, cause it to adapt itself to almost any soil or situation, provided the heat is not oppressive, and the air is pure. The best proof of its hardness is its power to endure cold, damp, hunger, and thirst—vicissitudes to which it is constantly exposed on its native mountains; while its gentle and docile qualities are evinced in its general habits of affection towards its keeper. No animal in the creation is less affected by the changes of climate and food, nor is there any one to be found more easily domiciliated than this. It fares well while feeding below the snowy mantle which envelops the summits, and for several months in the year clothes the sides of the Andes. It ascends the rugged and rarely-trodden mountain path with perfect safety; sometimes climbing the slippery crag in search of food, and at others instinctively seeking it on the heath, or in rocky dells shattered by the wintry storm; at the same time that, when descending, it habituates itself to the wet and dreary ranges on the lowlands, so long as it is not exposed to the intense rays of the sun.

“Many of our northern hills would try the constitution of any sheep, and yet there the weather is never so inclement or so variable

as on the Cordilleras of Peru. With so many advantages, why, then, shall not the alpaca have an opportunity of competing with the black-faced sheep, the only breed that can exist in those wild and inhospitable lands? Of the two, the stranger would fare best on scanty and scattered food; at the same time affording to the owner a far better remuneration.”

The alpaca wool is at present used largely in British manufactures. Mr. Walton estimates the quantity hitherto consumed, since its introduction in 1832, at 12,000,000 lbs. The price of it varies from 1s. 8d. to 2s. 6d. per pound, and the average weight of the fleece may be put at 10 pounds. Were the animal fairly naturalized on some of our bleakest hill districts, such land would soon increase in value from the increased worth of its annual produce in alpaca wool. And it appears from the experience of several gentlemen who have small flocks, that, when its habits shall be thoroughly understood, little difficulty will be experienced in doing so. The following is a statement by Mr. Sterling, of Craigharnet place, Lennoxtown, Glasgow, a gentleman better qualified to speak on the subject than any one we could name:

“I can have no doubt that, when the subject is better understood, the animal itself better known, and a more expeditious method contrived to bring them to Britain, we shall have thousands of them. When known, their docility, their temperate habits, their hardness, and, I may add, their easy keep, will, ere long, bring them into general notice. I can answer without the fear of being contradicted, that they will thrive and breed in Scotland equal, if not superior, to our native black-faced sheep.”

To those who would laugh at the idea of bringing over here, and domesticating on our hills, a Peruvian camel or sheep, (for the alpaca has properties in common with both,) we would point to Australia, a country which not many years ago possessed no quadruped but the kangaroo; and yet, notwithstanding its many peculiarities of climate, is now thickly peopled with our sheep and oxen. But the question must not be left to generalities of this kind. The experience of a few short years, on the larger scale which expected importations will enable, will determine it satisfactorily; and if, as in all probability will be the case, the alpaca should become one of our domestic animals, the best thanks of the country will be due to Mr. Walton for the persevering energy with which he has pressed the subject on public attention. His book is an exceedingly interesting and neatly got-up little volume, and will, we doubt not, prove a useful publication.—*British Cultivator*.

## Allen's Herd Book.

## CIRCULAR.

Black Rock, N. Y., July, 1845.

SIR:—About a year ago at the solicitation of a number of gentlemen interested in the breeding of Short Horn Cattle, I published a notice in several of the agricultural papers of the United States, that I would get up an American Herd Book, provided my efforts should be seconded by a respectable portion of those engaged in that pursuit. Although slow in their responses, a considerable number of breeders have forwarded the pedigrees of their herds for insertion according to the terms of my proposal. Many, however, and among them, some of the early and distinguished promoters of this branch of agricultural improvement, remain unmindful of this opportunity of thus recording their valuable stock.

A sufficient number of individuals having already contributed the pedigrees of their cattle to insure its publication, the work will proceed as soon as circumstances will permit, which will be *within three months* from this time.

I presume no arguments will be necessary with any systematic short horn breeder, to convince him of the necessity and convenience of an American registry of his cattle, other than such as will suggest themselves to his own mind, and those already advanced in my two several notices to breeders already published.

In case you think proper to register your cattle in the proposed work, you will please transmit your catalogue of thorough bred animals (none other being admitted) with as little delay as possible, to me (post paid) at this place, with the registry fees accompanying them, and stating also the number of copies of the work you wish for, when published.

I will here remark, that the month of October next, *will be the latest period* at which pedigrees can be received, as the work will be put in press immediately after.

The terms for registry are as follow:

For a single animal, one dollar.

For any greater number not exceeding ten, 50 cents each.

For a number exceeding ten, 40 cents each.

The work itself not to exceed three dollars a copy.

If any gentleman of your neighborhood or acquaintance be a breeder of short horns, and not, in receipt of this notice, you will confer a mutual favor by giving him the above information. Very respectfully, your obedient servant,

LEWIS F. ALLEN.

For the Farmers' Cabinet.  
Use of Poudrette, &c.

A LETTER from J. R. Bowman of Montgomery county, dated the 1st ult., to Wm. R. Conkling, has been handed us, from which we make the following extracts. The time for applying the poudrette to the wheat crop is now nearly at hand. The accounts from those who have used this manure have been very generally satisfactory. Its price compared with other manures—the small expense of transportation, and the little labor required in its application, will induce our farmers who purchase manure, to continue to use the poudrette. We always have it on sale at this office.—Ed.

“Last year, the quantity made, was insufficient for the demand, and I could only procure a single bushel at a time, which was applied in comparison with several other manures, to onions, cabbages and corn—on all of which crops it showed a very decided advantage, both as to cheapness and efficacy over bone dust, ashes and stable manure; that is, when we take into account the difference in the expense of hauling, and the ease of application.

“The plants nourished by poudrette have a much broader leaf, and more luxuriant colour than those produced by either of the other above mentioned manures. The present season, I have applied several loads of poudrette to various crops, and find it completely successful on all; and yet to my surprise, the chemical mixture you call *artificial guano* is double in power to the former. I have tried the experiment accurately, by placing half a peck of your guano, and a peck of poudrette on adjoining rows of potatoes, sowed after the sprouts came through the ground, and carefully worked in with the hoe; also, in like manner to sugar beets, and to peas and tomatoes with equal success, there being at present scarcely any difference; if any, it is in favour of your guano. A more advanced state of the crops, may show a different result, as probably the slight amount of moisture since the manures were applied, has been insufficient to dissolve the nutritive qualities of the poudrette, whilst the potash, &c. in the other stuff have attracted from the atmosphere what vegetation so much needed.

“I have been using bone dust since 1832, and fully understand its great value; twelve years back, it was all engaged by a few Englishmen at 50 cents per barrel; I visited all the button factories about the city, and offered a better price, in consequence of which the fine dust soon raised to 50 cents per bushel, at which rate it is mostly sold off very quick. I am told much of it is now exported to England, the high price in that country paying a handsome profit, and this will probably continue to be the case, as their much wetter climate renders it more valuable to them than to us.”

## Smut, Rust, and Chess.

Grosse Isle, Wayne co., Michigan,  
March 3rd, 1845.

To the Editor of the Michigan Farmer :

SIR,—I lately consulted Professor J. F. W. Johnston, the eminent Agricultural Chemist of England, and author of the well known "*Lectures on the applications of Chemistry and Geology to Agriculture*," &c., on the cause and cure of those sad annoyances and causes of loss to the western farmer—smut, rust, and chess, in wheat. As his answer may probably prove beneficial to others besides myself, I beg to hand you a copy for publication in your paper.

Believe me, very sincerely,

Your obedient servant,

CHARLES FOX.

AGRICULTURAL CHEMISTRY ASSOCIATION,  
8 BANK STREET, EDINBURGH.

About the smut and rust, your notice is all right. Steeping in a solution of salt that will float an egg, and then drying the wet seed with quicklime; fermented urine, blue vitriol, (*sulphate of copper*), and arsenic, are also used as steeps for the same purpose of killing the fungus, with greater or less effect. The rust arises from the over luxuriance of the growth of your wheat, which will diminish; but especially from the wetness of your soil, or the rains and mists to which, in the midst of so much water, your land may be subject. A good dose of lime, perhaps *plastering* your wheat, might help this disease; but it will lessen as your land is better drained, and rendered drier. But it is your chess in wheat which has amused me. Not that it is extraordinary that a farmer in Michigan should entertain that opinion, [that it is mutated wheat,] for it is prevalent over many other parts of the United States. Since I received your letter, I have amused myself further by reading *nineteen* articles upon the subject in the 7th, 8th, and 9th volumes of the *Cultivator*, your best periodical in the agricultural line, and therefore am not surprised, that with other farmers you should hold the opinion that chess is a disease of the wheat, or degenerate wheat. The chess is a *bromus*—a kind of grass, which resembles in its straw the young wheat, but which branches out in the head like the oat. Assume, with all botanists, that species cannot be transmuted, and the production of wheat from a *bromus* is impossible. If it be impossible, then how are your facts to be explained? You mention two cases. 1st. That of *new land*, when broken up and sown with wheat, chess comes up. This means, when correctly interpreted,

that the seed of the chess was more abundant in the soil naturally, than the grass you added artificially; and perhaps also that more or less of your wheat was thrown out by the frost and destroyed. 2nd. On *old land*, where wheat is sown, if the wheat comes up thick and early, it will keep down the chess perhaps; if it is thrown out, or picked up by birds, or destroyed by frost, the blank spaces will be filled up by the sprouting of those seeds which are most abundant in the soil, which with you seems to be chess, as in the flats of Yorkshire it is the wild mustard. Can you wonder that this seed should abound in the soil, when you remark how large a crop of seed the chess bears, where it is allowed to ripen? And it has ripened, and shed its seed for a thousand years, in your alluvial soils. The clay banks of your rivers are full of it. And though you extirpate it from your land, the first river flood that comes and overflows your land, will bring the mud and seeds of the banks, and sow your land with it again. And thus, in some places, generations may pass before this weed be finally extirpated, even where the greatest care is taken. Such is the case in Yorkshire, on the banks of the flat streams. No further off than Northallerton, a good farmer has extirpated with much care and expense, the wild mustard; but a flood comes, undermines a portion of the clay banks between which the river runs; and wherever the river flows over his land, the labours of years has again to be undertaken, before the same seed can be made to disappear. The error with the American farmers is, that they start from the false assumption that the change of wheat is possible, and thus come to see proofs—just as our forefathers saw ghosts—where only natural appearances present themselves. Believe it to be impossible, and the explanation of appearances may cost a little more thought, but the expenditure of that thought, will lead to the *truth*.

(Signed)

JAMES F. W. JOHNSTON.

The learned Professor, it will be seen, supposes the chess to be a weed natural to our soil. I have never observed it in this district to grow except among wheat, or among grain crops immediately succeeding wheat. But being a distinct plant, it must grow wild in some part of our country; and be that where it may, these remarks will there aptly apply. But if the weed be not native here, we must explain the prevalence of this pest in this part of the country, by supposing that it has been brought here originally among grain seed: and may be prevented by scrupulous attention on our part

as to the cleanness of our seed. By never sowing seed with ches among it, we can escape the loss we suffer from this weed; but all grain growers must be aware how much cleaning, and what care is requisite to separate the ches from the wheat. Once introduced into a farm, it may become impossible to eradicate it.

C. F.

### Cultivation of Mushrooms.

ROSWELL L. COLT, of Paterson, N. J., in a communication to the *American Agriculturist*, says, "I have two houses in which I have raised them, one built expressly for the purpose, 50 feet long, 14 wide, 9 high, plastered inside, with a flue from a stove running on the ground through the centre. On the top of the flue are hollow tiles for the purpose of holding water and keeping the room moist. I have two tiers of beds on each side of the house, one over the other, three feet apart and five-feet wide. We first fill each bed with pure horse dung, with as little straw as possible—say one foot deep; we then put on three inches of rich black mould; in this earth we plant the spawn of the mushroom broadcast. That from England comes in blocks like brick. This is broken up into pieces the size of a walnut, and planted about three or four inches apart. The best time to make the beds is in October and November. Keep the house warm; about 65 degrees, and damp and dark, and cover the beds with hay three inches deep. The mushrooms will be ready to pick in about a month, and will continue until August, or longer; but in very warm weather they get covered with bugs. The other house is smaller, and I heat it with a large pile of horse manure, which being kept wet my gardener thinks raises the best mushrooms."

### London Breweries.

A CORRESPONDENT of *Smith's Weekly Volume*, now in Europe, says, under date of May, 1845, "Barclay's Brewery, celebrated the world over, is such a curiosity that I have been tempted to visit it under favour of an introduction from one of the family owning it. The whole establishment covers 15 acres; we saw 180 vats, each containing from 1100 to 3000 barrels; they are 33 feet in height; one 36 feet across at the top, the bottom 43 feet, which had in it the enormous amount of 3,500 hundred barrels; the weight of iron in the hoops is seventeen tons, the eight bottom ones weighing no less than one ton four hundred weight; it is large enough to drive a carriage and six horses

into; it will contain 4000 barrels of imperial stout, and its liquid treasure is worth eighty thousand dollars! Father Mathew's gimlet would lessen its value. There are stables for 187 of the enormous horses employed for delivery, each horse worth \$300; one *little fellow* we measured, and found his height to be full 18 hands, or six feet; a steam engine finds full employment in breaking up their food.

"In one place we saw men in vats handling the hot hops, as nearly naked as savages. In one vat were 1360 bushels of malt; one copper boiler is so large that forty-five men have dined in it comfortably! it will contain 4,200 barrels of beer. Here are conduits half a mile in length, rail-roads, hoppers, steam engines, &c., enough to confuse one. Thirty tons of coal a day are consumed. The malt-bins will contain sixteen hundred thousand bushels, worth two millions and a quarter of dollars; sixty great cats are kept to destroy the mice. Fifteen hundred barrels of ale are made daily; it is cooled in summer by curious refrigerators. There is even a burying-ground for the men who die, but for this there is no longer room; the space is wanted, the temperance men would say, to make poison for others. The brewery was burnt down in 1832, but precautions are now taken so that the whole can be flooded in a very short time. To look at the Thames water you would not say it was a desirable article to drink, but the people here seem infatuated with beer; wherever you go you see huge signs, 'Truman, Hanbury, and Buxton's Entire,' and so of other brewers, while the beer is on every dinner table; and beer money is allowed to servants and soldiers, whether they spend it for that purpose or not, it is so settled in the contract."

AMONG many native Western fruits of value, there is an apple, originated among the Shakers, near Lebanon, Ohio, called the *Stump apple*. This very fine and large apple was exhibited at the last fall show of the Cincinnati Horticultural Society. For the time it lasts,—from the earliest of the late apples to about November,—it is in point of good flavor, cooking qualities, and its admirable adaptation for drying for sauce, one of our best Western fruits. The tree is remarkably productive, and the fruit maintains its large size generally throughout.—*Western Farmer and Gardener.*

It is said the water in which potatoes have been boiled, sprinkled over grain, plants, &c., destroys all insects in every stage of their existence, from the egg to the fly.

### Germinating Power of Seeds.

DR. CARPENTER, in his work on Vegetable Physiology, gives the following interesting statements:

"To the westward of Stirling, there is a large peat bog, a great part of which has been flooded away, by raising water from the river Teith, and discharging it into the Forth; the object of this process being, to lay bare the under-soil of clay, which is then cultivated. The clergyman of the parish was on one occasion standing by, while the workmen were forming a ditch in this clay, in a part which had been covered with fourteen feet of peat earth; observing some seeds in the clay which was thrown out of this ditch, he took them up and sowed them; they germinated, and produced a species of *Chrysanthemum*. A very long period of years must have probably elapsed, whilst the seeds were getting their covering of clay; and of the time necessary to produce fourteen feet of peat-earth above this, it is scarcely possible to form an idea; but it must have been—in the natural course of things—extremely great.

"The following circumstance which occurred about thirty years ago in the State of Maine, in North America, is, perhaps, still more remarkable. Some well-diggers, when sinking a well, at the distance of about 40 miles from the sea, struck, at the depth of about 20 feet, a layer of sand; this strongly excited curiosity and interest, from the circumstance that no similar sand was to be found anywhere in the neighbourhood, or anywhere nearer than the sea-beach. As it was drawn up from the well, it was placed in a pile by itself; an unwillingness having been felt to mix it with the stones and gravel, which were also drawn up. But when the work was about to be finished, and the pile of stones and gravel to be removed, it was found necessary to remove also the sand heap. This, therefore, was scattered about the spot on which it had been formed; and was for some time scarcely remembered. In a year or two, however, it was perceived that a great number of small trees had sprung from the ground over which the sand had been strewn. These trees became, in their turn, objects of strong interest; and care was taken that no injury should come to them. At length it was ascertained that they were beach-plum trees; and they actually bore the beach-plum, which had never before been seen, except immediately upon the sea-shore. These trees must therefore have sprung up from seeds which had existed in the stratum of sea-sand pierced by the well-diggers; and, until this was dis-

persed, in such a manner as to expose them to the air, they remained inactive. 'By what convulsion of the elements,' adds the narrator, 'they had been thrown there, or how long they had quietly slept beneath the surface of the earth, must be determined by those who know very much more than I do.'

"The following is an example of the same general fact, which is interesting from its connection with historical events. In the year 1715, during the rebellion in Scotland, a camp was formed in the King's Park—a piece of ground belonging to the castle—at Stirling. Wherever the ground was broken, broom sprang up, although none had ever been known to grow there. The plant was subsequently destroyed; but in 1745, a similar growth appeared, after the ground had been again broken up for a like purpose. Some time afterwards, the park was ploughed up, and the broom became generally spread over it. The same thing happened in a field in the neighbourhood, from the whole surface of which about nine inches of soil had been removed. The broom seeds could not have been conveyed by the wind, although the plant is a common one in the neighbourhood, because they are heavy and without wings; and the form of the ground is such, that no stream of water could have transported them, or have covered them afterwards with soil. Such an effect must have resulted from the operation of causes, continued through a long period of time."

For the Farmers' Cabinet.

### Amateur Farming.

TO THE EDITOR:

If you think the following observations worth it, you can give them a place in your paper, which you publish not only for the meridian of Philadelphia, but also for the humble cottager among our mountains, who has to earn his bread by the sweat of his brow, and who eagerly seeks in it what really is useful, and I must say, often finds it, though we sometimes meet the effusions of gentlemen, who have filled their purses by mercantile speculations, and then retreat to agriculture for the benefit of their health. They tell us of their operations, which may have turned out like that of the Indian's gun, which cost more than it came to. With pleasure we see in the June number of the Cabinet, that the Philadelphia Agricultural Society have past that very judicious resolution, that the applicants for the premium for the best farm, must answer questions as respects expenditures and profits. A strict account current, showing a balance of *profit*, would be an interesting document for our practical farm-

ers. The wealthy gentlemen who follow agriculture more for pleasure than for profit, ought to stand on higher ground, than merely to tell us how many sugar beets they can raise; we want to know whether they raise them to profit. Let them be liberal in making experiments, which their money enables them to do; for example—on the influence of electricity on agriculture, and let them give us a minute detailed report of their proceedings, then they will confer a real benefit to their brother farmers.

Another matter of regret is, that so many wealthy men cling to the large cities, speculating in stocks, shaving notes, &c., instead of promoting agriculture with liberality, like men of wealth in England do; we would then not have been obliged to look to that country, with all its pompous names of pedigree, in its genealogical herd book, &c., to improve our breed of cattle.

It is now a fact known by every practical farmer, that if our domestic breed were so well nursed and crossbred and every thing done to develop the organs that produce milk, they would be as good as the English breed. Many farmers from the interior, who have paid enormous prices for Durham or Devonshire cattle, now find that they being reduced to the same treatment as our domestic cattle, are not better than they. The farmer being obliged to barter his butter for store goods to the country merchant, at seven or eight cents per pound, it would be too expensive to keep additional hands on the farm to curry and nurse the cattle.\* The butcher will inform you, that he prefers for slaughtering, the cattle from the western part of New York to the imported breed.†

If, what I state is not so, I wish to be corrected by the farmer who operates for making profits, not by the wealthy amateur, who merely farms to lay out his money.

## II. S.

Bethel, Pa., July 5th, 1845.

\*It would be well for our distant farmers to remember, that many are deficient in skill, or care, or both, in putting up their butter. If properly managed, and brought to market in first rate order, and a first rate article, it never need be sold in this market for seven or eight cents—it will readily command double those sums. Let the farmer take due care in these matters, and then he will find the extra price for his butter will enable him to “nurse and curry” his cows to some profit.—Ed.

† All crossings with our native stock, and the Durham, &c., have proved decidedly beneficial, both as respects, the milking properties, and in their adaptation for the knife.—Ed.

For the Farmers' Cabinet.

## Minutes of the Philadelphia Agricultural Society.

At a Stated meeting of the Philadelphia Society for Promoting Agriculture, held at their Room on the 6th instant, MR. GOWEN, Vice-President, in the Chair—present 11 members.

Several beautiful specimens of wheat were exhibited by Mr. Gowen, having been presented by Mr. Thomas Morgan of this city, sent him by a relative residing in France.

Mr. Robert T. Potts, of Montgomery county, showed a fine sample of his O. K. wheat, the grain plump, white and heavy.

Mr. S. S. Richie read a paper, giving a statement of some experiments made by him, with the different concentrated manures on his late wheat crop, an account of which will be published hereafter.

After the business of the meeting was disposed of, a general conversation on agricultural subjects ensued. It was gratifying to find that the rot had not made its appearance in the potatoe crop, as it had for the two years past, and hopes were entertained that the present growing crop would escape the disaster.

An account was given by a member of the injury sustained from the effects of frost on the wheat, in the early part of June, in parts of Chester county, the present season.

Extract from the minutes,

A. CLEMENT, *Rec. Secretary.*

August 7th, 1845.

**THRIFTY AND UNTHRIFTY FARMERS.**—The grand difference between a thriving farmer, and one who does not thrive, is, the one looks out for the *fractions*, the other does not. In farming, nothing should be lost; nothing should be neglected; every thing should be done at the proper time; every thing should be put in its proper place; every thing should be performed by its proper implement. When these rules are observed, the farmer will surely prosper—though his gains may be slow, they will be certain and sure.

**TO EXTRACT GREASE SPOTS FROM SILKS AND COLOURED MUSLINS.**—Scrape French chalk, put it on the grease spot, and hold it near the fire, or over a warm iron, or water-plate, filled with boiling water. The grease will melt, and the French chalk absorb it, brush or rub it off. Repeat if necessary.

He who has no bread to spare, should not keep a dog.

## Lightning Rods, No. 3.

(Continued from page 356, last volume.)

4. *The point of the Rod.*—It is necessary that a lightning rod should have an acute slender point, not liable to be destroyed by rust—hence it has been found expedient to employ some metal which is not liable to rust for this purpose. Platina, gold, and silver, are the most proper. The cost of the two former renders them somewhat objectionable, and their place can be very well supplied by the latter, at a much less expense. A half dollar cut into three or four slips, and then forged into square tapering points about two inches long, with a screw tap at the lower end to attach them to the rod, will make so many very good points when neatly finished. This may be done by any ordinary blacksmith, taking care not to heat the metal quite to a red, so as to make it crumble under the hammer. Very good points may thus be obtained for twenty-five cents each, instead of paying some ten or twenty times that sum for those which are perhaps not as good. With a view to improve the quality and appearance of the rod and to make it less top-heavy, it is advisable to draw three or four feet of the upper end to a taper, so that the top shall correspond with the base of the point. A hole should then be drilled in the end—a female screw cut in it, and the point firmly screwed in. I have had points of this description in use for fifteen years, and do not perceive that they have sustained any injury.

It has long been a controverted question, whether one point or several to a rod is to be preferred. Professor Olmstead says, "According to the experiments of Earl Stanhope, made more than sixty years ago, a *single needle* will discharge a Leyden jar more rapidly than a *bundle* of the same." "I believe one point preferable to several, especially when they *diverge from each other.*" *Observer* says, "There is reason to doubt whether much advantage is gained by increasing the number of points, unless they are *separated to a considerable distance.*" Thus Stanhope found one preferable to several, when they *did not diverge.* Olmstead believes the same to be true when they *do diverge*; and *Observer* agrees with them unless when they are *separated to a considerable distance.* There is little discrepancy in all this. Stanhope's *bundle of needles* taken collectively, made a blunt instead of a sharp point—each one was circumstanced with regard to the others as the point in *fig. 6,\** is to the contiguous body.

\* See page 249, last vol. of Cabinet.

I understand *Observer* to mean, that the points should be separated to *such a distance* as not to interfere with each other's action. Thus each point being effective, they will certainly discharge a cloud more rapidly than one alone could do. This seems to be a plain common-sense view of the subject. Unless the points can be scattered over distant parts of the building remote from each other, they will hardly compensate for the cost. And when so placed it becomes a matter of convenience—a question of economy, whether the several points shall all be connected with the same rod or with different ones.

5. *The height of the Rod.*—I find it will be impossible to explain the operation of points under the varied circumstances in which they are placed, without the aid of further *illustrations*, and this seems denied to me. It must therefore suffice to say, that the greater the elevation of the rod, the more extensive will be its influence. *Observer* has well remarked, "that the length of the rod should be such as to elevate its point *as far as possible above the top of the building and every other contiguous object.*" Every near object, whether lateral to, or beneath the point, must impair its operation in somewhat the ratio of its distance and magnitude. A rod 50 feet long erected on an extended plane, would not be as effective as if it were placed on the top of a high conical hill. So also a rod raised from the centre of a flat roof, will possess less protective power than if placed on the *comb* of a common roof. When a rod is overtopped on an adjacent building, chimney, tree, &c., it is rendered comparatively inert.—(See prop. 23, 24, *figs. 6, 7.*) Protection is the primary object—we desire the greatest possible security. I would therefore advise in every case to raise the rod as high as it can be supported. If this is thought to be still too indefinite, I would say let it rise *at least ten feet* above every near object. Professor Olmstead, when speaking of "vanes, balls and ornaments, which are often placed on rods," says, "I think these appendages *do not* generally affect the efficacy of the rod." *Observer* says, "it is found that all objects when *near to the point*, diminish its effects in a rapidly increasing ratio to their height, until they render it *entirely useless.*" The sentiment of *Observer* is confirmed by the experiment shown *fig. 7.* It is therefore not advisable to connect any such appendages with lightning rods. They must, to a certain extent, frustrate the intention for which they were constructed, and may in extreme cases lead to disastrous consequences.

6. *The extent of Protection.*—Here, too,

there is a diversity of opinion. Dr. Comstock says, "A single rod only protects a circle around it which is equal to twice its height above the building;" and J. M. C. lays down the same "established rule" in nearly the same words. But *Observer* says, "no such distances can be assigned, because they *continually vary* from nothing up to an indeterminate extent, as the *intensity of the electric charge and other circumstances vary.*" Among these "other circumstances" must be included the form and extent of the cloud and of the surfaces around the building. It is prudent to avoid attempting precision where it is not possible to be precise. I would therefore only lay it down as a general rule, that where a rod is properly constructed, one may be sufficient for a building of moderate extent. Where the structure is large, two or more should be used. It is better to err on the safe side.

In concluding these hasty remarks I will adopt the sentiment of *Observer*: "We too often see conductors hang dangling by the sides of buildings, with the lower ends broken off," or very imperfectly planted in the earth. "Still more frequently we see their points scarcely raised above the top of the building, or completely overhung with trees. The protection which they afford must be very precarious. Indeed we often hear of such buildings being struck with lightning;" or perhaps more properly the rod attached to them—or the overhanging tree. 'This is no more than might be expected. Some years since an excellent rod was erected to a house that was shaded by a row of Lombardy poplars, which stood some twenty-five feet from the rod, and in a few years ascended many feet above it. At different times, two of those trees have been struck by lightning—the point below being crippled and prevented from disarming the cloud by their rising above it. This is no uncommon case—but is one which we have abundant cause to regret, inasmuch as it is continually brought up to prove that lightning rods are of no use. But we would say, let those who may doubt their efficacy, give them a fair trial before they pronounce a judgment upon them—let *all the conditions* of a *perfect conductor* be fully complied with. *Make it one connected whole—sink it deep into moist earth—elevate it far above all near objects, and furnish it with a perfect point*—and he who now so confidently recommends its use will cheerfully abide the trial.

FRANKLIN.

Eighth mo. 1st, 1845.

Try to love flowers—cultivate them; it will make you happier—perhaps better.

### Premiums offered by the Agricultural Society of New Castle County, Del.

*At the Fall Exhibition, Cattle Show and Ox team Ploughing Match, to be held at Wilmington, on Wednesday and Thursday, the 17th and 18th Sept., 1845.*

#### HORSES.

- For the best thorough-bred stud-horse, certificate of merit.
- For the next best do. do. certificate of merit.
- For the best stud-horse for field and road, certificate of merit.
- For the best pair of carriage horses, certificate of merit.
- For the best saddle horse, Farmers' Encyclopedia.
- For the best pair of work horses, certificate of merit.
- For the next best do. do. certificate of merit.
- For the best thorough-bred mare, certificate of merit.
- For the best mare for field and road, Youatt on the Horse.
- For the best horse-colt from two to three years old, colt bridle.
- For the best horse-colt, one to two years old, Cabinet, 1 year.
- For the best mare-colt, from two to three years old, colt bridle.
- For the best mare-colt, one to two years old, Cabinet, 1 year.
- For the best colt under one year old, Farmers' Land Measurer.

#### CATTLE.

- For the best bull, certificate of merit.
- For the second-best do., Youatt on Cattle.
- For the third-best do., Cabinet, 1 year.
- For the best cow, the latest improved Churn.
- For the second-best do., superior Butter Tub.
- For the third-best do., Farmers' Encyclopedia.
- For the best pair of fat cattle, Treatise on Cattle.
- For the best fat steer, Clater and Youatt's Cattle Doctor.
- For the best lot of grass fed steers, not less than six in number, Farmers' Encyclopedia.
- For the best lot of fat heifers, not less than six in number, Farmers' Encyclopedia.
- For the best bull-calf, from one to two years old, certificate of merit.
- For the best bull-calf under one year old, Cabinet, 1 year.
- For the best heifer-calf, from two to three years old, Colman's Reports.
- For the best heifer-calf, from one to two years old, Youatt on Cattle.

- For the best heifer-calf, under one year old, Cultivator 1 year.  
 For the best lot of store calves, not less than six in number, Colman's Reports.  
 For the best pair of working oxen, Skinner's Farmers' Library.  
 For the second-best pair of working oxen, Youatt on Cattle.  
 For the third-best pair of working oxen, Muck Manual.  
 For the best pair of four-year old steers, Youatt on Cattle.  
 For the best and best broke pair three years old, Cabinet 1 year.

## SHEEP.

- For the best Long-woolled buck, Blacklock's Treatise on sheep.  
 For the next best Long-woolled buck, certificate of merit.  
 For the four best Long-woolled ewes, Cabinet 1 year.  
 For the four next best Long-woolled ewes, certificate of merit.  
 For the best Short-woolled buck, Treatise on sheep.  
 For the next best Short-woolled buck, certificate of merit.  
 For the four best Short-woolled ewes, New England Farmer, 1 vol.  
 For the four next best Short-woolled ewes, certificate of merit.  
 For the four best Lambs of any breed, Cultivator 1 year.  
 For the four next best Lambs of any breed, certificate of merit.

## HOGS.

- For the best boar over one year old, Farmers' Encyclopedia.  
 For the next best boar over one year old, Cabinet 1 year.  
 For the best boar under one year old, Farmers' Encyclopedia.  
 For the best sow over one year old, Farmers' Encyclopedia.  
 For the best sow under one year old, Skinner's Farmers' Library.  
 For the next best sow under one year old, American Farmer 1 year.  
 For the best litter of pigs, not less than five, Colman's Reports.  
 For the next best litter of pigs, not less than five, American Farmer.

## FARMS.

For the best Farm, having regard to product, to economy in the working, and to arrangements of barns, shedding, &c., also to neatness in its management. Premium—Skinner's Farmers' Library.

## COMPOST MANURE.

To the person who shall make the most satisfactory, and in the judgment of the committee, the most useful experiment in composting manure, not less than 100 loads of 40 cubic feet, before October 1st, 1845. Premium—Skinner's Farmers' Library.

## CROPS.

- For the best crop of Wheat, not less than 30 bushels per acre, and not less than five acres, \$10  
 For the next best do., not less than two acres, 5  
 For the best crop of Corn, over 70 bushels per acre, and not less than two acres, 10  
 For the next best do., Cabinet 1 year.  
 For the best crop of Oats, over 60 bushels per acre, and not less than four acres, 5  
 For the next best do., Cabinet 1 year.  
 For the best crop of Grass, making not less than two and a half tons of Hay per acre, nor less than three acres, Colman's Reports.  
 For the best crop of Potatoes, not less than 300 bushels per acre, nor less than one acre, Farmers' Encyclopedia.  
 For the best crop of Ruta-baga Turnip, of one acre or more, not less than 800 bushels per acre, Colman's Reports.  
 For the best crop of Sugar-beet, of half an acre or more, and not less than 25 tons to the acre, Colman's Reports.  
 For the best crop of flat Turnips, quarter of an acre or more, not less than at the rate of 300 bushels per acre, Cabinet 1 year.  
 For the best crop of Sweet Potatoes, not less than quarter of an acre, Cabinet 1 year.  
 For the best field of Potatoes, not less than three acres, Colman's Reports.

## BUTTER AND CHEESE.

- For the best new milk Cheese, Colman's Reports.  
 For the best fresh Butter, not less than 5 lbs. Churn.  
 For the next best do., Butter Tub.  
 For the best potted or preserved Butter, not less than 20 lbs., nor less than two months old, Colman's Reports.  
 For the next best do., three stone Butter pots.

## CULINARY VEGETABLES.

- For the best and greatest variety of garden vegetables, \$10.  
 For the second-best do., \$5.  
 For the third-best do., Colman's Reports.

For the best Cabbage, not less than six heads, to be produced on or before the Fall Exhibition of 1845, Bridgman's Gardeners' Assistant.

For the best Cauliflower, not less than three heads, Vegetable Physiology.

For the best Kale, not less than three bunches of one pound each, to be produced by November 21st, 1845, Cabinet 1 year.

For the best bunch Beans, not less than half a peck, to be produced on or before June 25th, 1846, Cultivator 1 year.

For the best half peck of Onions, raised from the seed, Cabinet 1 year.

For the best bunch of Onions, certificate of merit.

For the best Tomatoes, not less than one peck, certificate of merit.

For the best Egg Plants, not less than half a dozen, certificate of merit.

### FRUITS.

For the best Strawberries, not less than two quarts, to be produced on or before July 1st, 1846, Cabinet 1 year.

For the best Raspberries, not less than three quarts, to be produced before June 20th, 1846, Cultivator 1 year.

For the best early Pears, not less than half a peck, to be produced on or before July 20th, 1846, China fruit basket.

For the best fall Pears, not less than half a peck, to be produced on or before Nov. 21st, 1845, China fruit basket.

For the best winter Pears, not less than half a peck, to be produced between the 1st and 17th of March, 1846, China fruit basket.

For the best native Grapes, not less than four bunches, to be produced between the 17th and 22nd of October, 1845, Bridgman's Gardeners' Assistant.

For the best Plums, the least liable to injury from insects, not less than two dozen, to be produced on or before the 5th of October, 1845, Cabinet 1 year.

For the best Quinces, not less than half a peck, to be produced at the Fall Exhibition of 1845, Cultivator 1 year.

For the best Peaches, not less than half a peck, to be produced at the Horticultural Exhibition, a handsome fruit basket.

For the best Apples, not less than half a peck, premium Saw.

For the next best Apples, Pruning Knife.

### FLOWERS.

For the best varieties of Camellias, to be produced to the Society by March, 1846, certificate of merit.

For the best varieties of Roses, to be produced to the Society in May or June, 1846, certificate of merit.

For the best variety of Double Pinks, to be produced on or before the 15th of June, 1846, certificate of merit.

For the best varieties of Hyacinths, to be produced to the Society on or before May 20th, 1846, certificate of merit.

For the six best varieties of Tulips, to be produced on or before May 20th, 1846, certificate of merit.

For the six best varieties of Dahlias, to be produced on or before October 20th, 1845, certificate of merit.

For the ten best varieties of Chrysanthemum, to be produced on or before November 21st, 1845, certificate of merit.

For the best Bouquet, exhibited at the exhibitions of the Society, certificate of merit.

For the introduction of any new and valuable Seeds, Fruits or Plants, presented to the Society during the years 1845-'46, a silver medal of the value of \$3 to \$5, at the discretion of the Board of Directors.

### SILK.

For the best reeled raw Silk, if approved, not less than a pound, a premium Silk Reel.

For the heaviest and best Cocoons, excluding double ones, not less than five pounds, Treatise on Silk.

### AGRICULTURAL IMPLEMENTS.

For the best Plough, certificate of merit.

For the best Drilling Machine, certificate of merit.

For the best Grain or Grass Sowing Machine, certificate of merit.

For the best Mowing or Reaping Machine, certificate of merit.

For the best Straw and Hay Cutter, certificate of merit.

For the best Root or Vegetable Cutter, certificate of merit.

For the best Corn Sheller, certificate of merit.

For the best display of Agricultural Implements, certificate of merit.

For the best Threshing Machine, certificate of merit.

For the best farm and road Wagon, certificate of merit.

For the best Cart, certificate of merit.

For the best and most convenient harvest bed on wagon or cart-wheels, certificate of merit.

Any newly invented Agricultural apparatus will be entitled to appropriate premiums.

### MAIZE SUGAR.

For the largest quantity of Sugar—having regard to quality—not less than 20 lbs., manufactured from corn-stalks, Colman's Reports.

### AMERICAN MANUFACTURES.

For the best American "Russia Iron," certificate of merit.

For the best piece of fine broad Cloth, certificate of merit.

For the best lot of Cassinetts, not less than three pieces, certificate of merit.

For the best lot of fine Satinetts, not less than three pieces, certificate of merit.

For the best specimen of Cotton goods, certificate of merit.

For the best ingrain piece of Carpeting, certificate of merit.

For the handsomest and best made saddle and bridle, certificate of merit.

For the handsomest and best set of single or double harness, certificate of merit.

For the best lot of Edge Tools, certificate of merit.

For the best constructed Cooking Stove, certificate of merit.

For the best lot of Cabinet Furniture, not less than three pieces, certificate of merit.

For the handsomest and best Parlour Stove, certificate of merit.

For the handsomest and best made Marble Mantel, certificate of merit.

For the handsomest and best made Boots and Shoes, three pairs of each, certificate of merit.

For the handsomest and best manufactured Hat, certificate of merit.

For the handsomest lot of manufactured Silverware, certificate of merit.

For the best and most convenient four-wheel Carriage or Dearborn for family use, and having regard to cost, certificate of merit.

For the handsomest and best specimen of Castings, certificate of merit.

For the best sample of Coach or Shoe Leather, certificate of merit.

☞ All to be made in New Castle county, and premiums to be awarded to any domestic articles not enumerated, as above, at the discretion of the Board of Directors.

### PLOUGHING MATCH,

For Horses and Oxen, single or double teams, and with or without drivers, to take place on the second day of the Exhibition.

For the best Ploughing, \$10 and Cabinet 1 year.

For the second-best Ploughing, Skinner's Farmers' Library.

For the third-best Ploughing, Colman's Reports.

For the fourth-best Ploughing, Farmers' Encyclopedia.

The great Ox Team will take place this year. Farmers generally are invited to bring in their Oxen to form a long team. The Oxen of each Hundred will be designated by a banner, and the Hundred that brings in the largest number will have its Oxen placed on the lead.

There will be a Ploughing Match for boys under 16 years of age.

For the best Ploughing, \$5.

For the second-best Ploughing, Farmers' Encyclopedia.

Claims for the premiums on crops must in every instance, be accompanied with a statement of the condition of the ground before commencing, and then the whole process of tillage, and the measurement must be of the whole crop by the half bushel, and certified to in writing by the applicant. Crops to be entered as early as the day of Exhibition—applications to be acted on by the committee any time before the 1st of January, 1846.

No animal shall take the same premium a second time.

All articles exhibited will be returned to contributors unless otherwise directed.

If, of any article for which a premium is offered, no specimen be submitted worthy of distinction, the Society reserves the power to withhold the premium, and in all cases where premiums shall be demanded, they will require such evidence from the claimants as shall be satisfactory to the Directors. No person shall be entitled to a premium for any animal which he shall not have had or possessed at least six months immediately preceding the time of exhibition. It is to be distinctly understood that all grain, vegetables, &c., produced for competition, shall be the growth of the producer.

All premiums not demanded within sixty days after they shall have been awarded, shall be deemed as having been relinquished to the Society. The object of the Society in offering these premiums, is simply to excite a spirit of emulation among cultivators to improve the varieties of fruits, vegetables, and other productions. It is desirable that each kind of fruit offered for competition may be as numerous as possible, regard being had to produce none but of fair quality. Each article should be accompanied by its appropriate name. It is also desirable that the articles exhibited should be accompanied by short observations on the mode of culture,

with any other remarks deemed to be of utility.

The Judges are authorized to withhold premiums where none is entitled to distinction; and where but one of a class is exhibited they will award such premium as they think it merits. Those who intend to compete, must inform the Committee of Arrangement before 11 o'clock on the day of exhibition.

All stock, &c., exhibited, must remain on the ground during the Exhibition; and all stock intended for sale will be required to be registered in a book provided by the Committee of arrangement, at the following rates: For each horse, \$2; for neat cattle, \$1 each; for hogs and sheep, 50 cents each.

Articles that are designed to compete for premiums, will be produced when practicable, at the annual exhibitions of the Society. Perishable articles may be offered at any of the meetings of the Society, or at those of the Directors, which take place on the afternoon of the second Saturday of every month in the City Hall; or they may be subjected to the inspection at any time, of either of the following committee appointed for that purpose, viz:

DR. J. W. THOMSON,  
MERRITT CANBY,  
SAMUEL HILLES,  
PHILIP REYBOLD,  
ANTHONY M. HIGGINS,  
ZIBA FERRIS,  
W. J. HURLOCK.

The Society will dine together at three o'clock. All members *not* in arrears to the Society, will receive their tickets to the dinner free of charge. The Annual Address will be delivered by a distinguished agriculturist, at John Hall's Hotel, immediately after dinner.

### Manure.

It is well known that in a close stable, where there are a good many horses, there is a very pungent smell, affecting the eyes and nose, more particularly when the stable is being cleaned out. This smell is occasioned by the flying off of ammonia, which is the essence of manure, and which volatilizes or flies off at a very low temperature—even the warmth of the manure in a stable will send it off, and it goes off in great quantities by the common heat of the manure in a farm yard, whether thrown up in heaps or not. There is however a very cheap and simple remedy for this. Before you begin to clear out your stable, dissolve some common salt in water; if a four horse stable, say 4 lbs. of salt dissolved in two buckets of water and poured through the

nose of a watering pan over the floor of the stable an hour or so before you begin to move the manure, and the volatile salts of ammonia will become fixed salts from their having united with the muriatic acid of the common salt, and the soda thus liberated from the salt, will quickly absorb carbonic acid, forming carbonate of soda; thus you will retain with your manure, the ammonia that would otherwise fly away, and you have also a new and most important agent thus introduced, viz: the carbonate of soda. As this is a most powerful solvent of all vegetable fibre, and seeing that all manures have to be rendered soluble before they can act upon vegetation, it is apparent that the carbonate of soda thus introduced must be a most powerful agent.—*Gardener's Chronicle.*

For the Farmers' Cabinet.

### Premiums of Pennsylvania Horticultural Society.

The Seventeenth Autumnal Exhibition of this Society, will be held as usual, at the Museum building in Ninth street, on the 24th, 25th and 26th of next month. The following premiums are offered.

#### FOR NATIVE GRAPES, VIZ:

For the best Isabella,	six bunches,	\$3 00
do do next best do.	do	2 00
do do best Bland or Powell,	do	3 00
do do next best do.	do	2 00
do do best Catawba,	do	3 00
do do next best do.	do	2 00
do do best Elsinborough,	do	3 00
do do next best do.	do	2 00
do do best of another variety,	do	3 00
do do next best do.	do	2 00

#### FOREIGN GRAPES, RAISED IN THE OPEN AIR.

For the best Black or Red Hamburg, four bunches,	\$5 00
do do Hansteretto, four bunches,	5 00
do do Black Constantia, do	5 00
do do Chasselas, do	5 00
do do White Gascoigne, do	5 00
do do Frontignac, do	5 00
do do St. Peter's, do	5 00
do do of another variety, do	5 00

#### FOREIGN GRAPES, RAISED UNDER GLASS.

For the best without artificial heat, four bunches,	\$5 00
do do next best do do do	3 00
do do best with artificial heat, do	5 00
do do next best do do do	3 00
do do best Peaches, one bushel,	10 00
do do next best do do do	5 00
do do best do one peck,	3 00
do do next best do do do	2 00
do do best do two dozen,	2 00
do do best Seckel Pears, one peck,	3 00
do do next best do do do	2 00
do do best Beurré or Butter do	3 00
do do next best do do do	2 00
do do best Bartlett Pears, half a peck,	3 00
do do best Pears, of another variety, one peck,	3 00
do do next best Pears do do	2 00
do do best and most numerous named varieties of Pears,	5 00
For the next best and most numerous named varieties of Pears,	3 00
For the best Apples, one bushel,	3 00
do do next best Apples do	2 00
do do best Apples, one peck,	2 00
do do best and most numerous named varieties of Apples,	5 00
For the next best and most numerous named varieties of Apples,	3 00
For the best Quinces, half a peck,	3 00

For the next best Quinces, half peck,	\$2 00
do do best Nectarines, one dozen,	3 00
do do Plums, two dozen,	3 00
do do next best do	2 00
do do best Water Melons, Spanish variety, three in number,	3 00
For the next best Water Melons, Spanish variety, three in number,	2 00
For the best Water Melons, of any other variety, three in number,	3 00
For the next best Water Melons, of another variety, three in number,	2 00
For the best Nutmeg Melons, or variety thereof, three in number,	2 00
For the next best Nutmeg Melons, or variety thereof, three in number,	1 00
For the best American seedling Potatoc, of superior quality,	5 00
For the best Potatoes, one bushel,	2 00
do do next best do do	1 00
do do best Sweet Potatoes, do	2 00
do do next best do do	1 00
do do best Onions, four dozen,	2 00
do do best Cabbage, six heads,	3 00
do do next best Cabbage, six heads,	2 00
do do best red Cabbage, six heads,	2 00
do do best Carrots, garden culture, two dozen,	3 00
do do best Lettuce, six heads,	2 00
do do next best do do	1 00
do do best Endive, blanched, six heads,	2 00
do do best Celery, six stalks,	2 00
do do next best, do do	1 00
do do best Salsify, two dozen,	2 00
do do Cranberries, cultivated, half a bushel,	2 00
do do next best do do do	1 00
For the best and greatest amount of Honey, produced by one hive of bees, being a swarm of 1845, to be exhibited without the bees,	5 00
For the next best and greatest amount of Honey produced by one hive of bees, being a swarm of 1845, to be exhibited without the bees,	3 00
For the best display of Honey,	5 00
do do next best do do	3 00
It is to be distinctly understood that the produce is to be from bees without artificial food.	
For a group of twelve of the best green-house plants, named specimens,	\$10 00
For another group of twelve of the next best green-house plants, named specimens,	5 00
For the best fifty named variety of Dahlias,	5 00
do do next best fifty named variety of Dahlias,	3 00
do do best twenty named variety of Dahlias,	3 00
do do next best do do	2 00
do do best Amer. Seedling Parti col'd Dahlia,	3 00
do do best do self coloured Dahlia,	3 00
do do best ten named varieties of Dahlias, grown by amateurs,	3 00
For the next best ten named varieties of Dahlias, grown by Amateurs,	2 00
For the best Dahlia, grown by Amateurs,	2 00
FOR DESIGNS FORMED OF CUT FLOWERS, ETC., Which are not to occupy at their base more than six feet square.	
For the best and most appropriate,	\$10 00
do do next best and most appropriate,	30 00
do do do do do do	20 00
do do do do do do	15 00
do do do do do do	12 00
do do do do do do	10 00
do do do do do do	8 00
do do do do do do	6 00
do do do do do do	5 00
☞ No special premiums to be awarded for designs.	
FOR BOUQUETS, To be confined to those suitable for the centre-table, the hand, or of basket-form.	
For the best and most approved,	\$7 00
do do next best and most approved,	5 00
do do do do do do	3 00
do do best formed of indigenous flowers,	5 00
do do next best do do do	3 00
do do best pair of Wreaths for Festooning,	10 00
do do next best do do do	5 00
do do next do do do	3 00

## THE FARMERS' CABINET, AND AMERICAN HERD-BOOK.

PHILADELPHIA, EIGHTH MONTH, 1845.

When the Editor assumed his present position in relation to the Cabinet, he was well aware that he was entering upon ground entirely new to him, and he freely acknowledges he had numerous misgivings. He was, however, personally acquainted with very many of the subscribers: he knew that he might rely upon their indulgence, and he thought also, he might hope to be leniently dealt with by others, with whom he had not the pleasure and benefit of an acquaintance. These calculations he has found realized. His intercourse with his subscribers has been—he might perhaps say, exclusively, for he does not recollect a single exception—of an agreeable character.

At the opening of another volume, we tender our thanks to the subscribers for their interest in the Cabinet, and invite them not only to continue, but to extend that interest. We thank our numerous correspondents, and ask them to continue their labours for the general good, and to prevail upon others to throw in their mite. All who are now on our lists are solicited to continue there—for we cannot afford to lose one of them; and to the thousands of farmers both in this State and elsewhere, who do not receive our paper, we would say, send in your names. We refer with some degree of satisfaction to the volume just closed for the character of the succeeding one, which we trust, will be of at least equal value.

It was announced in the CABINET two months ago, that Greeley & McElrath, of New York, were about to publish the *Farmers' Library and Monthly Journal of Agriculture*, to be edited by J. S. SKINNER, the originator, and for a long period the Editor of the *American Farmer*. The first number has been received. The solid and various character of the matter adapts it remarkably to the wants of those of our citizens who have leisure and taste—and who should not have?—for these things. The well known standing of the Editor is a strong guarantee for the value of the work. We cordially welcome his return to the editorial corps, and assign to him the ARM CHAIR.

We learn from the *Cherokee Advocate* that the Cherokees are about to form a National Agricultural Society. A meeting for that purpose was called, to be held at Tablequah on the 27th ult. This movement may lead to very important results. The Cherokees are decidedly an agricultural people, and perhaps nothing will more immediately conduce to their permanent advantage than the improvement of their agriculture. Whatever tends to this, should be encouraged.

The Reading Journal says that there were passed a few days ago down the Reading Rail Road, twelve hundred and thirty-four cars loaded with coal, averaging four and a half tons each, making in the whole five thousand five hundred and fifty-three tons, all passed over the whole road from end to end in one day.

PHILADELPHIA AGRICULTURAL, HORTICULTURAL, AND SEED WAREHOUSE.

No. 194½ Market street, between Fifth and Sixth streets, South side.

For sale as above, Prouty & Mears' Patent Centre Draught Self-sharpening Ploughs, with all the new improvements attached. These ploughs have taken nine premiums the last fall, in the States of Pennsylvania and Delaware. Subsoil ploughs for one or two horses—Taylor's new Patent Straw-cutters—Guillotine Improved do.—Corn-Planters—Cultivators—Harrows; Turnip-Drills, &c. Garden tools of every description. Also, *Vegetable and Flower seeds*, crop of 1844, grown for this establishment, and warranted true to name. Among the collection are several new kinds, very superior—as Seymour's White Giant Celery—Union Head Lettuce. Also, Peas—Beans—Potatoes, &c.—Fruit-trees—Bulbous roots, &c., for sale at the lowest prices, by  
D. O. PROUTY.

**Poudrette.**

A valuable manure—of the best quality, prepared in Philadelphia, for sale at the office of the FARMERS' CABINET, No. 50, North Fourth Street, or at the manufactory, near the Penitentiary on Coates' street. Present price, \$1 75 per barrel, containing four bushels—\$5 for three barrels—\$15 for ten barrels, or thirty cents a bushel. Orders from a distance, enclosing the cash, with cost of portage, will be promptly attended to, by carefully delivering the barrels on board of such conveyance as may be designated. The results on corn and wheat have been generally very satisfactory. Farmers to the south and in the interior, both of this State and of New Jersey, are invited to try it. It is now seasonable for turnips, wheat, &c.

JOSIAH TATUM.

**Agency for the Purchase & Sale of IMPROVED BREEDS OF CATTLE & SHEEP.**

The subscriber takes this method of informing his friends and the public, that he will attend to the purchase and sale of the improved breeds of cattle, sheep, &c., for a reasonable commission. All letters post paid, addressed to him at Philadelphia, will be attended to without delay.  
AARON CLEMENT.

March 15th, 1845.

WELL GROWN sweet potatoes, from the farm of Mark Clement, Jr., near Woodbury, N. J., were in our market on the 1st inst.

JONATHAN ROBERTS, of this State, and DR. MUSE, of Maryland, will be the principal speakers at the New Castle Agricultural Exhibition, on the 17th and 18th of next month.

**SHORT ADVERTISEMENTS.**

The subject matter of which, may correspond with the agricultural character of this paper, will be inserted at the rate of one dollar for each insertion of ten lines or less; and so in proportion for each additional line. Payment in advance.

NUMBER 3, of the *Pennsylvania Journal of Prison Discipline*, has been published from this office, where subscriptions are received. It contains, among much other valuable matter, the Memorial presented to our Legislature last winter by D. L. Dix, soliciting the establishment of a State Lunatic Asylum.

THE New York State Agricultural Society will hold its next *Cattle Show and Fair* at Utica, on the 16th, 17th, and 18th of next month.

IN a note recently received from Dr. Thomson, of Wilmington, he asks, "Have any of your correspondents informed you, and accounted for it—why so few bees have swarmed this year? It is a general fact—why is it?" We have repeatedly heard the same inquiry made here. The Editor has a couple of healthy swarms—one entering their hive in the bath room, under the window-sash—the other in his yard—neither of them has swarmed this season, nor did they last.

POUDRETTE is a manufactured manure, powerfully stimulating in its properties, and will be found an excellent application to the flower garden, or border, or to pot plants. It should be applied to the top of the soil, and then worked in with the rake or hoe. It is constantly for sale at this office in small quantities:—by the half peck, &c.

DR. ELLWYN informs us that he has made an improvement in the Horse-rake, by attaching a wheel about six inches in diameter to each end of the beam. It works more easily, and answers, as he says, "perfectly." Farmers hardly appreciate this machine. We consider the revolving Horse-rake as one of the greatest improvements offered to the farmer within the last half century. We have followed it many an hour, and contemplated its simplicity and the completeness of its operations with delight.

THE quantity of rain which fell during the Seventh month, 1845, was about two inches and three-quarters. . . . . 2.76 inches.  
Penn. Hospital, 8th mo. 1st.

According to a writer in the *North American*, who signs himself *Fahrenheit*, the "average temperature of the Seventh month was 75½°; viz: 68½° at sunrise—85° at 2 o'clock, and 73° at 6 o'clock in the evening. The maximum temperature was 96° on the 14th, and the minimum was 58½° on the 1st.—the variation 39½°. The hottest day was the 14th, the average temperature of which was 85½°, and the coldest was the 1st; the average of which was 64°. There were twenty-four and a half days clear, and six and a half cloudy. The greatest diurnal variation was 23½° on the 14th, and the least do. was 12° on the 26th. Rain fell on eleven days, and hail one day. On thirty-one days the thermometer was above 70° at noon; on twenty-three days it was above 80°, and on ten it was between 90° and 100°. The wind blew from the south-west fifteen and a half days, or just half of the whole month; from the north-west two and a half days; west six and a half days; north-east half a day; south-east four and a half days; and east one and a half days."

We keep on hand at this office, and will supply our friends with Agricultural works generally. Among which are

THE FARMER'S ENCYCLOPEDIA, full-bound in leather;—Price	\$4 00
YOUATT ON THE HORSE, with J. S. Skinner's very valuable Additions;	2 00
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“ ANIMAL CHEMISTRY,	25
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As well as his larger works on Chemistry and Agriculture.

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☞ We are prepared to bind books to order.

### Seed Store,

No. 23 Market Street, Philadelphia.

The subscriber keeps constantly a supply of White and Red clover, and other grass seeds. Field seeds, consisting of Spring and Winter Wheats, Potatoe, Oats, Barley, and choice varieties of Seed-corn. Also in season, Fruit and Shade Trees. Garden and Bird seeds generally. Guano in parcels to suit purchasers.

Philad., March 15th.

M. S. POWELL.  
tf.

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Of the most approved varieties for Cattle and Table use, with a complete Assortment of

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JOS. P. H. COATES,

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### ENGLISH SHEPHERD DOGS.

A FEW of these valuable animals of pure blood, may now be obtained at \$5 each, delivered in Philadelphia. The dam was selected in England last fall, for the present owner, and the pups now o'd enough for delivery, were sired by a thorough bred Shepherd Dog from the State of New York. Early application to be made—post-paid—at the office of the Farmers' Cabinet, No. 50 N. Fourth street, Philadelphia.

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## THE FARMERS' CABINET,

IS PUBLISHED MONTHLY BY

JOSIAH TATUM, No. 50 NORTH FOURTH STREET, PHILADELPHIA.

It is issued on the fifteenth of every month, in numbers of 32 octavo pages each. The subjects will be illustrated by engravings, when they can be appropriately introduced.

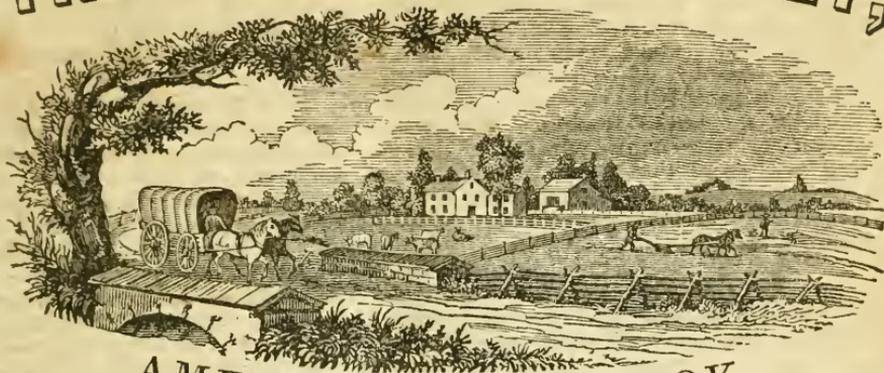
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# THE FARMERS' CABINET, AND



## AMERICAN HERD-BOOK.

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

Perfect Agriculture is the true foundation of all trade and industry.—LIEBIG.

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### Experiments with Guano.

THE following interesting account has been kindly forwarded for insertion. It is part of a letter from Edward Stabler, of Sandy Spring, Md., to S. K. George, of Baltimore, and is dated in the Seventh month last. We copy from the *Rockville Weekly Reporter*.—Ed.

ALL my experiments with guano, have not alike proved successful; and as it sometimes occurs, that even in a failure, either the operator himself, or others, derive future benefit by investigating the causes, I will give the results in both cases. I think I can very readily trace to the proper cause some of the failures reported.

*Experiment 1st.*—On a field of oat stubble, which was in corn the previous year, and had from 75 to 100 bushels of lime to the acre, I selected a strip of one acre, near the middle, and extending through the field; after ploughing, the land was once harrowed;—the ground broke up very dry and in

CAR.—VOL. X.—No. 2.

bad order for seeding—and about the 7th of the Ninth month (September) 200 pounds of guano were sown by hand, without admixture with anything; the ground was again well harrowed, and after remaining a couple of days, for the guano to assimilate with the soil, it was sown with about two and a half bushels of Mediterranean wheat; then well harrowed and *rubbed* in. About half of the field, and adjoining the guano on one side, was just previously sown with the same kind and quantity of wheat, with the addition of twelve bushels of ground bones to the acre.

On the other side of the guano, and including the remainder of the field, there were about twenty-five ox cart-loads—35 bushels to the load—of barn-yard manure to the acre; and the seeding, the same as the other parts. In two or three weeks it was evident at a glance, that the guanoed part had the start in vegetating; and which it steadily maintained until harvest.

The relative growth of the crop was generally estimated by those who examined it, at about the same yield, for those portions with ground bones and manure; but inferior, by 33 to 50 per cent. to the guano—that there was this difference, I am fully satisfied; but having only harvested the guanoed part separately, we cannot tell “what the half bushel says.” For experiment, the quantity of ground bones was varied on several adjoining *lands*; at no time was there a marked difference, between six and

(41)

twelve bushels, or twelve and eighteen bushels; but between six and eighteen bushels, it was plainly seen. The yield in grain of the first quality, from the acre with guano, is 35 bushels—no account taken of the screenings or small grain—with by far the heaviest crop of straw I ever harvested. A single bushel weighed 65 pounds. The ground was accurately measured; and by weighing a dozen or two of the sheaves from different parts of the mow, to obtain an average size, the whole crop was estimated at four and a half tons. But a small portion, either of this acre, or the field, stood thick enough; hence the great growth of straw. Although the quantity of seed sown might be considered ample if it all vegetated, owing to the drought when sown, it is probable much of the seed was lost; there being just enough moisture to swell, but not to sprout the grain which lay near the surface. The opinion "that more seed would have made a better yield," has, I am aware, been controverted by some. In the present case, I am certain such would have been the result. All are not aware, perhaps, that in a bushel of Mediterranean wheat, there are not as many grains by about 50 per cent., as in a bushel of White bearded wheat; or by about 33 per cent. of the Red chaff bearded wheat—neither does the Mediterranean wheat usually branch so well as either of the others. Fair as the present yield is, the addition of two to three pecks more of seed would have added in equal proportion to the crop; and forty bushels or more, could just as easily have been raised on the acre. In good ground, I have never seen this wheat too thick; and very rarely indeed thick enough.

*Experiment 2nd.*—About three weeks later I sowed a lot—corn ground—with 150 pounds of guano, and two bushels of White bearded wheat to the acre—about equal to three bushels of Mediterranean wheat. The land was limed in the spring, 70 bushels to the acre. The growth on this lot was *about thick enough*, and will, I expect, produce more wheat to the acre than experiment No. 1.; there was less straw, but the heads equally large and well filled. Adjoining this piece was a potatoe lot, which had been heavily limed and manured in the spring; it was sown with two and a half bushels of Mediterranean wheat, and twelve bushels of ground bones to the acre. To judge by the eye at harvest, the guanoed lot will yield nearly two to one; and certainly without any material difference in the quality of the soil, or other advantage on either side, manure excepted.

*Experiment 3rd.*—I sowed 100 bushels

of ground bones on a part of my oat crop, at the rate of about 16 bushels to the acre; it was sown heavier than I intended, and only extended over about two thirds of the field. Adjoining to the bones, and both extending through the field, guano was sown at the rate of 200 pounds to the acre: the crop is materially diminished by the drought; but the difference in favour of the guano is not less than 50 per cent; and at a cost, as compared with the ground bones, of just one half; others have estimated the yield at double: this land was also limed the year preceding—about 70 bushels to the acre.

*Experiment 4th.*—Finding the crop of grass likely to be very short, I ploughed up part of a clover lot—that had several years previously 100 bushels of lime to the acre—and sowed four bushels of corn broadcast. Similar to the mode adopted in my first experiment, there were 200 pounds of guano sown to the acre; but leaving a strip of 10 feet wide through the middle of the lot, without guano. The crop has suffered greatly from the drought, and the part with guano the most, i. e., the blades are more shrivelled, but is still, of the best colour: all who have examined it, estimate the difference in favour of the guano, at two, three, and some even four to one. Since the longer continuance of the dry weather, the difference is not so marked; there is yet, however, more than two to one in favour of the guano.

As this is *the era of experiments*, I will briefly allude to another, not altogether foreign to the general subject. Anticipating a dry season, we used the subsoil plough after the bar-share, in this lot; but after eight or ten rounds, were compelled to abandon it, and double the team on the plough: the result is, a marked increase of the growth almost to a line where the subsoil plough was laid aside.

*Experiment 5th.*—Just previous to planting corn, the land had 60 bushels—in all 120 bushels—of lime to the acre; and as there was no rain to slake it, it was broken up and spread in a caustic state, and the land well harrowed. Within a few days, and for experiment,—for I feared the contact of the guano with lime in this state—300 pounds were sown broadcast on one and a half acres; the ground again harrowed and the corn planted. It came up beautifully; perhaps not a hill in a thousand missing. When four to six inches high, an even table spoonful of guano,—or a handful to three hills—was dropped around and near the plant, but not on it—the part sown broadcast excepted; and occasionally leaving a row without guano, the Cultivator

following to mix it with the soil. Not long after the application of the guano, the corn was attacked by that greatest of scourges, the bud worm; eating into the centre of the stalk, near the surface of the ground, and the first and largest growth literally destroyed; so much of it as out-grew the injury, was for a long time dwindling and weak.

This experiment I consider a failure; for at no time could any material difference be perceived in the growth of the corn, with and without guano. A part of the field is low or meadow land; and has not suffered materially from the drought; here the corn is heavy; but whether attributable to the guano, I know not: unfortunately, no rows on this part were left without guano: and therefore allow it to be a failure, which I attribute to the contact of the guano with the quick lime. For, on the lands apparently similar and equally limed, though a year and more preceding, there are numerous experiments in the vicinity on corn crops, where the effects of the guano are most decided; both when sown broadcast before planting, and applied to the hill.

I have also applied guano on my melon vines; a small handful to the hill, producing the most luxuriant growth, both of vines and fruit, as compared with the adjoining hills, without any. It was applied a day or two before planting the seed, and well chopped in with the hoe—the hills were once watered with a weak solution—the ground being too dry to sprout the seed—by soaking three guano bags in half a barrel of water.

It may be observed as a general, if not invariable rule, that if seed of many, if not most kinds, come into immediate contact with unadulterated guano, they fail to vegetate. In my experiments I carefully avoided mixing the guano with plaster, ashes, or any other substance; because, if the crop was benefited, I wished to know with certainty what to attribute it to.

My letter has already extended to an unreasonable and unexpected length; but I shall, I hope, be excused for a few additional remarks.

The case of failure reported by John Mackenzie in the Southern Planter, given "for the benefit of the agricultural community," will benefit many, I have no doubt. I for one thank him for the communication. Presuming that it was the pure Peruvian guano, his experiments as well as many others, go to establish the fact, that by a top-dressing on wheat in the spring, the "money and labour expended on guano have been entirely thrown away." In my case, a different method of using it—and if I am

not mistaken, both were of the same cargo, the Orpheus—has produced results altogether satisfactory.

I have heard of but one such successful application; the case reported by our Senator, J. A. Pearce, of Chestertown. But when applied as a top-dressing on wheat *in the fall*, so as to have the full benefit of the winter rains, it has in some cases succeeded well. Dr. Wm. B. Magruder, one of our most enterprising and successful farmers and planters, informed me yesterday, that he believed his wheat crop was doubled by 200 lbs. of guano to the acre, applied soon after the wheat came up. He has also used it in his tobacco crop with evident advantage, as he thinks—I saw the latter; and although it looked well, I am no judge of the crop, or quality, *until manufactured*. I have examined many of the experiments of my neighbours, who joined our club in the purchase of nineteen tons last spring; and I expect every individual is so far pleased with the results, that at least as much more,—and some I know would double their purchases,—would be used this fall, if the Peruvian guano—with which all our experiments have been made—could be had at the same price.

The question has often been asked, how much wheat my land would have produced to the acre, without guano,—this question cannot be answered with certainty; but to judge by the crop of the same kind of wheat on the adjoining field last season, and without manure; and also of crops under similar circumstances of my neighbours this season, I think 10 to 12 bushels a full estimate; 15 bushels at the outside. In their care not to let the manure extend beyond its prescribed limits, my hands did not spread it quite to the guano; this left a strip through the field without any manure; and I am confident there was not one-third of the wheat on it; a space of 15 to 20 feet wide should have been left. Dr. Dupuy asks, "if the drought was as severe here, as generally through the country?" I presume nearly so, or quite.

Our oats and hay are not more than half crops; and if not relieved ere long by rain, our corn crops will be still less.

The spring was unusually dry, and the wheat in experiment 1st, suffered in consequence; yet the situation being lower, was more in its favour than the manured part. The ground bones had in all respects equal advantages with the guano: in neither, does any difference appear in the timothy and clover; both are good. Estimating the yield of the adjoining acre with ground bones, by the dozen sheaves, and it cannot

vary much from the actual result, the latter yielded nearly 28 bushels.\*

For the benefit of those who are opposed to taking agricultural works, or refrain from doing so, which amounts to the same thing, I would add, that this field was completely worn out when purchased by me; the higher part, without soil; and the lower part, like mortar in the winter and spring, baked under the summer's sun like a brick. I had attempted draining, but not successfully.

Meeting with an able essay on draining, in either the *Cultivator* or *Farmers' Cabinet*, I concluded to make another effort.

The field was well broken up in the fall and winter, and in the spring a heavy covering of lime was put on; the draining was deferred, however, by a long illness confining me to the house for months. The crop of corn was planted; and the yield was not over 15 bushels to the acre. Previous to sowing in oats, there were not less than five to six hundred yards of surface and under drains made.

I believe the *increased* crop of oats nearly paid for both the lime and drains. The result in the wheat has been stated.

Four years since, in the then state of the land, it would not have produced more than five bushels of wheat to the acre; now it is light and mellow, and will, most likely, produce an increase in grass of four or five to one. It is not a very difficult problem to solve, whether there has been a gain or loss in the transaction; when by the expenditure of four dollars for 200 pounds of guano, *twenty bushels of wheat additional* are raised to the acre; or that a single dollar for a year's subscription to an *Agricultural Journal*, should be the means, or suggest the idea for improvement, by which land that formerly did not produce over five to ten bushels, will now yield 30 to 40 bushels to the acre.

EDWARD STABLER.

### Liquid Manures and their Uses.

Nothing is more common than for authors, on various subjects in gardening, to recommend liquid manure to be applied, without in one instance, from the beginning to the

end of their remarks, saying what they meant by it, of what it is to be composed, or what quantity of any kind of manure and water composes it. Now there is hardly a more uncertain thing, hardly a more vague expression, than liquid manure. Various are the manures of the present day. Leaf mould is vegetable manure, and the most innocent of any; for it is composed of nothing but the leaves which were the produce of the earth returned to earth again; and if you could make a ton of it hold in solution with a butt of water, and it were applied instead of water itself, it could do no harm; but this, perhaps, never entered the thoughts of those who recommend liquid manure.

We have seen the dung of poultry made into liquid manure; one shovelful of it, in a state which we may call partly decomposed, put into a barrel of water, that is, 36 gallons. This was being applied efficaciously to potted plants about every third watering, and to out-of-door crops once a week. Every time it was used it was stirred up until the barrel was half emptied, when the liquor was used without stirring. The contents at the bottom were always cleaned out every time the liquor was emptied, that the quality should always be alike, and not be altered by the sediment of the former mixture. This was thrown on the ordinary dunghill, where it could do no harm.

In another establishment sheep's dung was used, at the rate of a peck to a barrel of water. This was put in one day, and stirred up four or five times; and the next day, when used, it was stirred again. This was being used with success to large camelias and orange trees, while they were making growth, and with considerable advantage, and also to some beds of layers newly planted out, without any watering between at all; but as it was explained to us, the soil might have been covered all over an inch or two thick, and then left to wash in by rain and artificial watering, without doing any injury; and certainly, if the appearance of things were a criterion, there could be no doubt of it.

We have seen cow-dung used, when decomposed, in rather large proportions; and here the precaution of using boiling water was taken, on account, as it was said, of the great disposition of cow-dung to breed the maggot or small grubs of some kind. The proportion was a spadeful to half a barrel, and stirred well several times before the water cooled. The liquid was used the next day to Carnations and Piccotees, in pots, just coming into bloom, and it was said to give them a good colour, and add to

\* A portion of this acre was unintentionally sown heavier with ground bones, say 16 to 18 bushels to the acre, instead of 12 bushels as intended. In this case also, the first crop more than repays the cost of manure, and will yield large returns in the grass crop, for years to come. We know the ground bones to be a durable manure. For a mere experiment one of my neighbours used a few pounds of guano on his corn last year; the effect on the oats this season, is as marked as on the corn.

their strength. Again, we have seen the new cow-dung used to a bed of Ranunculuses, which were literally destroyed by the black maggot, and scarcely a healthy root taken up; the smell of the cow-dung evidently drawing or attracting some fly, which blowed and bred there, for there was nothing to be seen but myriads of them about the soil when stirred a little. Here the mixture was cold water, and the proportion about a spadeful to half a barrel, but the waterings with this were repeated without intermission. Since this I have actually seen a recommendation of Dr. Horner's, to form a Ranunculus bed with liquid manure and the soil together; the former to be saturated with the latter, as thick as cream. This must be pure theory; because, wherever there is green cow-dung used, there will the cow-dung-bob—as the fishermen call it—and other nasty maggots, breed by millions, if the fly be in the neighbourhood at all, and we never knew a place where cows were kept or grazed in the neighbourhood, that was not infested with it.

Another liquid manure, which we have seen tried side by side with guano, was common night-soil. It was offensive, it is true; for it had not been disinfected by any process. Two pounds of each were tried in twenty gallons of water; the former was at first very troublesome to hold in solution in water. It was only done at last by mixing it with something like an equal weight of powdered lime, and when well amalgamated and thinned with boiling water, it was stirred and allowed to cool. The guano was, unlike manure, pounded and bruised, and dissolved with its weight of lime. These two fertilizers were tried on alternate half rods of onions; the night-soil was exceedingly efficacious, the guano not nearly so much; indeed, not much better, if any, than a half rod left to the common watering-pot. But here it may be mentioned, that the guano was not subject to analysis, and therefore nothing can be said as to guano in general from this experiment, although it may be safely taken as something like evidence in behalf of night-soil.

It must now strike any one, that to order liquid manure to be applied to anything, without stating how it is to be made, is the most vague and uncertain thing in the world. In a farm not far from the metropolis, the drainings of a cow-house, that is, the pure wet, without any of the manure, were used with the greatest advantage, with its equal quantity of water, and applied by a contrivance similar to a water-cart, though more clumsily made, all over a pasture field twice during the spring, and, as compared with

the other pasture of the same character adjoining, the crop was much heavier. The same stuff, with three times its quantity of water, was used to saturate the piece of ground previous to sowing cabbage, brocoli, and other seeds of that nature, and the first crop came up, turned yellow, and died; on raking it well over, and sowing again, the seedlings came fine, strong, and healthy, and made good plants.

Liquid manure for dahlias, when the ground is not prepared beforehand, has been made of cow-dung, well decomposed, at the rate of a pint to a pail of water, and did wonders, which was rendered evident by leaving some to plain water only, and observing the great difference in the growth and size of flowers, foliage, and plants, altogether. Here was a very large proportion of cow-dung; and, as the mixture was stirred and used directly, before the dung or any of the particles could settle, the earth was, after a few waterings, covered with the fibres and waste, as it were, of the dung, which, perhaps, with the washing of the rain, found nourishment still, when watering was unnecessary.

Much has been said lately about sulphate of ammonia and water as a fertilizer, at the rate of half an ounce of sulphate to a gallon of water. This we have heard affirmed to be good if used once to every five or six waterings, but not oftener, as the effect would be bad.

Upon the whole, we do hope that those who talk or write of liquid manure, would be good enough to say of what it is to be composed, what quantities are to be used, and when and how it is to be applied; not in a vague, but a positive way. It is certain that, after pots have been washed through and through with plain water for months, liquid manure may be of great service occasionally, to supply what has been washed away; but it should be manure adapted to the plant, and the direction plain.—*London Gardener and Florist.*

**CHANGE OF SEED WHEAT.**—If wheat growers would take a little pains to obtain for seed, wheat grown on a different kind of soil from their own—which in this country is easily done—they would find their crops improved. This is a well established fact in Agriculture, and of sufficient importance to deserve more attention than it generally receives.

It is said that milk set in glass pans, will produce more cream, and that of a better quality, than when set in other pans. They are made of the common green bottle glass.

### Importance of Manure.

IN agricultural establishments, in which the importance of manure is duly appreciated, every precaution is taken both for its production and preservation. Any expense incurred in improving this vital department of the farm, is soon repaid beyond all proportion to the outlay. The industry and the intelligence possessed by the farmer, may indeed almost be judged of at a glance by the care he bestows on his dunghill. It is truly a deplorable thing to witness the neglect which causes the vast loss and destruction of manure over a great part of these countries. The dunghill is often arranged as if it were a matter of moment that it should be exposed to the water collected from every roof in the vicinity—as if the business were to take advantage of every shower of rain to wash and cleanse it from all it contains that is really valuable. The main secret of the admirable and successful husbandry of French Flanders, may perhaps lie in the extreme care that is taken in that country to collect everything that can contribute to the fertility of the soil. Our agricultural societies, which are now so universally established, would confer one of the greatest services on the community, if they would encourage by every means at their command, economy of manure; premiums awarded to those farmers who should preserve their dunghills in the most rational and advantageous manner, would prove of more real service than premiums in many other and more popular directions.

The place where the dung of a farm is laid, ought to be rather near to the stables and cow-houses. The arrangements may be varied to infinity, but they ought all to combine the following conditions: 1st. That the drippings from the heap should not run away, but should be collected in a tank or cistern under ground; 2nd. That no water, except the rain which falls on the dung-heap, or any water that may be thrown upon it on purpose, should be allowed to drain into this reservoir; 3rd. That the place for the dunghill be of size enough to avoid the necessity of heaping the manure to too great a height. The ground upon which the dung is piled ought to slope gently one way or another—from each side towards the centre is best—so that the drippings may be collected in the tank or cistern. It is also desirable, that the soil underneath should be clayey and impermeable; where it is not so, it becomes necessary to puddle, to cement, or to pave the bottom of the dunghill stance as well as the bottom and sides of the tank or cistern. The water which runs from the

heap should be thrown back upon it occasionally, by means of a pump and hose, so as to preserve it in a state of constant moistness. The opening into the tank, which is best placed immediately under the centre of the dung-heap, is closed by means of a strong grating in wood or iron, the bars being sufficiently close to prevent the solid matters from passing through. One very important arrangement, one which, in fact, must on no account be overlooked, is that the drains from the stables and cow-houses be so contrived, that they all run to the dunghill. The litter, however abundant, never absorbs the whole of the urine, especially at the time when the cattle are upon green food; and it would be quite unpardonable in the husbandman did he not take measures to secure this, the most valuable portion of the manure at his disposal.

The litter mixed with the droppings of the animals, and soaked with their urine, ought to be carried from the stables to the dunghill upon a light barrow. The practice of dragging out the manure with dung-hooks, which is often permitted when the field upon which it is to be spread is at no great distance, ought on no account to be allowed; the loss from the practice is always considerable.

Materials ought not to be thrown on the dunghill at random or hap-hazard; they should be evenly spread and divided; an uneven heap gives rise to vacancies, which by and by become mouldy, to the great detriment of the manure. It is of much importance that the heap be pretty solid, in order to prevent too great a rise of temperature, and too rapid a fermentation, which are always injurious. Particular care must also be taken that the heap preserves a sufficient degree of moistness, not only of its surface but of its entire mass, which is effected by watering it frequently. At Bechelbronn, our dung-heap is so firmly trodden down, in the course of its accumulation, by the feet of the workmen, that a loaded wagon drawn by four horses, can be taken across it without very great difficulty. The thickness of the heap is not a matter of indifference: besides the convenience of loading, which must not be forgotten, any great thickness may become injurious by causing the temperature to rise too high; circumstances occurring which should compel us to keep a mass in this state for any length of time, the decomposition would make such progress as to occasion very great loss. Experience has shown, that the thickness of a dung-heap ought not to exceed from about four feet and a half to six feet and a half; it ought certainly never to exceed the latter.

With a view to prevent the drying of the dung-heap and its consequences, too great a rise in temperature and destruction of manure, it is the practice in some places to arrange the dung-heap on the north side of a building, which is undoubtedly advantageous, but not always to be realized, especially in connection with a farm of some magnitude, where the immediate vicinity of a large mass of matter in a state of putrid fermentation, is not only unpleasant, but may be unwholesome. In the north of France, the dung-heap is sometimes shaded from the sun by means of a row of elms, and the shelter thus secured is vastly preferable to that which it has been proposed to obtain by means of a roof or shed, which, besides other inconveniences, would be found costly at first, liable to speedy decay, &c. If circumstances, such as the smallness of the farm, the permeable nature of the soil, &c., prevent the construction of a reservoir, there is risk of the dung-water being quite lost; but such waste may be prevented by covering the bottom of the pit or stance for the dung-heap with a bed of sand, peat marl, or any other dry and porous substance capable of absorbing liquids. This practice is often followed by the farmers of Alsace.—*Boussingault's Rural Economy.*

#### Food for different Latitudes.

FROM FOWNES' Prize Essay on Chemistry, as exemplifying the wisdom and beneficence of the Supreme Being.

"We are accustomed to look with horror and disgust at the food of these poor people, as we in our ignorance and presumption dare to call them; to commiserate those who, as our northern navigators relate, prefer a piece of tallow-candle, or a draught of train-oil, to the fare of an English man-of-war; but a little more consideration might perhaps show us, that the blubber and fat of the arctic cetacea and fish, the only food the inhabitants of these countries can obtain, really constitute the only sort of food which could enable them to bear up against the extremities of cold to which they are subject. There is no other substance but fat, and that in very large quantity, which would answer the purpose required. It is a substance exceedingly rich in hydrogen, and in the body eminently combustible; weight for weight, it will generate a far larger amount of heat, when burned in the blood, than any thing else which can be taken as food. It will be wiser, then, instead of condemning, as filthy and abhorrent, the tastes and propensities of the Esquimaux, to consider them as a special adaptation, by an unspcakably

benevolent Providence, of the very wishes and inclinations of the individual to the circumstances of his life.

"But this is not all: the same individual who, when in a warm or temperate climate, craves a large proportion of bread and vegetable food, and turns with aversion from fatty substances, experiences, when transported to the frozen regions of the north, a complete revolution in his tastes and desires. Nothing will then satisfy him but fat: the flesh of deer, fish, to be acceptable, must be loaded with fat; he takes delight in sucking the marrow from the bones; nothing in the shape of grease comes amiss to him; he longs for it, he desires it as much as he formerly loathed it. But this new, this induced state, only lasts as long as his mode of life requires; removal to a milder region restores, to a very great extent, the first condition."

#### Blind Bridles.

LOOK and reflect; use your own intellect. Yes, use your thinking powers, friends, they were given you to use and not abuse. Blind bridles! truly named, surely. Art never invented a more fatal thing to the eyes of horses than when she devised this plan of depriving the horse of what nature intended he should enjoy. But, says one, why are blinders injurious to the horse? Because they gather dirt and heat around the eyes. Dirt irritates the eye and heat produces inflammation. These bridles so entrammel the eyes of the horse, that he is compelled to be constantly straining them to see his way. This over exertion of the nerve soon brings on disease. Eyes were not made in vain. Had they been needless, they would not have been located in the head. They were placed on the corner of the head that he might have the advantage of looking in different directions. Men, in the abundance of their imaginary wisdom, concluded the horse had too much sight, and they wished to curtail it: hence the origin of blind bridles. Think of this seriously and you will abandon the use of so destructive an appendage. Remember, that blind bridles and diseased eyes are inseparably connected. Custom hoodwinks the senses of men, as much as blind bridles do the vision of horses.

JOHN MADDOCK,  
Farrier and Blacksmith.

Where is the use of blind halters? if horses were unaccustomed to them, they would be no more liable to frighten without, than with them. Why are they not just as necessary with the saddle, as in the carriage or the team? Who would think of sitting on a saddle with his horse's eyes three-fourths shut out from the light of day? and how much finer and nobler would this noble animal appear in all situations, with his eye untrammelled?—Ed.

### Premium—diseased Potatoes—American Agricultural Association.

At a meeting of the Association, Monday, May 5th, the following resolution, offered by Dr. Gardner, was unanimously adopted:

*Resolved*, That this Association offer a liberal premium for a series of investigations into the nature and origin of the disease of the Potatoe, to be made under the conditions imposed by the Executive Committee.

The Executive Committee, therefore, offer under the preceding resolution, a premium of \$50 for the best investigations made during the ensuing season, in accordance with the plan drawn up by the chemist of the Association, and appended. They also impose the following conditions: The competitors to be or to become members of the Association; the papers and specimens to be forwarded free of expense to the Executive Committee, through their Secretary, Dr. Gardner, 412 Fourth street, N. Y., on or before the 1st of November; communications, whether successful or otherwise, to become the property of the Association; all persons in the United States may become competitors. The premium will be declared at the general meeting in January next. The papers sent to bear a motto without the name or address of the author, these particulars being contained in a sealed letter superscribed with the same motto. Investigations terminating without the appearance of disease in the potatoe, but pursued in accordance with the ensuing conditions, will be received in competition.

The following conditions to be observed by competitors for the premium of the Association, are respectfully submitted by order of the Executive Committee.

D. P. GARDNER.

May 8th, 1845.

1st. The papers to be entirely original, and in no part transcripts from other works, to contain a record of the observations made during the growth of the plants and conducted on at least 150 specimens.

2nd. The variety and character of the seed potatoes, the mode and time of planting, the nature of the soil, its condition of drainage, the manures used and previous tillage, to be fully detailed.

3rd. A daily register to be kept from the time of sowing to securing the crop, containing the temperature in the sun and shade, and the dew\* point in the shade at 12 o'clock, with the state of the sky, the occurrence of rains, dews or other meteorolo-

\* If the observer be not provided with an instrument for ascertaining the dew point, the following simple method may be adopted:—Let a little fresh

gical conditions. The manner of taking the dew point to be stated.

4th. Five entire plants to be taken up during each week after the third week from planting, and a record made of the condition of the leaves, stems, roots and tubers, the last being cut open and carefully inspected with a simple microscope, and all unnatural appearances written down with the day of the observation. Diseased proportions to be preserved by drying and forwarded to the Association.

5th. All insects discovered on the green portions, roots, &c., to be examined, and at least twelve specimens of each species in the perfect (imago) state to be preserved and forwarded to the Association. When practicable, the caterpillar to be described or figured, and the habits of the insect recorded. This condition to be performed in the case of all insects whatsoever found preying on the herbage of roots.

6th. At least twelve specimens of tubers in every stage of disease with a similar number in a sound condition of the same variety to be forwarded. The leaves and upper parts of any plants presenting a remarkable appearance, to be carefully dried between sheets of unsized paper, and at least twelve specimens sent, with all other objects in the same box or parcel as the written communication.

### Profit of Hens.

It is frequently asserted that poultry is more plague than profit. But this, like many other assertions, must be taken with proper qualifications. We contend, if you have a good breed of fowls, take proper care of them, and are near a reasonably good market, that the keeping of fowls is as profitable a business for the amount of capital invested in it, as a farmer's boy, or the women of the family, can be engaged in. To prove this we will cite one example. When we were at the pleasant farm, last September, of Messrs. H. and J. Carpenter, of Poughkeepsie, their brother, Mr. Gerard Carpenter, showed us an account of the number of eggs laid by their hens up to that time from the 1st of January. It was so exact and satis-

spring water be placed in a dry wine glass and introduce a thermometer, stir it freely in the fluid and ascertain the temperature at the moment the dew on the exterior of the glass is disappearing; if spring water be not cool enough to create a deposit of dew, add a few drops of iced water until dew is seen. The dew point is the temperature at the moment dew first appears or vanishes but the latter is the best time for examination.

D. P. G

factory, that we requested him to continue it to the end of the year, which he has obligingly done, and now here is the result.

He commenced on the 1st of January, 1844, with 67 hens and 3 cocks. Out of this flock were sold and lost by the 1st of May, 7 hens; from that time up to the 16th of September, they lost two more. Since then we are not informed what the losses have been. It would probably be fair to set down the average stock of hens during the year at 60 head. These laid in the following months, all of which were consumed by the family or sold:

In January,	191 eggs.
February,	400 "
March,	892 "
April,	1037 "
May,	1086 "
June,	700 "
July,	838 "
August,	740 "
September,	540 "
October,	113 "
November,	21 "
December,	— none.

6558 eggs.

In addition to this number, it is supposed full 300 were used for sitting, got lost, broken, or spoiled, which are not taken into the above account. The average price that the eggs brought at Poughkeepsie, was \$1 per hundred, which makes their value \$65 58

Chickens raised 101, at 20 cts. each 20 20

\$85 78

We suppose that this flock of hens may have consumed grain enough during the year, equivalent to 70 bushels of corn. This is allowing three-fourths of a gill per day throughout the year to the flock of hens, and nothing to rear the chickens; but as, during the summer, hens that have the range of a farm need no feeding, this quantity of grain is considered ample for their support.

At 50 cents per bushel for the corn, this would make the expense of their feed, \$35, which, deducted from the value of eggs and chickens, leaves a nett profit of \$50 78. It is considered that the manure of the hens, and the insects they destroy during the season, are equivalent to taking care of them.

The actual feed of the above hens was as much corn mixed with a few oats, as they would eat; the grain being placed where they could always get at it. In the winter they had a little meat. They were not confined at all, and had access to lime and gra-

vel while the ground was covered with snow. Their roosting place was comfortably enclosed under the barn.—*Agricultural Almanac.*

From the American Agriculturist.

### Culture of the Peach.

In reading a communication a few months since, of N. Longworth to the Cincinnati Horticultural Society, I was surprised to find that this eminent cultivator had imbibed several material errors in relation to the peach and its cultivation. He remarks, "that the pit of a seedling peach will produce its kind, is well known," &c.

There certainly can be no distinction intended here between a seedling or natural, and an inoculated peach tree. All our varieties of peaches are seedlings; there can be no other way of originating new varieties of any fruit whatever. Budded or grafted trees bear fruit precisely the same as that of the tree from which the bud or graft was taken; suckers from the root will produce fruit similar to that of the stock from whose root they spring. Consequently, all new varieties must spring from seed, and the above assertion cannot be correct, that seedlings will produce their kind, because, if such were the case, no new varieties could arise.

It is, as Professor Lindley truly remarks, an axiom in vegetable physiology, that seeds reproduce the *species* only, while buds will multiply the *variety*. That the pit of the Oldmixon peach will reproduce a peach is certain; but it is equally uncertain that it will produce a tree, whose fruit can claim the most distant affinity to the Oldmixon variety. Although there is always this uncertainty in perpetuating a variety, and it is the general nature of a seed to perpetuate the species only to which it belongs; yet there is always a visible tendency in it to produce a seedling more like its parent, than any other variety of the species. For example, suppose the pit was sown of an Oldmixon peach, if this peach stood isolated where the stigma of the flower that produced the pit could not have been impregnated with the pollen of other varieties, it would be more likely to produce a fruit, fine, large, and sweet, like its parent, than one that was small and worthless. Yet there would be no certainty of obtaining a fruit resembling the Oldmixon, although it might be equal, if not superior, to it in size and flavor.

The remarks of N. Longworth quoted above, have, therefore, a tendency to mislead the tyro in horticulture, although such

a result is undoubtedly very far from his wish or intention. I speak only of the present result of planting pits of seedling fruit. I have no doubt that by judicious experiments upon several generations of trees, one might be obtained whose fruit would produce a tree that would bear fruit very nearly, if not precisely similar to its parent. It is on the same principle that gardeners have obtained the seed of many fine varieties of vegetables, which, although *varieties*, will produce the same. Let a person plant the pit of the Oldmixon peach, and inoculate the tree that springs from it with the Oldmixon bud, let him plant the pit borne by this inoculation, and bud the tree again with the Oldmixon in a similar manner, and repeat this process for several generations, the result, I think, would be, that a peach would be obtained whose pit would uniformly produce the Oldmixon variety.

The cause of this result, I think, is founded upon true physiological principles. If the fruit of a tree produced from the pit of a budded peach partakes of the nature of the fruit, both of the stock and of the bud—and I have very little doubt that it does—then this “breeding in and in” must gradually assimilate the natures of the bud and of the stock, until the fruit of the one is very nearly, if not quite, the same as that of the other. I hope some amateur who has leisure and taste in these things, will try the experiment, and inform the horticultural public of the result. S. B. P.

Commercial Garden and Nursery, Flushing, L. I.

### Poultry.

THE economy of poultry may be classed under three heads; first, in their natural state, which is the department of the naturalist; second in their domestic state in the country with a full range of the farm-yard and fields in which the poultry-keeper is concerned, for his profit; and third, in their artificial state in or near towns, in pens or yards, which will chiefly engage my attention in the present article. The best and cheapest method of feeding I must leave to be detailed by those who keep poultry in large quantities.

*Shelter.*—Fowls should always be kept in a dry, warm sheltered situation—a southerly aspect is to be preferred—for they enjoy and benefit greatly by the “warms in the sun,” as well as requiring protection from its scorching rays, and a secure (storm) shed for rainy weather. The roosting-house and laying-house, if separate, should communicate, that early layers may have early access to the nests, and also communicate

with the storm-shed for the fowls to run in security, if they should leave their roosts early in the morning. The nests should be numerous, either in boxes or baskets, not too deep but roomy, some situated high, some low, and as independent of each other as possible; each supplied with sweet, short, and soft straw, and a small nest-egg or two of chalk, the size of a pigeon’s egg. If the nests be too deep, they break the eggs in jumping in and out, and if the nests are not roomy, sitting hens have no room to turn easily, and consequently break the eggs by not being able to get to them softly. They then eat the broken eggs, which gives them the habit of doing so at other times. They should roost warm at night, the perches high from the ground and of easy access, by means of lower ones or ladders. The more lightsome the house the better for promoting dry air and a free circulation; besides, fowls cannot see at all, being quite stupidified and helpless in the dark, consequently the feather tribe always retire to roost before the sun goes down. Shutters to the glazed windows are unnecessary, except for better security, or to prevent fowls from leaving their roosts too early in the morning, to disturb ticklish neighbors, otherwise they come out almost as soon as daylight begins to appear. The feeding places, if under cover, so much the better, as a precaution for wet weather, and as far as possible removed from the nests, that the hens which happen to be laying at the time, or which may be sitting, may not be disturbed and enticed off their nest and eggs at improper times. Being evidently natives of a warm country, they are scarcely yet perfectly acclimated in our variable and colder regions; although so widely diffused from time immemorial over the whole face of the globe, they have retained a peculiar susceptibility of damp and chilliness, most of their diseases arising from rheum, or catarrh—catching colds. The lungs of fowls are particularly tender; the finer the species, the less is it hardy.

*Cleanliness.*—Fowls being cleanly by nature, thrive when regularly attended, but degenerate and sicken if neglected. In an artificial state of existence, they require to be supplied by art with what in nature they would obtain for themselves. For this purpose they should have a regular supply, in some convenient part of their shed, of sifted cinders daily to roll in and cleanse themselves, and which should be often changed. This precaution will keep them entirely free from vermin of any description.

*Green Food.*—This being quite as necessary for health as corn, to supply this re-

quirement of nature, they should have daily a good supply of sweet and fresh green vegetables. Cabbage and lettuce are the best—turnip-tops and watercresses—but on no account any sour plants, which scour them as do spinnach, the cuttings from grass plats, and most sorts of garden seeds, as their instinct does not serve them to choose the wholesome from the noxious weeds, more than it does animals that happen to stray into a clover-field, or happen to receive too large a quantity into their stables. I have known them to burst. Green food with fowls is an astringent, the very reverse of what vegetables are with us. This fact will not appear so surprising, when it is recollected that one takes them raw, and the other cooked.

A plentiful supply of clean water, in daily well-cleansed vessels, and wholesome food are necessary. Frequent changes, and mixtures of corn, improve the appetite. Barley is decidedly their staple food in this country; Indian corn, or sometimes rice, mixed, for a change. Oats occasionally, but in too large quantity, are apt to scour. Occasionally buckwheat and hempseed, as a stimulant, mixed with the barley for a change, are very beneficial, particularly whilst moulting. One meal may be composed of boiled or steamed potatoes, well smashed up whilst hot, with a portion of barleymeal, or oatmeal for a change, but which must be allowed to remain till cold. \*Books copying errors from one another, make a great mistake in advising food to be given hot. It is unnatural, they have no good cooks amongst them in their own state; and it is decidedly injurious to their digestive organs, except when fattening, when they are doomed soon to be killed for table. Feed twice a day at least, or three times if not to fattening; morning early, before the usual hour for laying, if possible; at noon, the noontide meal may be the potatoes as above directed, and before sunset—not later than four o'clock—that they may go to roost by daylight, or they will go without their food. Regularity greatly tends to health, and disturbance of any sort is very hurtful. Rice occasionally boiled in a cloth, greatly increases its bulk, and they are very fond of it. Reaumur says, that great economy is derived from steeping or boiling the barley, to increase its bulk, when they will be satisfied with one-third less quantity. But I cannot speak of this from my own experience, nor can I say that beneficial effects are produced by giving them much flesh, raw or boiled. But fat, as advised in books, produces scourings; spiced or salted meats, and kitchen stuffs, are certainly pernicious to their stomachs.

In fattening for the table, when they are not required to live long, or show fine feather, this may not be of any consequence. Will some of your practical correspondents enlighten us? They require in pens, or small yards in towns, to be well supplied with grit, sand, and small gravel; slaked lime, and old mortar pounded is very beneficial, and serviceable in assisting to make the pen or yard dry. I will add to the above, that there is no economy in keeping poultry in towns, in small quantities, which is always exceedingly expensive, if well fed and taken care of; which, however, is compensated for, to those who wish to make certain that the eggs are quite fresh and newly laid. All calculations of expense must be erroneous, there being so many contingent expenses. As a source of trade, much depends upon rearing the best breeds, to be early in the season, laying in stock and store at proper times, having a ready sale for produce, and to "buy cheap, and sell dear."—*London Gardener's Chronicle.*

#### Liquid Manure.

It is now a pretty general belief among farmers, that there is "some good" in liquid manures; but, some how or other, we never see much preparation either for the collection or application of this, the cheapest and most valuable of all manures, and we verily believe that the subject is as yet scarcely thought of—in a way to lead to any practical result—by one *bona fide* rent-paying farmer out of a thousand. Now, having for several years been an experimenter in this way, and sensible of the very great importance and value of liquid manures, I shall here take the liberty of throwing in my mite to the general fund, by communicating the little I have gained by experience to my fellow-farmers.

As I discard all chemical formula—the tank, watering-cart, and other *et ceteras*, from my system, and attach the fertilizing ingredients to a substance which farmers can actually work in with spades and shovels, I have more hope that my plan will be followed.

Chemists, generally, do not tell us the reason why liquid manures will not do much good when applied in a fresh state, though this is perfectly plain to all reflecting men. Liquid manure, if applied upon an impervious or gravelly soil, in a fresh state, is not retained long enough for its decomposition to take place, or for the roots to drink it up. It is put on a liquid manure, and runs off in the same state; but apply it to a soil rich in decayed or decaying vegetable matter, and

on which a vigorous vegetation is going on, and it never fails of its extraordinary effects. The plan of administering liquid manures in a perfectly fresh state, is probably the best of any, were it not for the continued care and consequent expense necessary in supplying our crops with saturated water in all their stages throughout the year, and were we certain of the exact strength of the solution suited to their wants.

As we, therefore, cannot apply our liquid manures on the best principle, on account of the expense, we must try the next best plan, that of decomposing them by the aid of decomposed vegetable matter; and this can happily be done, to great perfection, by reducing the vegetable matter to the state of carbon or charcoal—which we make from peat, as being trifling in expense, easily pulverized, and withal an excellent manure of itself. We divide a shed into two compartments, one of which we make watertight, by puddling the side walls with clay to the height, say of two feet, and separated from the other compartment by a low watertight wall or boarding. This is my fermenting tank, which is filled half or three parts full of pulverized burnt peat, and the liquid manure from the stable, pig-styes, &c., directed into it. This is mixed up with the pulverized peat and allowed to remain three or four weeks, till the decomposition seems about completed, being occasionally stirred about after the composition has become about the consistency of gruel. The whole is then ladled with a pole and bucket over the low partition into the second floor, which is also three parts filled with carbonized peat; and as the second floor is meant merely as a filter, we have it lower on one side than the other, by which means, in the course of a day or two, the carbonized peat is left comparatively dry. The water having passed off at the lower side, the first or fermenting floor is again filled as before, and the contents of the second floor, if considered saturated enough, are then shoveled up into a corner, and allowed to drip, and further dry till used, which may be either immediately, or at the end of twenty years, as scarcely anything will affect it, if not exposed to the continued washing of pure water, or exposed to the influence of the roots of growing plants. By being thinly spread on a granary floor it soon becomes perfectly dry, and suited to pass through drill machines.

The mixing of the carbonized peat with the liquid manure on the first or fermenting floor, it will be observed, is for laying hold of the gaseous matters as they escape during the fermentation; perhaps other substances

may effect this more effectually, but none so cheaply. I think by this plan it will be obvious to every one that a great many desiderata are at once obtained. In the first place, you get free of about 956 parts out of every 1,000 of the weight and bulk of manure, by the expulsion of the water; while at the same time you link all the fertilizing properties contained in it to one of the most handy vehicles—light, cleanly, and portable, and possessed of the peculiar property of holding together the most volatile substances, till gradually called forth by the exigencies of the growing plants. Lastly, you get free of the nasty tank, and the hogshed and the watering-cart, with all its appendages, and are no more bothered with overflowing tank or over-fermenting liquid, with weather unsuited for its application. You have merely to shovel past the saturated charcoal, and shovel in a little fresh stuff, and the process goes on again of its own will; while the prepared stuffs lie ready for all crops, all seasons and at all times.

The solid matter in the urine of the cow is estimated by very high authority, to be equal in value to its weight of South American guano.

I beg my fellow farmers clearly to understand, that I make no pretensions to this plan of applying liquid manure being a new discovery. It is merely a modification of your old and tried plan of bottoming your dung-hills with peat; but by charring, the peat is freed of its antiseptic qualities, and thus becomes of itself a much better and speedier manure, and an admirable filter. But even peat, thoroughly dried and perfectly pulverized, I have no doubt might answer the end indifferently well.—*Inverness Courier*.

#### On the Use of Lime.

A correspondent in the *American Farmer* makes certain inquiries, to which Dr. Darlington gives the following reply.—Ed.

THE first inquiry is—"What effect would be produced by the application of lime on the surface of limestone lands?"

To this I may reply, that the farmers in the limestone valley of Chester county, are in the practice of applying lime freely on their land, and find it productive of the best effects,—especially in promoting the growth of the valuable *grasses*. Its benefit to the *grain* crops is not so striking; but, in agriculture, a good *grass turf* is of primary importance—particularly in a grazing country,—and wherever there is *such a turf*, the *grain* crops are rarely defective. It is re-

markable, that the soil which overlies the limestone rock, has been found to bear the heaviest dressings of lime. The farmers, in our limestone valley, have frequently applied as much as 100, and 110 bushels to the acre, with apparent benefit, but latterly, some of the most intelligent observers among them have expressed the opinion, in which I decidedly concur, that smaller quantities—say 40 or 50 bushels to the acre—repeated at proper intervals, are attended with better results. I believe a moderate *top-dressing* of lime,—equally distributed in a state of fine powder—every three or four years, is more beneficial than a heavy dose once in six or eight years; and this, I think, is true in all kinds of soil. It appears, then, that lime may be, and has been, used with advantage, on limestone lands.

“Virginia,” next inquires whether, by successive cropping, lime is extracted from the *surface* soil, “where the substratum is limestone?”

To this I can only reply, that such seems to be the fact,—or at least, that experience has demonstrated the benefit of *repeated applications* of it, on limestone lands. The true *rationale* of the process, I must leave to the agricultural chemist.

As to the inquiry, whether “*sufficient* lime is kept in the surface soil—of limestone lands—by the action of the weather and the process of cultivation?” I am equally unable to give a satisfactory answer. The same experience, just referred to, would seem to indicate, that the surface soil does *not* derive “*sufficient* lime,” from the processes mentioned, to keep it in the best condition of which it is susceptible; yet it is certain that limestone lands are generally of a better quality, and less readily exhausted, than most others. Hence I should infer, that they do derive *some* benefit from the rock beneath.

The next inquiry is, “Would the application of it—i. e., the limestone rock,—in a powdered state, to the surface of *such* lands be beneficial?” I am not enabled, by experiment, to answer this question; but I am informed it has been tried, without much benefit. In its native state, limestone is not so soluble in water, as when reduced to a calx, by fire—neither is it so well fitted to act upon the dead vegetable matter. In fact, I should judge powdered limestone to be nearly inert, and of very little value to vegetation, compared with *quick lime* in a pulverized state. This, however, is mere *opinion*. I have no doubt that *shells*, finely powdered, might be applied to land with advantage, if they contain a portion of *animal* matter; but, probably, even they would

be more beneficial in a calcined state. While I am giving *opinions*, I may as well remark, that I think it of importance to apply quicklime in a minutely divided, or pulverized state—such as it assumes when first slacked. It can be not only more readily and equally distributed in that state, but must necessarily, I think, be more effective. I believe a large portion of its benefits are often lost, by careless farmers permitting it to get *too wet*, by long exposure, before it is spread. It then forms into little insoluble masses, and cannot possibly have the same effect as if minutely and evenly distributed. All bodies, to act chemically, must be minutely divided, and they must be applied where they are to act.

Excuse these hasty remarks. My object was merely to comply, as well as I could, with the request of your correspondent. If you think them worth the space they will occupy in your valuable paper, they are at your service. W. D.

West Chester, Pa., January 10th, 1845.

#### Cow losing her Horn.

On New-year's day, 1845, one of my cows in fighting another, with a fence between them, caught the horn in the rail and completely separated it from the pith. I was absent at the time, but my man who acted as assistant surgeon in the cases of the cow and the shoats, and who thought he had learned something from a *book farmer*, undertook to practice on his own account. He concluded, by reasoning on the nature of things, that as the horn was made to cover the pith, the pith ought to be covered, especially in winter. He accordingly shut up the cow by herself, and looking around, found the horn beside the fence lying on the ground, and as cold as a stone. It was replaced, and he went to my farm medicine chest, and taking therefrom a roll of sticking plaster, spread long strips of muslin with it, and wound the strips around the base of the horn. The result was, the next day the horn became warm at the base, and gradually extended upwards until the whole assumed its natural temperature. The plaster adhered more than a week, and upon examination at that time, the horn was found to be united. It is now three months since the accident, the horn is firmly fixed in its natural position, and the cow is well, and running at large with the others.—*Cultivator*.

A FINE cucumber sixteen inches long, from the gardens of Roswell L. Colt, of Paterson, N. J., was laid on the table at the New York Farmers' Club, on the 15th ult.

## Report of the Committee on Wines.

[Appointed by the Cincinnati Horticultural Society in 1844.]

THE Committee on Wines, beg leave respectfully to report :

That in order to fulfil the duty assigned them, of examining the specimens of the Wines produced in our neighbourhood, they assembled at the house of the president, where all those specimens which had been sent to the Society, were collected and arranged, and your committee then and there submitted them to the proper investigations, *secundem artem*.

Your committee, although by no means diffident in respect to their own skill and

talents, in estimating the true character of the articles whose qualities they were called upon to determine, judged it expedient to ask the aid of several German gentlemen, who have been accustomed to judge of the qualities of the European Wines, to which those of this region bear the strongest resemblance; and in compliance with this request, Messrs. Brachman, Werk, and Rehfuß, attended their session, and politely afforded them the aid of their judgment and experience.

The Wines were designated by labels, which referred to sealed descriptions of their ages, owners, &c., and which were not opened until the judgments respecting them had been pronounced and duly recorded. The subjoined table gives the result of their trial.

Marks & Nos.	Verdict of the Judges.	Name.	By whom sent
C. A. 1837.	Good,	Catawba,	J. E. Mottier.
" 1844.	New, not matured,	do.	do.
" 1835.	Very good, resembling old Madeira,	do.	do.
" 1834.	Fine, resembling Muscat or Malmsey,	do.	do.
" 1843.	Good for new wine, with age will be of the best quality,	do.	do.
" 1837.	Good, high flavored,	do.	do.
" 1838, F.	Superior to any of the previous specimens,	do.	Dr. Flagg.
" 1831, F.	Good, resembling Hock,	do.	do.
R. H. 1837.	Good dry wine,	do. R. B.	J. Resor.
R. 7.	Good,	do. do.	do.
M. C. 1843.	Best new wine, will be superior with age,	do. do.	J. E. Mottier.
S. E.	Not good,	French Wine,	A. Owen.
B. H.	Good dry wine, but supposed to be foreign.	German Wine,	Mr. Brachman.
C. A. No. 8.	Medium quality, resembling Hock.	Hockheim,	N. Longworth.
No. 3.	Good strong wine,	1830, Catawba,	do.
No. 7.	Not American wine,	Spanish Manzinello,	do.
German Label	A good wine, but not the best,	1830, Catawba,	do.
R. F. No. 1.	Inferior, a foreign wine,	Old Hock,	Dr. Rehfuß.
No. 2.	Good, about equal to No. 4,	1839, Catawba,	N. Longworth.
C. A. No. 4.	Good, about equal to or better than No. 8,	1837, do.	do.
" No. 6.	Good, considered by some better than No. 8, by others not so good,	1837, do.	do.
" No. 1.	Inferior to No. 8,	Catawba,	do.
S. F. 1.	Very good, resembles Manzinello,	Spanish,	[skins, S. E. Foote.
N. 60.	Good Cape wine, very ripe,	Cape, not fermented on	N. Longworth.
" 70.	Very good, resembling Madeira,	Cape, ten years old,	do.
" 50.	Old wine, but indifferent,	Lenoir, on the skins,	do.
No. 40, N.	Poor, fermented on the skins,	Ohio Grape,	do.
No. 10.	Not liked, supposed to have been injured in the bottle,	Mo., 1841,	do.
No. 3, M.	New and good Catawba,		do.
No. 34, M. C.	Very good Cape,		do.
No. 37, " "	Good, but not equal to the preceding,		do.
No. 35, M.	Good, better than No. 34,		J. E. Mottier.
No. 44, M. C.	New Cape,		do.
No. 2, 2d.	Good old wine,		do.
No. 41, C.	Very good Catawba, resembling Rhenish more than any other,		N. Longworth,
No. 1, 2d.	Tolerably good,		do.
No. 34.	Very good, old,		do.
	Do. do.		Dr. Smith.
	Good new, not in a suitable state for judgment,		do.

The judgments pronounced and recorded in the foregoing table, were as nearly unanimous as can ever be expected among so many judges. It will be seen that several of the specimens were foreign wines, included probably to test the connoisseurship of the committee; it will also be seen that the committee stood the test reputably. The result of the examination is a conviction on the part of the committee, that our soil and climate are well adapted to the production of a very fine, delicious wine; and that the Catawba grape is the species which yields the finest qualities. It will be seen that the greatest number and variety of the specimens examined were from the several vineyards of N. Longworth, Esq., who has been longest engaged in the cultivation of the vines, and in perfecting the manufacture of wine. Mr. Mottier, and Jacob Resor, Esq., who have lately acquired a good reputation in this department of horticulture, were next to Mr. Longworth in the number and variety of specimens furnished. These, with the single specimens of Dr. Flagg, and the two specimens of Dr. Smith, confirm the opinions of the committee, that the pure juice of the grape, when judiciously managed, will furnish the finest kind of wine, without any addition or mixture whatever; that no saccharine addition is necessary to give it sufficient body to keep for any length of time in this climate. In confirmation of this opinion, we would state that two of our German friends who were present, informed us that they had taken, on different occasions, specimens of the wine of this county to Germany, and submitted them to the judgment of various connoisseurs in that country, by whom they were highly approved—the principal, or only objection being, that they were too strong to compare with the fine kinds of the lightest German wines. A taste for the wines of this region appears to be well established, since all that can be produced finds a ready market at good prices; and the committee are of opinion, that the period is not distant when the wines of the Ohio will enjoy a celebrity equal to those of the Rhine.

D. B. LAWLER,  
S. F. FOOTE,  
M. FLAGG,  
JACOB RESOR,  
ELISHA BRIGHAM.

#### Durham Oxen.

It may be new to many to learn the particulars of the best ox ever bred in England. This wonderful animal, commonly called

the Durham Ox, or Day's Ox, I saw several times, and knew the owner, Mr. John Day, well. The said Durham Ox was sold to Mr. Bulmer, of Harnley, near Bedale, for public exhibition, at the price of £140; this was in February, 1801; he was at that time computed to weigh 168 stone of 14 lbs., his live weight being 252 stones. Mr. Bulmer having obtained a carriage for his conveyance, travelled with him five weeks, and then sold him and the carriage at Rotherham, to Mr. John Day, on the 15th of May, 1801, at £250.

On the 21st of May, Mr. Day could have sold him for 500 guineas, on the 13th of June, for 1000 guineas, and on the 8th of July, for 2000 guineas. Mr. Day travelled with him six years through the principal parts of England and Scotland, till at Oxford, on the 19th of February, 1807, the ox dislocated his hip-bone, and continued in that state till the 15th of April, when he was slaughtered; and notwithstanding he must have lost considerably in weight during those eight weeks of great pain and illness, his carcass weighed, at 14 lbs. to the stone, four quarters, 165 stone, 12 lbs.; tallow, 11 stone 2 lbs.; hide, 10 stone 2 lbs. At eight years old this wonderful animal weighed, alive, 83\* cwt. 3 qrs., the greatest weight ever known; he girthed in the least place, behind his shoulders, 11 feet 1 inch.

This large, handsome ox, brought the Durham cattle into such a high repute; nay, this ox speaks volumes in favour of even a single cross of this blood, for the ox was the produce of a common cow, which had been put to Favourite, at five years old. This single cross striking the admirers with amazement, what a great mistake there has been in not crossing all coarse beasts in Great Britain and Ireland with the pure Durhams! I have no doubt but the Dutch cattle, and most other foreign beasts, will be crossed with them, which will not only put some fat on their backs, but will marble their lean meat with fat, and make them more suitable for our roast-beef-eating metropolis, London, the best and greatest mart in the world.—*Mark Lane Express.*

TO PERFUME CLOTHES.—Take of oven-dried best cloves, cedar and rhubarb wood, each one ounce, beat them to a powder and sprinkle them in a box or chest, where they will create a most beautiful scent, and preserve the apparel against moths.

\* There is doubtless an error in this weight—we give it as we find it in Skinner's Journal of Agriculture.—ED.

For the Farmers' Cabinet.

### Magnesian Lime.

MR. EDITOR,—A by-stander during the Magnesian war, so long and ably waged in the pages of the Cabinet, but bottle-holder to neither party, requests a small space in your useful miscellany, for the following extract from the English Agricultural Magazine for June. Yet it is with no desire to stimulate the belligerents to another trial of strength that I point your correspondents Messrs. Kinzer, Webb, Van Leer, and Lewis, to the subject; conceiving, however, that some one will be able to account for the fact—if fact it be—that magnesia is necessary to the growth and full development of the potatoe crop, and thus open a way to the solution of the problem, if so it might be termed, “Why is it, that in this part of the country we cannot grow such large crops of potatoes as are raised in the Eastern States, or in England?”

By the way, might not magnesia be found a cure for the potatoe plague? Here, then, follows the extract from the Agricultural Magazine, with which I take my leave.

D. L.

Delaware county, Pa.

“The top-dressing of potatoes with nitrate and sulphate of soda, which has produced such admirable effects in Scotland, has given more promise than profit in an experiment in our own neighbourhood; the plant running up green and rank without proportionate root. The general result of the experiments show, that they require magnesia, and when this is not contained in the soil, *or in the lime employed*, it must be added. Twenty-eight pounds of sulphate of magnesia to the acre, seems to be enough; or five gallons of bitters from the salt-works, may be equal to that quantity.”

### Farming Scenes at the West.

ABOUT eight years ago, a raw dutchman, whose only English was a good natured yes, to every possible question, got employment here as a stable-man. His wages were \$6 and board; that was \$36 in six months, for not one cent did he spend. He washed his own shirt and stockings, mended and patched his own breeches, paid for his tobacco by some odd jobs, and laid by his wages. The next six months, being now able to talk good English, he obtained eight dollars a month, and at the end of six months more had \$48, making in all for the year \$84. The second year, by varying his employment—sawing wood in winter, working for the corporation in summer, making garden

in spring, he laid by \$100, and the third year \$125, making in three years \$309.

With this he bought 80 acres of land. It was as wild as when the deer fled over it, and the Indian pursued him. How should he get a living while clearing it? Thus he did it. He hires a man to clear and fence ten acres. He himself remains in town to earn the money to pay for the clearing. Behold him! already risen a degree, he is an employer! In two years' time he has 20 acres well cleared, a log house and stable, and money enough to buy stock and tools. He now rises another step in the world, for he gets married, and with his amply built, broadfaced, good natured wife, he gives up the town and is a regular farmer.

In Germany he owned nothing and never could; his wages were nominal, his diet chiefly vegetable, and his prospect was, that he would be obliged to labour as a menial for life, barely earning a subsistence, and not leaving enough to bury him. In five years he has become the owner in fee simple of a good farm, with comfortable fixtures, a prospect of rural wealth, an independent life, and, by the blessing of Heaven and his wife, of an endless posterity. Two words tell the whole story—Industry and Economy. These two words will make any man rich at the West.—*Indiana Farmer and Gardener.*

For the Farmers' Cabinet.

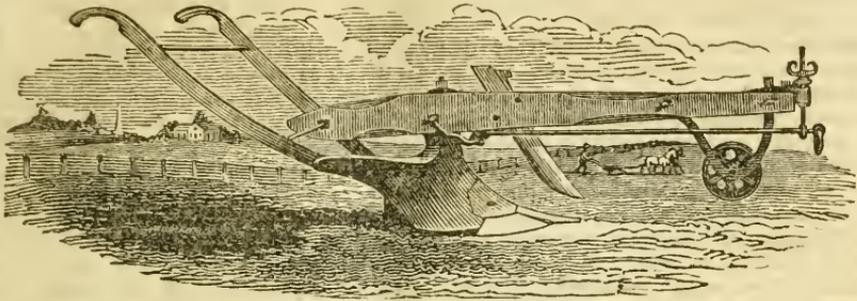
### Trap for Cut-worms.

TO THE EDITOR,—A man farming for me on shares, thought the cut-worms very thick this season, when he was planting corn. He gathered the leaves of what is generally called swamp cabbage, and placed several about in the corn-field; on examining under them a day or two after, he found under one leaf 42, under another 35, and under a third, 32, well grown cut-worms. The leaves were partly eaten up. Upon examining them myself a few days after, I found the worms had eaten the leaves all, except a part of the stem. I believe they are very fond of such *food*, and that persons having small fields, particularly near where this cabbage grows, would do much to save their crop, by placing a number of the leaves among the corn. If the worms are fond of them let them have as much as they want, as they are but little worth for any other purpose; and if any person wishes to kill the worms, he could not ask a better trap.

THOMAS WOOD.

Steeleville, Pa., 1845.

AGRICULTURE may produce health, wealth, and happiness.



THE CENTRE-DRAUGHT PLOUGH.

From the Cultivator.

### Trial of the Centre-Draught Ploughs.

MR. JAMES PEDDER, general agent for the sale of Prouty & Company's *Centre-draught Ploughs*, brought to this city in May last a number of these implements. They being comparatively but little known in this vicinity, several persons were desirous that a public trial should be made with them under the supervision of a judicious and impartial committee. This was more especially wished, as an unfavourable report had reached this country in regard to the performance of this plough, and that of Messrs. Ruggles, Nourse and Mason, at the exhibition of the Royal Agricultural Society of England, last year. The work of the American ploughs at this trial was represented as *decidedly bad*—a result for which we are wholly unable to account, except on the ground of the ploughmen not being well acquainted with the somewhat peculiar construction and operation of these ploughs. We have seen the operation of several of the most celebrated English and Scotch ploughs, which have been brought to this country, among which we will name that of the celebrated *Ransome* plough, which received the highest prize at the English trial referred to. With the exception of this, we are confident we have seen no imported plough, which, every thing considered, can be deemed equal to the American ploughs mentioned. The *Ransome* plough which we saw, was imported a few years since. It is unquestionably a good one. Some late improvements are said to have been added, of which we cannot speak. We know not what would have been the result of a comparative trial of this with the best ploughs made in this country; we however hope that such trial will yet be made—but at present we can only express our concurrence generally with the conclusions of the committee in regard

to the work of the Centre-draught Plough, as set forth in the following report:

#### REPORT OF THE COMMITTEE.

We whose names are underwritten, were solicited to examine the Centre-draught Plough and witness its performance, at the farm of T. Hillhouse, Esq. The performance of this duty was certainly far from being courted by any one of us. But having been selected for that purpose, it would have been uncourteous to have declined; and having performed the duty, it is incumbent upon us to report the result of our examination. We have no desire, we must state in the outset, unduly to magnify the Centre-draught Plough, nor to praise unduly its performance. Neither can we be prevailed upon—even if desired so to do—to undervalue all or any of the various new and improved ploughs now before the agricultural community, which are brought in competition with it. But we nevertheless willingly report truly and fairly the facts in the case.

The committee are almost strangers to each other—inhabitants of different parts of the State—chiefly, if not entirely, practical men, and accustomed to use—and perhaps prejudiced in favour of—other ploughs. Yet, with entire unanimity, we concur in the opinion that the Centre-draught Plough is not surpassed by any plough with which any of us are acquainted. The work performed by it is equal in excellence to any thing we have ever seen, and performed with as little labour and fatigue by both ploughman and team, as it could, in our opinion, possibly be done.

Perhaps nothing more than the above need be said, as it comprises in general terms all that we can say, or that it can be desirable to say. However we will add:

This plough can be adjusted with the greatest nicety, both as respects the depth

of the furrow and the width of furrow-slice, with perfect facility and ease.

We are quite sure that it runs very light, and is of course easy for the team. But we did not make any trials with the dynamometer, and therefore are unable to make any comparative statement between the draught of this plough and that of others. All we pretend to offer upon this point, is the result of our observation upon the apparent effort and fatigue of the team; a conclusion which can be relied on to some extent, though we admit, far from being conclusive. We however would remark, by way of fortifying our opinion, that at the celebrated trial of ploughs made at Worcester a year or two since, this plough bore off the premium of one hundred dollars, after a very severe competition with some of the most celebrated ploughs. So far as the ploughman is concerned, we can with certainty assert, that severe labour and strenuous effort on his part, are almost entirely done away. Even skill is comparatively useless in working with this plough.

This may seem a strong position to take; but in confirmation of it we must state, that we saw furrow after furrow ploughed with great nicety, the hand of the ploughman having been laid to the plough only to enter it at the commencement of the furrow. As to the style of work performed, we can only say, that some of the ploughs lap the furrow-slice—and they are those which we prefer—and to which our report mainly refers, while another—the one to which the one hundred dollar premium was awarded at Worcester—turns the furrows flat.

The workmanship of the plough is excellent, and we beg specially to commend the casting of the share from a composition which is much harder than ordinary cast-iron, thus ensuring a great degree of durability to the ploughshare. If to this it be added that the share is also constructed upon the self-sharpening principle, it can easily be conceived that the purchasers of these ploughs are ensured against the too frequent recurrence of the vexation that results from the rapid and often *unexpected* wear of the share.

In conclusion, we would remark that this plough has obtained great celebrity, and has received and is daily receiving the cordial approbation of men whose opinion have far greater weight than ours. We believe that it has lost none of its celebrity by the trial which we witnessed, for out of the numerous company present, there was not one who did not seem to be both surprised and delighted with the performance of the plough.

It may be asked how it comes that both this plough and the Worcester county

ploughs, Messrs. Ruggles, Nourse & Mason's, were condemned at the Fair of the English Agricultural Society last year. Nor is it easy to answer the question. Prejudice, national prejudice, may have had something to do with it. All we can say is, that some of the committee at least were practical men: we have reported only that which we saw. Moreover, there was present on the ground an English ploughman, recently arrived, whose judgment was perfectly unbiased, who pronounced this equal to any English plough he had ever handled, and fully concurred with the committee in the opinion expressed by him.

J. B. NOTT, Albany Co.

T. HILLHOUSE, "

JOHN McVEAN, Monroe Co.

C. HANNAM, Genesee Co.

PREVENTION OF SMUT IN WHEAT.—It is stated on authority that it is believed may be relied upon, that wheat grown from seed which was thoroughly ripe before cutting, is much less liable to be affected with smut, than that grown from seed which has been cut earlier. Farmers who have adopted this practice, it is said, are seldom or never troubled with smut. To make the best flour, wheat is usually cut a little before its full maturity, and such is generally used for seed. This may be one cause of the extensive prevalence of smut, though there are unquestionably others. It is recommended to defer cutting the portion designed for seed about a week later than the rest of the crop, until the berry shall have become perfectly ripe. This measure of prevention is one which may be adopted with very little trouble, and is believed to be richly worth the trial.

We shall speak more fully of the causes and prevention of smut in our next.—*Michigan Farmer*.

TO CLEANSE GLOVES WITHOUT WETTING.—Lay the gloves upon a clean board, make a mixture of dried fulling-earth and powdered alum, and pass them over on each side with a common stiff brush; then sweep it off, and sprinkle them well with dry bran and whiting, and dust them well; this, if they be not exceedingly greasy, will render them quite clean, but if they are much soiled take out the grease with crumbs of toasted bread and powder of burnt bone: then pass them over with a woollen cloth dipped in fulling earth or alum powdered; and in this manner they can be cleansed without wetting, which frequently shrinks and spoils them.

### Lightning Rods.

#### A Letter from Professor Hare to the Inquirer and Gazette.

Newport, August 16th, 1845.

DEAR SIR,—In the Inquirer and National Gazette of the 14th inst., it is mentioned that the barn of Mr. Detwiler, near Reading, was struck by lightning while furnished with a lightning-rod at the east end of the building. Although I can but ill spare the time, from other objects in which I am engaged, I am led to call attention to the sad consequences of this error of not putting up a conductor intended for the protection of any building against lightning, at the westernmost part, and preferably the north-westernmost end or corner. I am under the impression that all thunder-gusts, in this part of the world, come from the westward, and generally from the north-westward. We have sometimes storms from the south-east, accompanied by diffuse electrical flashes, but such genuine thunder-gusts as produce dangerous discharges of concentrated lightning, agreeably to my observations, come always as above stated. Being consulted about ten days since, by the proprietor of a house, respecting the proper mode of putting up a lightning-rod, I advised that it should be secured to the north-western chimney, so as, while duly pointed, to extend about 10 feet above it. Had Mr. Detwiler put up a rod, *well pointed above and properly terminated below*, at the north-westernmost part of his barn, I am of opinion that it would not have been struck. I advance this opinion conditionally, because a lightning-rod is competent as a conductor of electricity only so far as it terminates in contact with a conducting medium capable of diffusing into the earth any electricity which may be presented to it. Unfortunately the conducting power of the soil in which these rods usually terminate, is due only to the moisture which it naturally holds; while according to Cavendish, the conducting power of water itself, is two hundred thousand times less than that of iron. It follows that an iron rod, when terminating in *dry* earth, is wholly incapacitated from acting as a conductor. It is like a pipe plugged at the lower end. Even when the soil is moist, the rod cannot receive more electricity than the soil can carry off from it. Hence under ordinary circumstances, the competency of lightning-rods is dependent on the pointed form given to the upper end, which prevents the electricity from being received above in greater quantity than it can get off through the soil below.

Lightning-rods should always be made, if possible, to terminate in the nearest spring or stream of water, whether at the bottom of a well or the surface of the earth; it being excepted that in cities, where there is an extensive ramification of metallic pipes, for the conveyance of water or gas, a connection with such a ramification is to be preferred to any other termination.

In the case of vessels employed in navigation, where the bottom is coppered, an attachment to the sheathing by solder, is the best termination possible; but where there is no sheathing, a sheet or strip of copper, so situated as to be always under water, may be resorted to.

From the immense conducting power of the metallic chimney, and the necessary connexion of the machinery with the water in which steamers float, I cannot conceive that they are liable to be injured by electrical discharges, unless in the form in which they produce tornadoes.

You will perceive that I have said more than my premises would warrant, but I hope what I have added may carry with it sufficient apology, in the desire by which I have been actuated to promulgate information respecting the means of avoiding an awful source of human calamity.

I am, Sir, yours with esteem,  
ROBERT HARE.

### The Strawberry Plant.

I YESTERDAY, for the first time, met with Mr. Downing's work on fruit. I doubt not it will be a work of great value. I discover from it, that I have erroneous opinions respecting the character of the strawberry plant. I was not, like Mr. Downing, "born in a large garden, on the banks of one of the noblest rivers in America," and therefore "claim a natural right to talk about fruit." But I have resided for forty-one years, on the banks of La Belle Riviere—the Ohio—at the then village of Cincinnati, now the Queen of the West, and destined in less than half a century, to be the second city in the Union. Thirty years of that time have been devoted in part to horticulture, and I have paid particular attention to the character of the strawberry plant. If I am wrong, I am without excuse, and should pay for my error.

It seems, according to Mr. Downing, that all strawberries in their *natural* state, have blossoms perfect in both the male and female organs. Of course, all new seedlings have perfect blossoms. But it seems, in rich soils, a *few* of the runners will become defective in the male or female organs, and be

unproductive. That perfect natural plants, of all the varieties, are abundant, and you have only to select your plants from these to have abundant crops, and not cumber your ground with staminate plants. My doctrine is, that in 10,000 seedlings, there would be about an equal quantity of male and female (staminate and pistillate) plants, and that it would be a strange occurrence, should a single plant be found perfect in both organs. With the exception of the white and monthly varieties, I have met with one plant only, perfect in both organs. Its fruit is small. That even an acre of Hovey's fine seedlings, will not by themselves, produce a single perfect fruit. It is time this subject was settled, for if my impressions be true, though our Queen city may be second to New York in population, she will be the only city where strawberries can be sold at a price to bring them within the reach of the poor. No cultivator will be able to take 125 bushels in one day to her market. True, I did not go to the far West for poverty, I had a plenty of that in my native town. Still I feel a deep interest in the poor, and would risk something to bring this delicious fruit within their reach. I propose that Mr. Downing select a dozen perfect plants from each of the twelve following varieties described in his work. Bishop, Grove-End Scarlet, Hudson, Large Early Scarlet, Methven Scarlet, Black Prince, Brewer's Emperor, Elton, Hovey's Seedling, Myatt's British Queen, Myatt's Pine, and Myatt's Deptford Pine. Most of these are new kinds, and never seen by me. Mr. Downing has seen them, and can be the better judge. Let these be sent to Mr. Jackson, an intelligent horticulturist, in the vicinity of Cincinnati, who will take a pleasure in making the experiment. Mr. Downing, if he wishes, can name another person to overlook the plants. These twelve varieties Mr. Jackson will plant 100 feet separate from each other. He will leave, when growing, one plant only of each. That plant may be increased by runners. For each variety that produces a full crop of perfect fruit, I will pay \$50 to Mr. Downing, to be applied as he may wish. For each kind that does not produce a full crop of perfect fruit, he is to pay me \$50, which I will apply to some public charity. Should the experiment cost me \$600, I shall deserve it for my temerity and ignorance. Should it cost Mr. Downing that sum, a belief in my views, and a corresponding cultivation, will reduce the price of strawberries to four cents per quart. Should Mr. Downing not incline to accept this proposition, I trust the President of the

Massachusetts Horticultural Society, will bring the subject before them, and have the question fully settled. Mr. Hovey deems his seedlings what Mr. Downing calls a natural plant and uniform bearer. Yet I believe a different opinion prevails at the garden of Messrs. Hovey. Mr. Hyde, an intelligent horticulturist, in the vicinity of Boston, informed Mr. Ernst, when he was in Cincinnati, that when he bought Hovey's seedling at their nursery, he was told it would not bear, except in the vicinity of other varieties.

To induce market gardeners and others to make the experiment, I would state, that I have paid particular attention to this plant for thirty years. In the fields in this region, fifty years since, the plant was abundant. Barren patches were common in the field, but I was not then aware of the cause. Of late years I have examined them. There are staminate plants so defective in the female organs, as never to bear even a defective berry. Others are so far perfect in both organs, as to produce a half crop of fruit. The pistillate plant is so defective in the male organs, as never, except impregnated by a plant near, to produce a perfect fruit. As a general rule, where the staminate plant produces any fruit, it is the richer of the two. For the better understanding of those ignorant of botany, I am in the habit of designating them as male and female. The strawberry belongs to the class of plants that has the male and female organs in the same blossom, and I have never seen a white or monthly variety in which both organs were not perfect. Of the scarlet, I have seen one variety, and one only, that is perfect in both organs; and every blossom produces a small, high flavoured perfect fruit, unless injured by late frosts. Neither the staminate nor pistillate plant, changes its character by cultivation. The partially bearing staminate plant, will bear better some seasons than others, and, I doubt not, a greater portion of pistillate organs may be forced out than usual, by forcing in hot beds. It is this character of the strawberry plant, that renders botanists slow of belief. Yet, it should not, for the discovery is not of modern date. It was noticed by some of the disciples of Linnæus, and he scolded them for it, advising them to examine closely the plant before committing themselves, as he presumed the plants they called staminate and barren, were blossoms killed by the late frosts. Duhamel and all who have written expressly on this plant, since the days of Linnæus, have advanced the same doctrine, with the

exception of Harper or Harvey,\* who wrote the results of the London Horticultural Society's classification of the different strawberries cultivated in England. He is silent on the subject of staminate plants, and appears to have had as little practical knowledge of the character of the plant, as he had of the Hebrew psalter.

From the prairies of Iowa, I have twice had strawberry plants sent me with the same result. There were both staminate and pistillate plants. The fruit of the latter was very small, and never produced a single berry, unless impregnated by other plants. The staminate plant, in favourable seasons, will perfect half its blossoms; in others, but few. The fruit is a light scarlet, and where it perfects but three or four berries to the plant, the fruit will measure upwards of four inches. If used for impregnation, it requires constant watching. It is of such vigorous growth, that if but one plant were planted to fifty pistillate plants, it will in two years root out the others. For twenty years I kept patches of the staminate and pistillate Hudson strawberry, in separate departments, to set new beds from, so as to be certain not to have too many barren plants. Neither bed ever produced a single fruit, unless as a matter of curiosity, I placed a single plant of the latter by the former, when a certain portion were always impregnated, and bore perfect fruit. When in blossom, the plants may be distinguished at the distance of 20 feet. Our market gardeners can distinguish them by the stem and leaf. In raising from seed, I have had about an equal quantity of staminate and pistillate plants. Not one in fifty of the former would produce a single berry. I have raised thousands in a single year, but I never raised one of what Mr. Downing calls a *natural* plant; not one in which both organs were perfect in the same blossom. I never saw a pistillate plant, separated from all others, bear a perfect fruit. Hovey's very superior seedling, by itself, as obtained by us, in the West, from his nursery, and from others, never bore a perfect fruit. I saw a like bed of it in this place, with many defective berries, but not a single perfect fruit. I have seen this the case on the banks of the Ohio, where there were one and a half acres of this variety. The bed had been set out the fall previous, and a press of business had prevented the gardener from putting out male plants. Had he done so in the fall, even one to twenty, they would have had possession of near half his ground. The elder, Mr. Prince, more

than twenty years since, conversed with me on this subject. He was aware of the existence of barren plants, which he designated as blind plants, and the necessity of having one blind to ten or twelve bearing plants; but the blind plants so speedily rooted out the bearing vines, that he was impressed with the belief that the bearing vines produced a portion of blind plants in running. In raising seedlings, it is a matter of great importance to be able to distinguish the staminate from the pistillate plant, before running; to cut them out, as they will before the plants are fruited, root most of the pistillate plants out. Is not Mr. Downing under a mistake in describing the Hudson as a *necked* fruit? This is one of our largest, best flavoured, and most productive strawberries, where male plants are interspersed. I have known it well for fifty years, in New Jersey, Philadelphia, and Ohio, but never saw one with a neck. On the contrary, the stem and hull are so much imbedded in the fruit, that it is difficult to separate the fruit with the fingers. The strawberry cultivated in England under this name, and said to have been received from New York, is described as a *necked* fruit, and I presume Mr. Downing has taken the description from English works, and not personal observation. I wish to draw his attention to it, that he may correct the error, if he be in error; for where its *pistillate* character is understood, it is the most valuable to cultivate for market. In the spring of 1844, a single wild staminate plant was brought me, from a field in Kentucky. This spring I sent it to our Horticultural Society, with 200 hundred perfect berries. Separate from staminate plants, it would not have produced even an imperfect berry.

In justice to Mr. Downing's views, I should say, I have never met with an English or Scotch gardener who would even admit the existence of plants not producing a full crop of fruit, from a defect of organs. When I have in their own gardens pointed out ten staminate to one pistillate blossom, the former all barren, and the latter with perfect fruit, they gave a shrug of the shoulders—said they had never before noticed the difference in the character of the blossom, and that no such difference existed in Europe. Mr. Buist, the intelligent horticulturist of Philadelphia, denied my principle, certainly so far as Kean's seedling was concerned, as it yearly never failed to produce a full crop of large fruit. He showed me a full bed, then opening its blossoms, which were all pistillate plants, and not the true Kean, which is a staminate plant, and so figured in their publications, and so seen

\* My memory does not serve me certainly of his name.

by me at Mr. Cushing's. I told him they could not produce any perfect fruit. He assured me they had never failed. A few feet distant I found another bed, in which nearly all were staminate plants, and which he told me was the Hudson. I pointed out to him in that bed, male plants, amply sufficient to impregnate all his Kean. He then observed, to be certain, he had planted a bed of them separate from all others. These I examined, and we agreed to be bound by the result. He wrote me one month thereafter, that the fruit in the first bed shown me, was all perfect, whilst the separate bed had not a single perfect fruit.

I imported the same variety from England, under the name of Kean's seedling. It is a hardy vine, a great bearer, the fruit large and well flavoured. It is a much more valuable variety than the genuine staminate Kean, which produces a partial crop only, of large fine fruit; and a late English writer says it is now but little cultivated, being found unproductive. It is a valuable kind for forcing, but of little value for general culture.

N. LONGWORTH.

Newark, N. J., July 10th, 1845.

For the Farmers' Cabinet.

### Maryland Marl.

MR. EDITOR,—Having had some experience in the application of green-sand marl to poor and worn-out, and thrown-out, lands for the last four years, I have thought that as I have benefited by the experience of others, others might possibly have some claim to be benefited by mine. I purchased a farm of 400 acres—300 arable—which was most deplorably out of order, and situated near the head of Sassafras, Maryland. I got possession in January, 1840. I gave \$8,500 for it. I went immediately to work and surveyed the farm, laid off, and fenced the fields, garden, yards, lanes, &c. Built a large barn 82 by 45 feet, with a building in front 48 by 27 feet, for cribs, horse-powers, &c., and roofed and repaired the house. These things together consumed the first two years. Having made these preliminary remarks, I will now try in my bungling way to give you some of my experience in the application of marl, and if you think proper to publish it, you can do so—if not, commit it to the flames, and no harm will be done. Having been a subscriber to the Cabinet nearly from its commencement, I read much of the wonderful effects of marl in New Jersey, and in Delaware, my native State. Being aware there was something like it on the farm in question, although I had little or

no faith in it, as my neighbours there said, I concluded to give it a fair trial, for the former owner, Charles Thomas, Esq., had used a few loads a number of years before as I was informed, and with good effect. In the summer of 1840, I sowed the headlands of the corn-field with buckwheat, and applied one ox cart-load of marl, spread evenly on the ground immediately after the buckwheat was sown and harrowed, and to my astonishment, before the buckwheat had been up two weeks, I could see very plainly the difference where the marl was and was not put. Well, sir, this raised my curiosity much, and set me to examining the accounts of it in the Cabinet—how it was applied; what quantity to the acre, &c. In the following winter, 1840 and '41, we opened a pit and covered about 15 acres of young clover, at the rate of two to three hundred bushels per acre, and its action was so sudden, that it showed very plainly immediately on the opening of the spring; and when harvest came there was a good swarth, and some places lodged, to the very spot where we left off marling; and where there was no marl there was little or no clover, although all was well plastered. Well, now I began to think I had found a gold mine indeed! Ah! said some of my neighbours, it will help your buckwheat and clover, but it will do nothing else any good. My answer was as every experienced man's would have been—if it will make clover grow luxuriantly, that is all I want. Only enable me to raise plenty of clover, and I will risk the wheat and other crops. I began now to think about going to work at the marl in earnest, and I first thought if I could cover a field every year at slack times, we would do pretty well; but I soon found these slack times never came, so I hired a man to remove the earth off the top, and a second to drive a two-horse team, which was appropriated to hauling marl altogether, and in about two years we had our farm well marled all over, and some of it a second time; and the effects have been almost incredible. In the summer of 1842, I broke up part of an old sedge field, that was so poor that it had not been tilled for a number of years, gave it a top-dressing of marl—let it lay until September—stirred it again—sowed Mediterranean wheat—harrowed it in, and I cut a good crop the next harvest; and a good crop of clover the succeeding harvest; and the next, this last harvest, another crop of wheat much better than the first, without any other application except plaster, and so we go ahead. I raised last year about 1,600 bushels of wheat, and about the same of corn, and clover in abundance; and this

year our wheat crop will be near the same, and the corn a much larger crop, from two to three thousand bushels; say 2,500 bushels from sixty acres. Remember, this is on a farm that was so poor that the former owner sowed no wheat for a number of years before he sold:—all told with the application of plaster and marl, and no mistake. Last fall I purchased another farm, 353 acres, adjoining the one spoken of, and we are going ahead with it as we did with the first; having a son on each farm, working-men of the right stamp, I trust we will continue to go ahead, if Providence is pleased to bless and prosper our efforts as heretofore. The marl spoken of, lies high and dry on the bank of the Sassafra river, and raising with the bank at an angle of about 45 degrees, it is from six to thirteen feet thick, when it comes to a level on the top; and so far as we have operated, there is from none to 13 feet of dirt on the top, which we wheel off with a wheelbarrow and tumble it into the river, where there is a breast of 10 or 12 feet. The colour varies much; the top is generally green—some stratas dark brown; some brighter; some pale green; some dark, or blue-black, &c.; but it is invariably black, or blue-black, in the bottom. In one place where the bottom was very dark it smelled of sulphur, and when dry on top, a white crust forms, tasting strong of alum: this last injures vegetation when put on heavily. When we first opened the pit there were some large shells resembling clams, and thousands of small ones, about the size of the thumb-nail, entirely round, but in working further in they disappeared, but the prints of them show here and there all through the mass. I have had it analyzed by Professors Booth and Boye, of Philadelphia, and they say the principal fertilizing quality is potassa; it contains from four and a half to five and three-quarters per cent. of potassa, with smaller portions of lime and magnesia.

Respectfully,

JOSEPH GRIFFITH.

Newark, Del., Sept. 1st, 1845.

### Tests of a thriving Population.

CHARLES SMITH, in his Tracts on the Corn Trade, estimated the population of England and Wales in 1760, at 6,000,000, which is sufficiently near the truth for our present inquiry. The entire consumption of grain at that time, he estimated to be 7,566,350 quarters; of which 3,750,000 quarters were wheat, and of the remainder 1,026,125 consisted of barley, 999,000 of rye, and 1,791,225 of oats.

The change which has taken place in the species of grain used for bread in England since the period referred to by Charles Smith, is notorious. Rye has almost entirely ceased to be employed. The same remark might almost be applied to barley; and oat meal and oat cake are not consumed to any thing like the same extent as in the previous century. Almost every individual now uses wheaten bread; and in some of our manufacturing towns, the inferior sorts even of wheaten flour have been rejected by all except the most indigent classes.

The total average produce of grain in England and Wales, has been estimated, within the last ten years, at 29,450,000 quarters; of which 12,450,000 quarters consist of wheat. (M'Culloch's "Statistics of the British Empire," i. 529.) It would thus appear, that whilst the population of England and Wales has doubled, the consumption of wheat, as well as of other grain, has nearly quadrupled; for the home producer is unable to supply the demand of the consumers, and an annual average of at least 500,000 quarters of wheat may be added to the total quantity produced at home, on account of foreign importations.

*Test by Butcher's meat.*—In a similar manner, in regard to butcher's meat; if we take the market of the metropolis, we shall find that the number of cattle and sheep annually sold at Smithfield, has doubled within the last century, whilst the weight of the carcass has also more than doubled in that interval. In the early part of last century, 1710, according to an estimate made by Dr. Davenant, the nett weight of the cattle sold at Smithfield, averaged not more than 370 pounds, whilst calves averaged about 50 pounds, and sheep 28 pounds. In 1800, the nett weight of the cattle was estimated at 800 pounds; of the calves at 140 pounds; of the sheep at 80 pounds.

Again, in 1742, we find 79,601 head of cattle, 503,260 sheep, to be the numbers sold at Smithfield; in 1842, the numbers had increased to 175,347 cattle, 1,435,960 sheep. According to the calculation which M'Culloch adapted for the amount in 1830, when he sets down 154,434,850 pounds for the supply of butcher's meat required in London, if we assume the population to have then amounted to 1,450,000 exclusively of some suburban districts, we should find the average annual consumption of each individual to be very nearly 107 pounds.

The returns obtained by the Statistical Society of Manchester, as to the cattle sold in the markets of that town, furnish an annual consumption of not less than 105 pounds of butcher's meat for each inhabitant. In

Paris, on the other hand, the quantity has been estimated by M. Chabrol, from 85 to 86 pounds per head; and in Brussels, it is supposed to average 89 pounds. We thus find that the consumption of animal food in the towns of England, far exceeds that of foreign cities; and as this consumption has gone on steadily increasing, we are warranted in concluding that the labour of the English people is not only more efficient as compared with that of other nations, but is daily acquiring greater efficiency, if the present be contrasted with previous results.

The following curious fact of speculative science applied to trade, is from the appendix, and has been furnished to Dr. Twiss by Mr. Dixon, an eminent land surveyor at Oxford:

“The present mode of calculating the probable yield of wheat of a given district for the coming harvest, is as follows: About the time that the wheat is blooming, generally about the beginning of June, a person will go round with a gauge secreted in a hollow cane, which forms a triangle when opened, and represents a certain portion of an acre of ground. This is placed over various portions of the standing crop in the best and worst parts of a field: the number of ears of wheat comprised within the triangle is counted, and the probable quality of the grain is taken into calculation according as the spring has been wet or dry. On the former supposition the grain is likely to shrink; on the latter, to harden and come out plump. It may be observed, that if there has been a good general rain during the last ten days of April and the first ten days of May, on the average, no more wet is required for wheat. An expert gauger will form a very accurate estimate of the probable produce of a given district by this method.”—*Foreign Paper.*

For the Farmers' Cabinet.

**Memorandum of Experiments with Guano, on the Farm of Dr. Ellwyn, near West Chester, Pa.**

*April 10th.*—Planted potatoes—Mercers—one bushel; put in the rows before covering them, equal parts of guano and plaster, at the rate of one and a half bushels to the acre. Strode's best whites alongside, planted and manured in the same manner—weather dry.

*May 31st.*—The frost last night killed the tops to the ground.

*June 18th.*—Potatoes spring up to admiration. I dressed them, and found those guanoed somewhat in advance of the others.

*June 30th.*—Observed a marked differ-

ence in the growth and colour of the tops of both kinds, but most particularly in Strode's whites. The weather has been wet for the last three days and nights.

*August 1st.*—Dug some of the Mercers, and found those guanoed much larger than the others.

*April 16th.*—Applied an infusion of guano to six rows of onions planted about a week previously—left three rows without. Also applied to head sallad—left a part without—weather dry.

*April 26th.*—I found that the quantity was too great or the weather too dry, or both, as about one half of them perished, and the remainder grew but poorly. I conclude, therefore, that to apply a large quantity is injurious.

*July 1st.*—The onions not grown well—most of them dwindled, and none of them flourished as well as those that had none applied.

*April 17th.*—Appearance of rain. Experiment on grass in orchard east of the house. Sowed a part with equal parts of guano and plaster, left one cast without—then sowed with plaster alone. Orchard north of the house, sowed one part with equal parts of guano, plaster, and dry soil mixed through a sieve; the remainder of the ground with plaster alone, and about one acre of an adjoining field in like manner, and the remainder with plaster alone.

*April 30th.*—Took my neighbour, J. C. Strode, across the lots at right angles with the sowing, but did not inform him where either the guano or plaster began or ended; but he was able precisely to mark the difference in colour and vigor of the different casts. Took him to both the other lots, and he with equal precision, marked the same difference. There came rain about two days after sowing.

*May 15th.*—The same marked difference is still observable.

*June 15th.*—Mowed the orchard east of the house; found material difference in quantity where the guano was sown, it being much thicker at the bottom. The lot north of the barn was mowed the 26th of June, and the difference in favour of guano much more marked than the former. The lot north of the house was mowed on the 28th—in this lot the greatest difference appeared. I think there was three times the quantity on that guanoed, that there was where nothing was sown, and double the quantity of that sown with plaster alone.

*July 1st.*—This morning, after a copious rain, sowed two bushels, three parts dry soil

and one guano, on one acre clover ground that had been mowed ten days, and second crop fairly started; and at the same rate on pasture ground. The former was fresh grass, on ground that had wheat last year; the latter was an old sod of four or five years standing, the ground very wet. The guano and dry soil has been mixed for about six weeks, kept in a dry loft, and appear to have been well incorporated—result hereafter. Immediately after the sowing the weather became dry, and remained so for several weeks, and I have not been able to discover that the guano has had much effect, owing, as I suppose, to the extreme drought.

*April 22nd.*—Planted corn this day.—Steeped sufficient to plant twelve rows, in an infusion of guano, twenty-four hours previously; planted the remainder of the field with dry seed. That steeped in guano came up two to three days earlier than that which was planted dry. The ground was quite moist.

*May 10th.*—Found the worms were making sad work with the corn; and replanting, I found that which had been steeped in guano, had almost entirely escaped the ravages of the worm, and continues to this time—*May 17th*—decidedly ahead of that planted dry.

*May 31st.*—A heavy frost killed the potatoes to the ground, and the corn very much injured—weather dry, with cold nights—altogether discouraging.

*June 5th.*—Went through the corn with the cultivator, and planted pumpkins in the missed hills, and in going over clipped the dead leaves off.

*June 10th.*—Found that the corn notwithstanding the drought, revived and gave encouragement to hope that all was not lost that appeared in danger.

*July 1st.*—About one acre of corn much missed—the remainder of the field flourishing. I omitted to note the time of putting the guano on the corn, but think it was about the 20th of May; immediately after putting it on—one half plaster, the other half guano—the ground was dry and continued so for several weeks, and I am induced to believe it injured the plant. I found, in many instances, that the ends of the leaves were killed as with frost. That part steeped in guano, does not now appear much better than the other.

I sowed all the grass land except those lots of experiment, with plaster, at about one bushel to the acre.

*May 1st.*—Sowed about one and a half acres of grass in the corn-field, and four or

five acres of pasture ground with guano mixed with dry soil—about one part guano and two parts soil, put together about two days previous to sowing. The guano emits a fetid smell, so that it is almost beyond endurance to sow it, especially as it is a fine powder, and is more subject to the action of wind than plaster. My object, therefore, was to prepare it in such a manner that it could be sown with some kind of comfort, and mixing it with the dry soil succeeded; it seemed to incorporate itself with the soil, and thus lost much of the smell, and the dust was much more allayed than when mixed with plaster. If comfort in sowing be the object, I think this the best mode I have tried, but am inclined to think that mixing it with plaster, about equal parts, is the most effectual and most beneficial mode of application.

*August 30th.*—This application did not make much difference in the appearance until recently. The present month we have had much wet weather; the rain being frequent, but not heavy, except in one instance. From this circumstance, and information from those of more experience, I have arrived at the conclusion, that rain or moisture is altogether essential in promoting the benefit of guano, and that it will remain inactive until rain descends, whether the time be long or short.

*July 16th.*—This day sowed headlands around the corn-field, previously well prepared, with guano that had been mixed with dry soil, and remained in a dry loft for two months—one part guano and two parts soil, about two bushels per acre—mixed it well with the cultivator—left a small portion unsowed with guano—ground moist, weather dry, but like for rain.

*July 28th.*—Sowed the turnip seed,—ground moist—soon after came a hard rain, that washed the ground considerably. Since that time many gentle showers, and turnips look promising. There is quite a perceptible difference between that sowed with guano and that omitted. As the corn and turnips are yet to be gathered, I am unable to report the result.

WM. EMBREE.

East Bradford, Sept. 1st, 1845.

### New Seedling Strawberry.

C. M. HOVEY, Editor of the Magazine of Horticulture, has produced another seedling strawberry, which he calls the *Boston Pine*, and describes as possessing very valuable qualities. "The fruit, very large, roundish or slightly conical, always very regular in form: Color, deep, rich, shining red: Seeds imbed-

ded in a rather deep cavity: Flesh, pale scarlet, solid, fine grained, very juicy, sweet and rich, with a high and most delicious flavor: Footstalks, long and spreading, elevating the fruit from the ground: Flowers, large, and perfect, possessing both stamens and pistils: Leaves, large, of a lighter and duller green than deeply and sharply serrated: Vines, exceedingly hardy and vigorous. Ripe nearly as Hovey's Seedling, narrower, and much more early as the Old Scarlet or Virginia, filling up the season between that kind and Hovey's Seedling, when there is no other of equal merit.

"The sterile and fertile character of the strawberry has been a subject of much discussion in our pages, and no perfectly satisfactory result has been arrived at. But enough information has been elicited to show, that with some sorts there is a tendency to barrenness, when growing in a plantation away from other kinds. Let the causes be whatever they may, it is sufficient for all practical purposes, to know, that the most abundant crops can be procured by planting some sort abounding with *staminate* flowers, in the near vicinity of those which do not possess them: and whether soil,—climate,—cultivation,—injudicious selection of plants, or a normal defect in the organization of the flowers, prevent the production of pollen, a *certain crop* may be depended upon. Thus in a plantation of Hovey's Seedling, a single row of the Old Scarlet or Boston Pine, will fertilize a dozen rows of the former. We know of one gentleman who has raised *two thousand quarts* of Hovey's Seedling on a *single acre*, set out in this way, the present year. It is time and labor thrown away to cultivate sterile plants, as has been recommended by some individuals, when varieties, unusually productive and of large size can be planted out for that purpose. It is in this respect, that we view our new seedling as invaluable to every good collection of strawberries.

"We have given great attention to the strawberry, and cultivated all the varieties introduced for the last twenty years, and proved nearly twenty sorts the present season. Of the whole number, however, there are only *four* which can be recommended for general cultivation. Others will do for the amateur, who minds not time nor expense to ensure their growth; but our object has been to produce fruit fit for the "million;" varieties which need not the fostering care of the gardener, or which heed the intense cold of our northern clime,—but such as with ordinary care may *always*, and in every soil, be depended upon for a crop. We started with such a purpose in view, and we believe

it has been accomplished. Should an opportunity present, we hope to give an article, showing the comparative merit of the varieties we fruited the present year.

"The four varieties are the Old Scarlet or Early Virginia, the best and largest very early variety: the Boston Pine to succeed it, and in small gardens to take its place: Hovey's Seedling, and the common Red Wood. These will give a continued succession of splendid fruit of unsurpassed excellence, from early in June to the end of July, a space of two months; and when desired, with some care, the Alpine will prolong the season to October. The market affords the best test of the superiority of any kind for general cultivation. Let a comparison be made, of the supply, and the sorts, three years ago, with the past season. Keen's Seedling, imported in 1826, out of all the foreign kinds, was the only large one to be seen, and that exceedingly scarce. This year nearly the whole stock consisted of Hovey's Seedling, and Early Virginia, and the Wood: *three cultivators* alone sending to Boston market more than *four thousand five hundred quarts* of the former variety."

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For the Farmers' Cabinet.

#### Meeting of Agricultural Society.

At a Stated monthly meeting of the Philadelphia Society for promoting Agriculture, held at their room September 3d,—K. Smith, Esq., Vice President, in the chair;—present 13 members.

One new member was elected, and two others were proposed for election at the next meeting.

A communication from William Embrce, of Chester county, on experiments made with guano on grass, &c., the present season, on the farm of Dr. A. L. Ellwyn, was read and ordered to be published in the Farmers' Cabinet. An interesting statement was made by Mr. S. C. Ford, showing the value of guano and poudrette as manures, for corn, grass, &c., in which other members concurred.

A. Clement exhibited a very superior sample of white wheat, from the farm of Mr. Peter Wager, from seed obtained from Mr. R. T. Potts.

Mr. James Pedder brought to the room, a few uncommonly large and fine peaches, from the farm of Major Raybold, which were highly relished by the members present.

The Farmers' Cabinet will contain a statement of the products of the Messrs. Raybold's orchards, up to the last of August.

A. CLEMENT, *Rec. Sec'y.*

For the Farmers' Cabinet.

### Thaer's Principles of Agriculture.

MR. EDITOR,—I design with your permission, to give to your readers some knowledge of a work published in Germany in 1844, entitled, "Principles of Agriculture," by Albert D. Thaer. They need be under no alarm that I shall impose upon them any thing not altogether practical. I know very well the caution with which farmers receive theories, or indeed any information which they cannot readily and immediately apply to their business. It is a fault and a misfortune, but as it is a feeling which exists too generally, and is far too strong to be resisted, and far too sensitive to be rebuked, I shall not venture to quarrel with it. But this work contains nothing not strictly practical; it is the result of the experience of a very intelligent man, whose life was devoted to the study and practice of agriculture, and although he was of a country towards which Americans, from the difference of language, customs, &c., very seldom turn for information, yet it is probable that such a man as he appears to have been, with a strong mind, earnestly engaged for years in a single pursuit, may, and ought to have struck out something of interest to his brother cultivators. Of this we shall be made aware, as we proceed in the examination of the work. It may be as well, perhaps, to encourage an esteem for the writer's opinions, and to give them all the authority possible, to say who and what he was. Thaer was a Hanoverian, born in the town of Celle, in 1752; he was the son of a physician, and educated for the medical profession; after practicing for some years, he retired and devoted the rest of his life to agriculture. He appears to have been an enthusiast, for though living at a time when Europe was convulsed by Bonaparte's ambition, and he himself in his peaceful occupation, was surrounded by the ring of arms, and was at length obliged to desert his country, yet he does not seem even for a moment to have thought of giving up his pursuit—having once put his hands to the plough, he looked not back. Honours were showered upon him from all parts of Europe; noblemen and princes sought his acquaintance; all men honoured him because he was useful. After a career of high merit, he died at an advanced age, in 1828.

I now propose to myself the pleasure of introducing to the readers of the Farmers' Cabinet, some of the ideas and modes of proceeding of this estimable person. As one of the most interesting topics to all agriculturists, I will begin with the chapter,

*On Manuring the Soil.*—Manures are of

two sorts, those which nourish the plant by becoming, as it were, its food, and those which stimulate its growth by chemical decompositions and combinations. It is not easy to define the way in which each manure produces its effect; but it is very important that we should make the endeavour to discover it, as it is only by attaining or approximating towards the real effect, that we can appreciate its value or feel authorized to discard any particular manure, or to continue its use. But in making this attempt we strike upon one of the greatest difficulties in the management of land—the power of deciding as to the soils and manures that are fitted for each other. In a practical point of view there is no subject more difficult, and no knowledge more difficult to attain; for a long time, and time of great value to the farmer, may be wasted before he is enabled to say whether he is treating his soil in the right manner. It is true that all soils may contain the aliments necessary for every kind of plant, but they are not in equal proportions; for this reason one kind of land favours the vegetation of one kind of plant, and another some other kind of totally a different nature. And in this way it is a nice point in the management of land, to know what our land is fitted to produce, and what kind of manure is calculated for this particular product. Our author makes an important distinction between vegetable and animal manure. The first, he says, appears to act on plants solely as an aliment, while the last acts on the soil as well as on the plants which vegetate there. Mineral manures, lime, plaster, &c., which contain no organic bodies, and of course, nothing to be decomposed, act almost entirely by rendering those parts of the soil soluble, which were before insoluble, and by favouring and accelerating decomposition. The manures in common use, are composed partly of vegetable and partly of animal substances; the vegetable matter, from not being so easily soluble as the animal, prevents or restrains the too rapid decomposition of these last, and makes their effect more lasting. The vegetable matter would indeed have but little effect, unless animalized, by first passing through the bodies of animals; while on the other hand, the vegetable are made to decompose more rapidly by the addition of animal substances. The value of these manures does not depend on the quantity so much as their quality. This is a point very little attended to. They should be from the best animals, fed in the best manner, for that which comes from an animal, will be of little value unless that which goes into him is of the best sort. Let an

animal be fed on bad hay, or bad grain or straw, or any coarse material, with little or no nutriment in it, how can it be expected that the manure it makes can enrich the earth, when the creature itself is ill fed and half starved. To produce the best manure the food must be of the best sort; or to say the same thing in other words, the animal should be in the best health. Our author goes with some minuteness into the nature of stable manure, but it is not necessary to alarm our sensitive agricultural readers with any scientific details, however correct or interesting; it is enough to say, that in his opinion and from his experience, this is admirably suited from its rapid decomposition, and the heat it throws out during this process, to cold, sterile, moist, and clayey soils, while to the chalky, dry, sandy, and calcareous, it is extremely injurious; it forces forward vegetation rapidly at first, but when its influence has somewhat diminished and vegetation is left to the natural strength of the soil, it droops and becomes languid. It may be inferred from these ideas, that this kind of manure is considered only transient in its effect, and as of very little use, except on moist and tenacious soils; though it is extremely beneficial on soils containing a large amount of humus or vegetable mould, from its promoting, by the passing off of its ammonia, the decomposition of this substance. When used by itself, the author directs that it should be carried to moist and clayey soils as soon as its first stage of fermentation has commenced, and then buried; fermentation and the heat it produces render the soil looser and lighter, and the repeated ploughings incorporate it with the soil and tend to fertilize it. When used on warm, light soils, he recommends the mixing it with vegetable substances which still retain their succulency, or with earth, and especially with turf. These should be mixed together, heaped up in successive layers, protected from too free an access of air, and moistened when the weather is dry. The manure from horned cattle does not ferment so rapidly or develop so much heat as that from horses. Its effect is not therefore so rapid, but in proportion more lasting, and it may be used on a greater number of crops, and crops more various in their nature. From there being very little apparent increase of temperature during decomposition, it is peculiarly adapted for warm soils; when buried beneath tenacious, clayey soils, it will produce little or no effect until brought into contact with air; and it appears that this is effected by the tuber of the stem keeping up the communication between the air and the buried manure. The manure of

sheep produces a very rapid, strong effect, but is soon exhausted. When its moisture is preserved by being thrown into a heap, it decomposes readily, but when this escapes, decomposition takes place very slowly. From its activity, and from its accelerating vegetation too much, the author thinks that it should be employed in smaller quantities than any other kind of manure; in most cases its effect does not outlast the second crop, and it seems of the most advantage on soils containing insoluble humus or vegetable mould. It appears that there is a difference of opinion among agriculturists as to the efficacy of the manure of pigs, and it is probable that this arises from the difference in the food that they receive, there being a far greater influence from this source on the manure of these animals than on that of any other; though there is no doubt of its activity when every proper arrangement is made to preserve all the excrement. The manure of the poultry-yard, which is very little regarded, but which might form for the farmer his native guano, is of the greatest strength and activity. It is very different from that of quadrupeds, and contains a peculiar substance resembling albumen. Vauquelin, a celebrated French chemist, discovered in an analysis of this material, that there was a marked difference between the dung of cocks and that of breeding hens. In the use of this article it is essential that it should be as minutely divided as possible.

E.

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 For the Farmers' Cabinet.

### Swine.

TO THE EDITOR.—There is perhaps no race of animals more useful or profitable to the farmer, than a good breed of swine; and it is of great importance that the best breeds should be disseminated throughout the country. I happened yesterday to see a lot of Chester county, pure white pigs, that had been purchased by Mr. Aaron Clement, of this city, for some of his friends in this neighborhood, and for a gentleman in Richmond, Virginia. They were large and perfect in form; they appear like easy keepers, and I am told that they arrive at great weight at an early age; say from three to five hundred pounds. Persons at a distance desirous of procuring the best breeds of cattle, sheep or swine, can apply to Mr. Clement with the greatest confidence.

A SUBSCRIBER TO THE CABINET.

Philad'a, Sept. 5th, 1845.

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IN the autumn when you sow your wheat, is generally the best time to sow Timothy seed.

**On the preservation of Fruit Trees.**

*A Paper read by the Hon. SAMUEL D. INGHAM, before the meeting of the Bucks County Agricultural Society, held at Pineville Hall, August 21st, 1845.*

THE insect which has caused such extensive havoc among Peach Trees in our country, belongs to that most destructive of all the families of the races of insects, the Moth. It has four wings, its body about three-fourths of an inch long, is formed by six belts, gradually tapering from the wings to the tail. Some have supposed that its eggs were laid in the crotches of the limbs, and under the rough pieces of bark, but as the young larvæ of all insects require their peculiar food, the parent generally seeks a place for depositing her eggs where food may be conveniently found. A worthy friend of mine, the late Samuel Johnson, of Buckingham, mentioned to me many years ago, that he believed the Peach Moth laid its eggs on the leaves of the peach trees, which, by curling up, protected them from the weather until hatched, and then supplied them with food until the leaves withered and fell to the ground. He further remarked that the larvæ in searching for supplies of food, on finding the root of the young tree, seized on the tender bark, and if it had strength enough, penetrated to the wood, where it continued to ravage upon its victim until death. This is by far the most probable process of this insect thus far, and it may be remarked that there is a trait in the character of most, if not all wood worms, not generally known, viz: The change from the larvæ to the chrysalis does not take place from any law of necessity at fixed periods of time, but is prolonged according to circumstances almost indefinitely. I once found a worm in a piece of yellow pine furniture, which, unless it had entered the dry wood after it was painted, must have been there more than twenty years. The amount of work it had done seemed to justify the same idea of its longevity. I conclude, therefore, that the peach worm remains in the tree as long as it finds food to suit, whether the theory of the process of maturation be true or not. There is no doubt that the young larvæ, in a very tender state, commence their attacks on the bark of the tree, and consequently a small matter, properly applied, could not fail to protect the tree from their ravages. The remedy I propose does not depend for its efficacy upon any particular process in the labors of the insect. It is as follows: When the young peach trees are taken from the nursery, let them be very carefully examined, and every worm taken out, or if any trees are materially injured,

reject them; when thus examined, &c., put on the lower part of the stalk, and upper side of the root, a thin coating of tar, so warm as to be conveniently applied with a paint brush, then plant the trees in the usual way, and once in two years remove the earth around the stalk and apply another coat of the same material; a quart of tar will suffice for thirty or forty growing trees, and two hands will easily dress two or three hundred in a day. Be careful not to have the tar too hot, nor to make the coat too thick on young trees; when done replace the earth on the roots—after the first application it is not very material at what season it is done.

I have tried the experiment for several years, and while every tree not thus treated with the tar was destroyed by the worms, not the slightest injury was done to the others. I consider the trial I have made, though on but a few trees, as a demonstration of the efficacy of the tar thus applied, as an antidote to the Peach worm.

I have found the same application upon young apple trees, a complete preventive against the ravages of mice. For this purpose the tar may be slightly boiled, and if put on once a year the mice will not touch the bark.—*Bucks County Intelligencer.*

**Restraints—Exercise.**

We take the following from a Southern paper. Let a word to the wise prove sufficient.—Ed.

FROM infancy our girls are waited upon till locomotion becomes painful; they grow up with a fair skin, and from generous feeding are apparently full in development; but there is no muscle, nothing but fat, which the first trials of the physical frame dissipate, and the whole system is collapsed. For the want of exercise in the house and in the open air, added to the infamous and disgusting pressure of the waist and all the vital organs, the secretions are faulty; the skin, instead of being of a firm, velvet-feeling texture, becomes pale and sallow; then come low spirits, peevishness, ennui, disgust.

Nature has decreed that work, health, and happiness, should be closely united. If you want a drink, go to the pump or to the spring and get it; if to bathe, prepare your own bath, or plunge into the running stream; make your own beds, sweep your own rooms, and wash your own clothes; throw away your corsets, and Nature herself will form your bustles; then you will have full chests, glossy hair, rosy complexions, smooth velvet skins, muscular, rounded limbs, graceful tounures, elasticity of person, generous hearts, sweet tempers, good husbands, and long lives of honey-moons.

When we read of the free clothing, the gymnastic exercises, the household duties of the Greeks, we are not surprised at the exquisite loveliness of the marble copies of those most perfect exemplars of Burke's line of beauty. But when, under the Southern system of dress and no exercise, we see great profusion of clothes piled up in rigid opposition to nature's known lines of gradual swell and imperceptible declension and attenuation of limb, we do not fail to remember that the owl, of all birds, having the greatest bulk of feathers, has also the most ragged person; and 'flaccid skins' and 'forked radishes' 'come o'er the spirit of our dream.'

**USE OF SOAP-SUDS AS A MANURE.**—About twelve months ago I had at my command a tank that received nothing but the suds that came from the laundry; I thought I would try its effects. The first thing I tried it on was hyacinths in pots, and the result was most astonishing. I tried some of Potter's liquid guano at the same time as an experiment, but found the suds most beneficial. Many persons who saw the hyacinths, said they never saw finer. I used it alternately with pure water. I also tried it with strawberries that were forcing, and though the plants were previously very bad ones, the result was very satisfactory. French beans in pots were also a great deal improved by its use, and I think if it were extensively employed it would be found very beneficial to a great many plants. It must be remembered that it was not used fresh from the wash-house, but was allowed to run into the tank, which was always nearly full; by this means it may be used without the least injury to any growing plant requiring such stimulans.—*Gardeners' Journal.*

## THE FARMERS' CABINET,

AND

## AMERICAN HERD-BOOK.

PHILADELPHIA, NINTH MONTH, 1845.

In a letter dated the 19th of last month, at Salem, Ohio, from a valued friend who had recently journeyed thither from Richmond, Indiana, he says, "Through Indiana generally, wheat has seldom if ever been better. The grain is large and fine. Grass, owing to the drought, is mostly light, though better than farmers had anticipated. Oats are good and corn promises well. Similar observations may apply to Southern Ohio, from the intelligence I have been able to collect. In many parts of Northern Ohio, there has been a great failure of the wheat crop, owing to the late

frosts; and some neighbourhoods have suffered so severely from drought, that grass has failed, and farmers will be obliged to sell their stock, or drive it to the Pickawa plains to winter."

Our correspondent noticed in his journey many evidences of bad farming and wretched management, and wishes some "Agricultural paper could find its way to such farmers, to convince them by whispering a few secrets in their ear in a clever manner, of their error, and the inexpediency of any other than good cultivation." But the wish, we can assure him, is to a great extent vain. It is not the slovenly and the unthrifty who read agricultural papers. They do not apprehend they need them.

### ENGLISH SHEPHERD DOGS.

A FEW of these valuable animals of *pure blood*, may now be obtained at \$5 each, delivered in Philadelphia. The dam was selected in England last fall, for the present owner, and the pups now o'd enough for delivery, were sired by a thorough bred Shepherd Dog from the State of New York. Early application to be made—post-paid—at the office of the Farmers' Cabinet, No. 50 N. Fourth street, Philadelphia.

### FARM IN WHITEMARSH FOR SALE.

THE subscriber offers to sell the farm on which he resides, in Whitemarsh valley, Montgomery county, about eleven miles from the city—it contains 155 acres of first quality limestone land, in a high state of cultivation.

The improvements are a large stone mansion, which has recently undergone a thorough repair—stone carriage-house, with granary attached—a substantial stone farm-house—a new tenant house—a stone barn 120 feet long—hay-house—wagon-house—spring-house, &c., all in excellent repair.

This estate combines the singular advantage of a beautiful country-seat, within a pleasant ride of the city, with a highly improved and productive farm.

For terms, apply to the subscriber residing thereon, or to Eli K. Price, Arch street, Philadelphia.

Ninth mo. 15th. WM. W. LONGSTRETH.

### Agency for the Purchase & Sale of IMPROVED BREEDS OF CATTLE & SHEEP.

THE subscriber takes this method of informing his friends and the public, that he will attend to the purchase and sale of the improved breeds of cattle, sheep, &c., for a reasonable commission. All letters post paid, addressed to him at Philadelphia, will be attended to without delay. AARON CLEMENT.

March 15th, 1845.

### SHORT ADVERTISEMENTS.

The subject matter of which, may correspond with the agricultural character of this paper, will be inserted at the rate of one dollar for each insertion of ten lines or less; and so in proportion for each additional line. Payment in advance.

THE Chester and Delaware County Agricultural Society will hold an Annual Exhibition at West Chester on the 7th of next month. They will also have a Ploughing Match. An interesting and exciting time is anticipated. A list of premiums has been forwarded to us.

JOSIAH QUINCY, Jr., of Boston, will deliver the Annual Address at the Exhibition and Fair of the New York State Agricultural Society, at Utica, on the afternoon of the 18th inst., the last day of the Fair.

THE Exhibition and Ploughing Match of the Agricultural Society of New Castle County, Delaware, will be held as stated in our last, at Wilmington, on the 17th and 18th insts. For list of premiums see last number.

THE Philadelphia Agricultural Society holds its Annual Exhibition at the *Lamb Tavern*, on the 22nd and 23rd of next month—the Ploughing Match on the 24th. For list of premiums, see No. 12, of last volume.

At a half year's meeting of the Royal Agricultural Society, held in London in the Fifth month last, our friend H. Colman, presented a specimen of Jersey marl. The Society has about 7000 members, and an invested capital of nearly \$40,000. The people of Shrewsbury, where the Annual Show was held in the Seventh month last, raised £1000 towards defraying its expenses.

THE *Indiana Farmer* says that in his ramblings, he saw "hay which had been cut and partly cured, and cocked up and left for a week or two, and was doubtless intended to stand much longer, for there is a fashion with some to let their hay lie about the field in little three feet cocks, until it is convenient to haul it to the stack. This may be in August or September. And sometimes we have seen a farmer with a little sled and rope hauling his hay in October!" Well may the wonder be expressed if these were "book farmers!"

ICE has become an important article of export. It is shipped from Boston in blocks weighing from two to four hundred weight, deposited in saw-dust in the ship's hold, and sent to London. It arrives there with but little loss of weight. A man by the name of Tudor, who first engaged in the ice trade, is said to have accumulated a handsome fortune by it.

THE *South Western Farmer*, a spirited paper, heretofore published at Raymond, Mississippi, is discontinued. We regret the necessity for it.

MANY of our readers are subscribers to Colman's Agricultural Tour. They will be pleased to learn that the fourth part is now in press at Boston, and we shall be able to furnish it in the course of three or four weeks. N. P. Willis, in one of his letters to the *New York Mirror*, says, "Mr. Colman, the agriculturist, has made a strong impression on society in England. His strong good sense and fresh originality of mind are well suited to be relished in this country."

PEACHES have been again this season abundant and cheap in our market for several weeks. Thousands of baskets were daily landed at our wharves, whence they were distributed to our citizens, and into neighbourhoods where they are more of a rarity. Tens of thousands of baskets have been forwarded to New York, which has had the good effect both to enable the Knickerbockers to luxuriate in our superabundance, and to keep up the price here. We have been informed that the Reybold family in Delaware, including the Major and his four sons, had sent to market up to the 29th ult., 63,334 baskets, and that they had in one day, shipped 5,420 baskets. We found upon our table the other day from these orchards, half a dozen as delicious in flavor, as they were noble in size.

THE quantity of rain which fell during the Eighth month, 1845, was 7.30 inches. At the Pennsylvania Hospital for the Insane, in Blockley, there fell 8.14 inches.

*Penn. Hospital, 9th mo. 1st.*

THE abstract from Von Thaer, on page 67, will be valuable to our readers; both they and the Editor thank our Chester county friend for his kindness, and ask a continuance of it.

#### PHILADELPHIA AGRICULTURAL, HORTICULTURAL, AND SEED WAREHOUSE.

No. 194½ Market street, between Fifth and Sixth streets, South side.

For sale as above, Prouty & Mears' Patent Centre Draught Self-sharpening Ploughs, with all the new improvements attached. These ploughs have taken nine premiums the last fall, in the States of Pennsylvania and Delaware. Subsoil ploughs for one or two horses—Taylor's new Patent Straw-cutters—Guillotine Improved do.—Corn-Planters—Cultivators—Harrows; Turnip-Drills, &c. Garden tools of every description. Also, *Vegetable and Flower seeds*, crop of 1844, grown for this establishment, and warranted true to name. Among the collection are several new kinds, very superior—as Seymour's White Giant Celery—Union Head Lettuce. Also, Peas—Beans—Potatoes, &c.—Fruit-trees—Bulbous roots, &c., for sale at the lowest prices, by

D. O. PROUTY.

#### Poudrette.

A valuable manure—of the best quality, prepared in Philadelphia, for sale at the office of the FARMERS' CABINET, No. 50, North Fourth Street, or at the manufactory, near the Penitentiary on Coates' street. Present price, \$1 75 per barrel, containing four bushels—\$5 for three barrels—\$15 for ten barrels, or thirty cents a bushel. Orders from a distance, enclosing the cash, with cost of portage, will be promptly attended to, by carefully delivering the barrels on board of such conveyance as may be designated. The results on corn and wheat have been generally very satisfactory. Farmers to the south and in the interior, both of this State and of New Jersey, are invited to try it. It is now seasonable for wheat, &c.

JOSIAH TATUM.

We keep on hand at this office, and will supply our friends with Agricultural works generally. Among which are

THE FARMER'S ENCYCLOPEDIA, full-bound in leather;—Price	\$4 00
YOUATT ON THE HORSE, with J. S. Skinner's very valuable Additions;	2 00
BRIDGEMAN'S GARDENER'S ASSISTANT;	2 00
THE AMERICAN POULTRY BOOK;	37½
THE FARMER'S LAND MEASURER;	37½
DANA'S MUCK MANUAL;	60
Complete sets of the FARMERS' CABINET, half-bound, 9 vols.	7 50
DOWNING'S Landscape Gardening,	3 50
Downing's Fruits and Fruit Trees of America,	1 75
SKINNER'S Every Man his own Farrier,	50
AMERICAN Poulterer's Companion,	1 25
BOUSSINGAULT'S RURAL ECONOMY,	1 50
FARMERS' & EMIGRANTS' HAND-BOOK,	1 00
BEVAN ON THE HONEY BEE,	31¼
BUISTS' ROSE MANUAL,	75
SKINNER'S CATTLE & SHEEP DOCTOR,	50
AMERICAN FARRIER,	50
THE FARMER'S MINE,	75
HANNAM'S Economy of Waste Manures,	25
LIEBIG'S AGRICULTURAL CHEMISTRY,	25
“ ANIMAL CHEMISTRY,	25
“ FAMILIAR LETTERS,	12½

As well as his larger works on Chemistry and Agriculture.

Subscriptions received for Colman's Agricultural Tour—or single numbers sold.

☞ We are prepared to bind books to order.

### Seed Store,

No. 23 Market Street, Philadelphia.

The subscriber keeps constantly a supply of White and Red clover, and other grass seeds. Field seeds, consisting of Spring and Winter Wheats, Potatoes, Oats, Barley, and choice varieties of Seed-corn. Also in season, Fruit and Shade Trees. Garden and Bird seeds generally. Guano in parcels to suit purchasers.

Philad., March 15th. M. S. POWELL, Jr.

## COATES' SEED STORE,

No. 49 Market Street.

### FRESH TIMOTHY SEED,

Of various qualities, from good common seed to the purest and finest that can be produced,

TOGETHER WITH A COMPLETE ASSORTMENT OF

### GRASS & GARDEN SEEDS,

Of the finest Quality and best Varieties—Bird Seeds, &c. JOS. P. H. COATES, 1 yr. Successor to George M. Coates.

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## THE FARMERS' CABINET,

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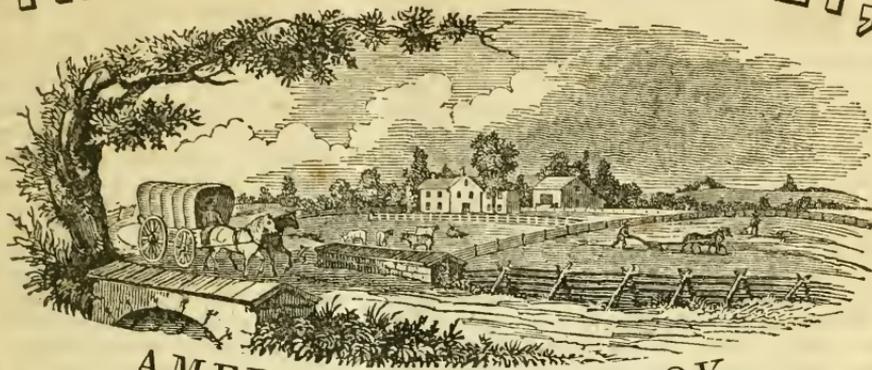
TERMS.—One dollar per annum, or five dollars for seven copies—payable in advance.

All subscriptions must commence at the beginning of a volume. Having lately struck off a new edition of one or two of the former numbers, which had become exhausted, we are now able to supply, to a limited extent, any of the back volumes. They may be had at one dollar each, in numbers, or one dollar twenty-five cents half-bound and lettered.

For six dollars paid in advance, a complete set of the work will be furnished in numbers, including the tenth volume. The whole can thus readily be forwarded by mail. For twenty-five cents additional, per volume, the work may be obtained neatly half-bound and lettered. Copies returned to the office of publication, will also be bound upon the same terms.

By the decision of the Post Master General, the "Cabinet" is subject only to newspaper postage. To any Post office within thirty miles of Philadelphia, they will go free of charge.

# THE FARMERS' CABINET, AND



## AMERICAN HERD-BOOK.

DEVOTED TO  
AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

Perfect Agriculture is the true foundation of all trade and industry.—LIEBIG.

Vol. X.—No. 3.]

10th mo. (October) 15th, 1845.

[Whole No. 129.

PUBLISHED MONTHLY,

BY JOSIAH TATUM,

EDITOR AND PROPRIETOR,

No. 50 North Fourth Street,

PHILADELPHIA.

Price one dollar per year.—For conditions see last page.

### Cattle Show and Exhibition of the N. Y. State Agricultural Society at Utica.

To the Editor of the Farmers' Cabinet:—

DEAR SIR,—Having attended this grand Exhibition at Utica, on the 16th, 17th, and 18th ult., I snatch a few moments from onerous engagements that assert an unrelaxing claim to every effort of my overworked frame, to give a brief outline of the character and spirit of the agriculturists of New York. How gratifying would it have been to have met at Utica a portion of the substantial farmers of Pennsylvania, looking on and inspecting with me the contributions in every department of husbandry, made by the farmers, their wives and children, to the great Cattle Show and Fair of the New York State Agricultural Society; for then might I hope that such an example and such cheering results would inspire them to rouse up, and in like manner elicit and develop the rich but latent agricultural resources of the Keystone State. Then might I hope

that even before I had shuffled off this mortal coil, Lancaster, Reading, Easton, York, Pittsburg, &c., &c., would become the theatres of similar scenes with Albany, Rochester, Poughkeepsie, and Utica, exhibiting the triumphs of a well directed State policy, an enlightened and profitable agriculture, and a spirited and generous yeomanry—but clouds and darkness rest upon this hope; for while New York leads so gloriously and exhibits such convincing proofs of the wisdom and patriotism of her legislation in the encouragement of Agricultural Societies,\* Pennsylvania stands spell bound in the toils of party spirit and faction—a spirit which produced corruption and oppression at home through *funding* and *financiering*, and the sneers and contempt of those abroad, who loaned the money which politicians made use of to pander to party ascendancy or individual aggrandisement. While Virginia is beginning to awake to a proper sense of the true interests of a State—the promotion of its agriculture—the farmers of Pennsylvania drudge on in dogged toil to pay the taxes brought upon them by improvident legislation, which they themselves from time to time sanctioned and sustained, in the spirit of party at the polls. When shall they shake off the yoke of faction and party discipline, and eschew the intrigues of the

\* The State of New York expends annually, seven to eight thousand dollars upon her Agricultural Societies.

demagogues, who present to them annually a ticket for their support which, if successful, affords no hope of improvement in their condition, for it never properly or proportionably represents the great and leading interests of agriculture, nor of those, the honest industrious, who compose the most numerous class. The farmers of New York act differently; they cause themselves to be felt, heard, and understood. The merchant, manufacturer, and professional man, are made to acknowledge their value, and bow with due submission to their intrinsic and popular importance. But to the Exhibition.

The town, or city of Utica, like all others in Western New York, looks fresh and beautiful, from its having within the last twenty years, risen from a few straggling houses among stumps, to its present size of broad and well paved streets, closely built with attractive warehouses, stores, hotels, and public buildings, and numerous private residences of great beauty, containing a population of some thirteen to fourteen thousand. It is situated upon the Mohawk river, and is distant from Albany about ninety miles. Its central position, backed by such an agricultural district as Oneida, led to great hopes of a large contribution and a numerous attendance; and in this there was no disappointment. The citizens of Utica subscribed liberally towards the expenses of the Exhibition, and made every possible arrangement to accommodate the Agricultural Society and the visitors in general; and in doing this, while they manifested a generous hospitality, they showed a cleverness and good sense equally creditable; for I doubt not, but Utica was the recipient of more than fifty thousand dollars, expended and left by those who sojourned within her borders during the Exhibition, while it is impossible to estimate the vast results growing out of this great Agricultural Show, in the stimulus it will impart to the skill and enterprise of the agricultural district of which she is the centre.

To give you some idea of the number of persons who witnessed this Exhibition, it is only necessary to state that the Society, as I learned, added to their funds something over three thousand dollars, for admissions to the grounds, at twelve and a half cents for each visitor, independent of members and contributors, who with their families had free admission. I found individuals, and in many instances, families, husbands and wives, brothers and sisters, from almost every part of the State of New York, and not a few from Canada. To hint at the spirit of New York, I need but remark, that all the rail-road companies volunteered to

carry cattle, horses, hogs, sheep, agricultural implements, butter and cheese,—every thing to be exhibited—from any distance within their respective lines, free of all charge; not only this, but every individual who visited the Show, was carried to and from Utica, at half the usual fare. In what other place except New York, could a corporation be found to act thus patriotically and generously? When I saw the immense trains arriving constantly, filled with huge oxen, fat steers, and stock of all kinds, set down *free*, the agents as courteous, civil and bland, as if they had made a most comfortable and profitable trip, instead of having had unusual and vexatious trouble in taking in and discharging cargo, and *no freight*; I began to think there was no insolence of office in New York, and that there were exceptions to the sweeping imputation, that certain bodies had no souls.

Among the cattle exhibited, the first class, Durhams, took the lead, as indeed they do everywhere. Where there are no Durhams, the exhibition in cattle will always look mean and meagre to the eyes of those who are familiar with this noble breed. The principal contributors to this class, were Mr. Prentice, of Mount Hope, Mr. Vail, of Troy, Mr. Sherwood, of Auburn, Messrs. Bell and Morris, extensive dairymen of Westchester, near the city of New York; Mr. Ballard, of South Port, Mr. Carey, of Marcy, Mr. Nicholas, of Geneva, Mr. Brinkerhoff, of Albany, and Mr. Wakeman, of Herkimer, to whom were awarded the principal premiums. Mr. Wadsworth, of Genesee, formerly president of the Society, exhibited ten yoke of oxen of such size, form, and training, as not only did great credit to himself, but reflected favourably on the whole State—they were awarded the first premium. The Herefords and Ayreshires were represented; the former by Mr. Corning's cattle, the latter by Mr. Bement, an enlightened agriculturist, now the obliging host of the American Hotel, Albany, one of the best houses, if not the very best, for cleanliness, comfort and cooking, in the city. The Red cattle, or Devons, with sundry grades were numerous, one or two of the Devon bulls were very good animals of their class. The sheep, to my view, were very superior, and consisted of various distinct and improved breeds. It was regretted, however, that Mr. Randall, of Courtland, did not exhibit a portion of his celebrated Merinoes—they would, as at Poughkeepsie, have attracted much attention. The horses, from the thorough-bred stallion, down to the special draught horse, were superior and numerous—horses, mares, geldings, and colts, were on the ground from

all quarters, and were shown under favourable circumstances. The committee of judges in this department, had an arduous task in deciding upon the merits of the respective animals; the committee, however, was a strong one, and had at its head Col. Sherwood, of Auburn, reputed as one of the best judges in the country. The ploughing match was spirited and interesting; in no part of the United States, it is believed, could so many superior ploughs, ploughmen, and teams, be exhibited, as competed for the prizes at Utica. Mr. Delano's Improved Diamond Sod Plough took the first premium; he exhibited also a Cross Plough, for fallow or broken land, which to my liking, was the best I ever saw.

The Flora and Pomona Hall was a beautiful affair, tastefully festooned and decorated by the ladies of Utica. The fruits and flowers were creditable offerings, but of course, fell short of the special Horticultural Exhibitions of Philadelphia. But then the Farmers' Hall, where were exhibited the butter, cheese, and dairy utensils of Oneida and adjoining counties:—Where and how could it be surpassed? Nowhere, take it all in all, I'll answer for it. A Pennsylvania farmer can form no adequate idea of the capital employed in cheese making alone, nor the perfection to which this part of dairy husbandry is carried. The women seemed more interested in this department than the men, and I cannot withhold from them the meed of well merited praise for their tidiness, their affability, general intelligence and good looks. If I had to choose a wife, I would go among the Yankees or to Western New York, which I believe would be the same thing; and could I do no better, would, as Jacob did of old, serve some Laban for a Rachel.

Fortunately the weather was very propitious, uninterruptedly fine throughout the three days, until near the close of the third, as Mr. Gowen, chairman of the committee on first class of cattle, had finished reading his Report, there came up a shower which induced the president to suggest a removal from the open ground to the halls. It soon cleared away again, the sun shone out, and the moon succeeded, and reigned throughout a beautiful night, making pleasant the journey of thousands, who left Utica by railroads, canals, stages, and private conveyances for their homes, which I hope they all reached in safety, pleased with their agricultural excursion.

The Hon. Josiah Quincy, jr., made the annual Address. It was listened to with marked respect and attention. It bore principally on the social and moral condition of

the farmer, was ingeniously compiled, and well delivered; some might think it rather puritanical, the Scriptural allusions being many; yet none of them could be held as inappropriate.

The State of New York, nay the whole agricultural community, are indebted to the officers and members of the State Society for their industry, perseverance and management, in carrying out so ably the great work of improvement, by means of these grand Exhibitions, which speak in such intelligible language to so many thousands at once, of what *has*, and what *can* be done in the various departments of agricultural science and domestic economy. While all the officers are entitled to much praise, I would in a special manner notice the able and efficient labours of the president, B. P. Johnson, Esq., and of Luther Tucker, recording secretary, favourably known to agriculturists, as editor of the Albany Cultivator.

However glad to have brought this rapid sketch to a close, I cannot resist telling you, that pending the Exhibition I visited the Falls of Trenton, distant from Utica about fifteen miles. I shall not attempt any thing like a description of these sublime and enchanting Falls, for even had I the time at command, there would be wanting the ability to do justice to them; and in saying this, it affords no comparative idea to your readers of the splendor, richness, and variety of the scenery that nature has so luxuriantly thrown together in the sweetest and wildest form that can be imagined; no human penciling could give any thing but a faint and imperfect sketch of their grandeur and beauty. He who would desire to see nature in her wildest, chastest mood, must gaze upon her as I have done in her most felicitous display—the Trenton Falls—and if he can say that I raised an expectation that was not more than realized, I shall acknowledge myself an enthusiast, and consider him as proof against all the influences that combine to dazzle and delight the common mind!

What a world is New York—her agriculturists and merchants—her public works—her territory and population—her bays, rivers, and lakes—she is indeed “Land of the mountain and the flood!” And compatible with all these are her public spirit and enterprise—the munificence and hospitality of her generous and enlightened citizens.

J. G.

Philadelphia, October 1st, 1845.

WOOLLENS should be washed in very hot suds and not rinsed. Lukewarm water shrinks them.

**Efficacy of Ammonia in cases of Poison.**

*Extract of a letter from Dr. Church to the Editor of Silliman's Journal of Science, dated Cooperstown, N. Y., February 6th, 1829.*

A young man in this place had accidentally overset a hive of bees, and before he could escape, they had settled, in great numbers, on different parts of his body and limbs and stung him very severely. It was about half an hour after the accident happened, when he came to my office in great agony, and he had scarcely time to give an account of it before he fainted. I immediately applied the ammonia to the parts that had been stung, his legs, arms, and breast. He directly recovered from his faintness, and experienced no pain or other inconvenience afterwards.

It is several years since I first used the aqua ammonia, to counteract the effect of the bites of insects and stings of bees, and it has invariably produced instant relief—generally complete. I have often seen children crying in excessive pain from the sting of a bee, and on application of the ammonia they would immediately cease complaining and become cheerful, so complete and sudden is the relief it produces. I always use it for mosquito bites, and they never trouble me farther. I was led to use it in these cases, from the instantaneous effect it was said to have in counteracting the operation of prussic acid. In the second number of the American Journal of Medical Sciences, (Philadelphia,) for the last year, it will be seen that Dr. Moore, of Alabama, used it with great success in the cure of bites of venomous serpents. From his account, it is probable that the pure uncarbonated aqua ammonia is most efficacious. I have sometimes noticed, and think it must be on account of its being sometimes carbonated and at others not.

**WATER IN A SHEEP'S HEAD.**—Mr. John Scurr, farmer, of Greenside Trimdon, near Sedgfield, a short time ago had a sheep, which, for a fortnight had been ill. Three days it was unable to get upon its feet. Mr. Scurr happened to have a friend who called upon him on business, and they together went to see the sheep. His friend pronounced the animal all but dead, it being ill of the "sturdy," or water in the head, which he said was incurable. They consequently left the sheep to die. A servant boy, named Gilpin, who lived with Mr. Scurr, overheard their discourse, and immediately went to his master's house and procured a gimblet, when

he returned to the field where the sheep was, and, without practice or skill in the art, began cautiously to operate upon the head of the animal, by boring a hole exactly upon the top of the scalp, which done, the water streamed out of the head, and, strange to say, in a very few minutes the sheep got upon its feet and started to eat grass, and is now doing as well as any of its fellow grass eaters.—*New Farmer's Journal.*

**TO DIMINISH THE DRAUGHT OF PLOUGHS.**

—We may consider that upon an average, 35 per cent. of the labour of ploughing is attributable to the weight of the implement, 55 per cent. to the operation of cutting the furrow-slice, and only ten to the action of the mould board. This conclusion, if it be correct, reverses most of our pre-conceived opinions on the subject: the attempts which have been made to diminish the draught of ploughs have been mostly directed to the alteration of the form of the mould board; let our plough-makers direct their efforts more to facilitate the action of the sock and coulter, and to diminish, within safe limits, the weight of the implement, and they will, probably, be more successful in lessening its draught.—*Gardeners' Chronicle.*

**WINDOWS CLEANSSED BY STEAM.**—A very simple method of cleaning windows is now coming into general use in England. The window is first dusted with a bunch of feathers or dusting brush, and when the dust is thoroughly removed, place a bowl of boiling hot water at the base of the window; the steam immediately covers the glass, which is removed by a wash leather, and finished off with another quite clean and dry. The method saves time, prevents that cloudy appearance left by whiting, and produces a more brilliant and durable polish than any other.

**ANIMAL GRATITUDE.**—An English writer says, "Animals are so capable of showing gratitude and affection to those who have been kind to them, that I never see them subjected to ill treatment without feeling the utmost abhorrence of those who are inflicting it. I know many persons who, like myself, take a pleasure in seeing all the animals about them happy and contented. Cows will show their pleasure at seeing those who have been kind to them, by moving their ears gently, and putting out their noses. My old horse rests his head on the gate with great complacency when he sees me coming, expecting to receive an apple or a piece of bread."

### Decrease of Temperature in the superior Strata of the Atmosphere.

THE temperature rises rapidly as we ascend in the atmosphere; places among the mountains always possess a climate more severe as they are higher above the level of the sea. Even under the equator, height of position modifies the seasons so much, that the hamlet of Antisana, which is within one degree of south latitude, but which is upwards of 13,000 feet above the sea level, has a mean temperature which does not differ much from that of St. Petersburg. Near it, but at a still greater height, the summit of Cyambe, covered by an immense mass of everlasting snow, is cut by the equinoctial line itself.

The cold which prevails among lofty mountains, is ascribed to the dilatation which the air of lower regions experiences in its upward ascent, to a more rapid evaporation under diminished pressure, and to the intensity of nocturnal radiation.

Places which are situated upon the same mountain-chain, nearly in the same latitude, and at the same height, have often very different climates. The temperature which would be proper to a place perfectly isolated, is necessarily modified by a considerable number of circumstances. Thus the radiation of heated plains of considerable extent, the nature of the colour of the rocks, the thickness of the forests, the moistness or dryness of the soil, the vicinity of glaciers, the prevalence of particular winds, hotter or colder, moister or drier, the accumulation of clouds, &c., are so many causes which tend to modify the meteorological conditions of a country, whatever its mere geographical position. The neighbourhood of volcanoes in a state of activity does not appear to affect the temperature sensibly; thus Puracé, Pasto, Cumbal, which have flaming volcanoes towering over them, have not warmer climates than Bogota, Santa Rosa, De Osos, Le Param de Hervé, &c., situated on sand-stone or syenite.

From the whole series of observations which I had an opportunity of making on the Cordilleras, it appears that one degree of temperature, cent., 1.8° F.,\* corresponds to 195 metres, or 649.4 feet of ascent among the equatorial Andes. In Europe, it has been ascertained that the decrease of temperature in ascending mountains, is more rapid during the day than during the night—during summer than during the winter; for example, between Geneva and Mount St. Bernard, to have the Fahrenheit ther-

момeter fall one degree, it is necessary to ascend:

In spring .....	326.1 feet.
In summer .....	336.6
In autumn .....	382.2
In winter .....	424.2

It sometimes happens, however, that in winter, in a zone of no great elevation, the temperature increases with the elevation—a fact which Messrs. Bravais and Lottin observed in the 70° of N. lat., in calm weather; at an elevation between 1312 and 1640 feet, the rise amounted to as many as 6° centigrade, 10.8° Fahrenheit.

In no part of the globe is the diminution of temperature, occasioned by a rise above the level of the sea, more remarkable than among equatorial mountain ranges; and it is not without astonishment that the European, leaving the burning districts which produce the banana and cocoa-tree, frequently reaches, in the course of a few hours, the barren regions which are covered with everlasting snow. "Upon each particular rock of the rapid slope of the Cordillera," says M. de Humboldt, "in the series of climates superimposed in stages, we find inscribed the laws of the decrease of caloric, and of the geographical distribution of vegetable forms."

In the hottest countries of the earth, the summits of very lofty mountains are constantly covered with snow; in the elevated and cold strata of the atmosphere, the watery vapor is condensed, and falls in the state of hail and snow. In the plain, hail melts almost immediately; the fusion is slower upon the mountains; and for each latitude there is a certain elevation where hail and snow no longer melt perceptibly. This elevation is the *inferior limit of perpetual snow*.

The accidental causes which tend to modify the temperature of a climate, also act in raising or lowering the snow-line. On the southern slope of the Himalaya, for example, the snow-line does not descend so low as it does upon the northern slope; and in Peru, from 14° to 16° of S. latitude, Mr. Pentland found the perpetual snow-line, at an elevation of 1312 feet higher than it is under the equator.

Elevation above the level of the sea, consequently, has the same effect upon climate as increase in latitude. Upon mountain ranges, vegetation undergoes modification in its forms, becomes decrepit, and disappears towards the line of perpetual snow, precisely as it does within the polar circle, and for no other than the same reason, viz., depression of temperature.

The constancy and the small extent of

\* 1° of Centigrade thermometer is equal to 1.8° F.

variation which occurs in the temperature of the atmosphere under the equator, enable us to indicate with some precision the point of mean temperature below which there is no longer any vegetation. In ascending Chimborazo, I met with this point at the height of 15774.5 feet, where the mean temperature approached 35° F., and where consequently the saxifrages, which root among the rocks, must still receive a temperature from 41° to 43° F. during the day, inasmuch as far beyond the inferior snow-line, at an elevation of 19,685 feet above the sea-line, I saw a thermometer suspended in the air, and in the shade mark 44.6° F.

In considering the extension of vegetation towards the polar regions, we discover plants growing in very high latitudes in places which have a mean temperature much below that which I believe to be the limit of vegetable life on the mountains of the equatorial region. In these rigorous climates vegetation is suspended by the severity of the cold during the greater portion of the year; it is only during the brief and passing heat of summer that the vegetable world wakes from its long winter sleep. Nova Zembla, lat. 73° N., the mean temperature of whose summer is between 34° and 35° F., is, perhaps, like the perpetual snow-line of the equator, the term of vegetable existence. It is also to the very remarkable heat of the summer in countries situated at the northern extremity of the continent of Asia, remarkable if it be contrasted with the intensity of the winter cold, that man succeeds in rearing a few culinary vegetables in those dreadful climates. At Jakoustk, in 62° of N. lat., and where mercury is frozen during two months of the year, the mean temperature of summer is very nearly 64° F. We have here, as M. de Humboldt observes, "a well characterized continental climate," examples of which indeed are frequent in the north of America. At Jakoustk wheat and rye sometimes yield a return of 15 for 1, although at the depth of a yard the soil which grows them is constantly frozen.

The limit of perpetual snow being much lower upon the mountains of Europe than in tropical countries, agriculture ceases at a much less elevation. At a height of 6,560 feet above the level of the sea, the vegetables of the plain have almost entirely disappeared. In Northern Switzerland the vine does not grow at an elevation of more than 1,800 feet above the sea-line; maize scarcely ripens at an elevation of 2,850 feet, while in the Andes it still affords abundant harvests at an elevation of 8,260 feet. On the plateau or table land of Los Pastos, fields of

barley are seen at upwards of 10,000 feet above the level of the sea; but on the northern slope of Monte Rosa, in Switzerland, barley fails at an elevation of about 4,260 feet; on the southern slope, indeed, it reaches a height of about 6,560 feet; and this great variation in the ultimate limit of barley is frequently observed with reference to the same plant grown upon opposite aspects of a mountain range.—*Boussingault's Rural Economy.*

From the Boston Cultivator.

### **A Day at the Reybolds in Peach Harvest.**

DESIROUS of affording our readers the means of forming some idea of the magnitude and importance of the Peach business of Delaware, we lay before them the details of "A day spent at the Reybolds in Peach harvest."

We took passage from Philadelphia by the steamer *Pioneer*, at Arch street wharf, at seven o'clock on the morning of the 29th of August, Reybold's wharf adjoining being full to overflowing with his empty baskets in transitu; passing the steamer *Napoleon*, which had arrived at the rail-road wharf on the Camden shore, and was discharging her lading of 3,000 baskets of Reybold peaches for the New York market. During the passage to Delaware City we were continually meeting boats of different descriptions loaded with peaches for the Philadelphia market. We reached the wharf at 11 o'clock, forty miles below Philadelphia, where it was with difficulty that we could pass along it, for the rows of baskets of Reybold's peaches three tiers in height, and extending about one hundred yards in length, flanked with carriages, from the six-ox and six-mule wagons, counting their 125 baskets each, to the single-horse cart or dearborn with its score or two awaiting their turn for unloading; reloading with empty baskets and driving furiously back for more—a scene which bade defiance to imagination.

Here we found the Reybolds loading a sloop, which departed for Philadelphia with 1,230 baskets only, to make room for the *Cohansey* steamer, on board which were placed 1000 baskets more; and then they began to prepare the evening's loading for the *Napoleon*, that had returned from Philadelphia during the day, on which were put 1,700 baskets from the orchards of Messrs. John, Philip, Jr., William, and Barney Reybold, when she proceeded to the wharf of Major Reybold, which is situated in the midst of his orchards, to complete her loading—another 1,400 baskets, starting for Philadelphia, so as to be again in the market

before daylight next morning, with a total of 3,190 baskets.

The details of this day's shipment, therefore, are as follows:

On board the sloop,	1230
On the steamer Cohansey,	1000
On the steamer Napoleon,	3190

Total, 5420 baskets, from the Reybold orchards only. These all reached their destination before daylight next morning, consigned to Mr. Anthony Reybold, by whom they were disposed of before 11 o'clock, at 16 to 31 cents per basket, containing about three and a half pecks each.

From the books of Major Reybold and his sons were ascertained the following remarkable facts: Quantity of peaches sent to market to the 29th of August inclusive—

Major Reybold, from his Maryland and Delaware orchards,	31,145
John Reybold,	13,300
Philip Reybold, Jr.,	6,000
William Reybold,	5,699
Barney Reybold,	7,200

Total number of baskets, 63,344

Number of baskets employed for transit, 40 to 50,000.

Number of acres of orcharding,	1,090
Number of trees in orchards,	117,720

Business detaining us in that part of the country, we returned to Delaware City on the 31st, and found the Reybolds loading two large steamboats at the wharf—the "Napoleon" for Philadelphia, and the "Mutual Safety" for New York, direct by sea; the latter, of 700 tons burden, leaving with 3,581 baskets on board, the former, completing the shipment for that day, a total of 4,075 baskets, having taken the day before, her usual loading of near 3,000. Here we saw three steamers loading with peaches at the same time, while the empty return baskets had numbered 16,000 within the last 24 hours. Major Reybold has it in contemplation to start a large steamer with peaches direct to Boston! Success attend him.

JAMES PEDDER.

Philadelphia, Sept. 1st, 1845.

### Mustard Crop in Ohio—Prices offered for the seed in Philadelphia.

In the last volume of the Farmers' Cabinet, No. 3, page 99, will be found an interesting account of J. H. Parmlee's crop of Mustard last year.—Ed.

We have made inquiries respecting the success of our friends who attempted the

cultivation of Mustard seed in this State the present season, and we learn that although some failed entirely, owing to the frosts and drought, the majority have succeeded remarkably well considering the unfavourableness of the season, and their want of experience in the business. The following are the principal lots:

Mr. Parmlee, Duncan's Falls,	27 acres.
Mr. Buckingham, Putnam,	9 "
Mr. Ely, Chillicothe,	15 "
Mr. Myers, Canton,	7 "
Three or four smaller lots, say	12 "

Making in all 70 acres; and there may be other lots in the State, of which we have not heard. Mr. Parmlee's crop is about as good as last year, say 14 bushels per acre. Mr. Buckingham's is nearly as good. Mr. Ely's, and the smaller lots, were somewhat injured; we have not learned the amount of the yield; probably not over seven to ten bushels per acre. This will give, for the whole amount 700 bushels.

Now for the markets. We have just received a letter from Messrs. C. J. Fell & Co., of Philadelphia, in answer to one from us, in which they generously say, that although the market price for seed is not yet established—and it may range lower than last year—yet, inasmuch as they may have been instrumental in inducing some Ohio farmers to engage in its cultivation, with the expectation that the same price would be given this year that was paid Mr. Parmlee last year, they now offer to pay that price—eight cents per lb. in cash—for all Ohio seed that may be sent them of *as good quality*—as heavy and clean—as was Mr. Parmlee's last year; to arrive at Philadelphia not later than the first of November. For seed of a less perfect quality they will pay a proportionate price; and to avoid any dissatisfaction, they offer to let the weighmaster send us samples of the lots that arrive, and have us compare them with seed of Mr. Parmlee's last year's crop, and say what deduction ought to be made in the price.

The seed should be packed in good strong flour barrels, and shipped by way of Pittsburgh. The cost of transportation from Pittsburgh to Philadelphia, is 60 cents per hundred weight.—*Ohio Cultivator.*

**LIQUID MANURE.**—The Chinese, who are particularly skilful in the management of manure, are extremely careful not to waste the smallest portion; and, according to Sir George Staunton, they prefer the dung of birds to that of all others, and next to that, night soil, which they apply in a liquid state.

### The Van Mons Theory.

DR. VAN MONS, Professor at Louvain, devoted the greater part of his life to the amelioration of fruits. His nurseries contained in 1823, no less than two thousand seedlings of merit. His perseverance was indefatigable, and experimenting mainly on Pears, he succeeded in raising an immense number of new varieties of high excellence. The *Beurré Diel*, *De Louvain*, *Frederic of Wurtemberg*, &c., are a few of the many well known sorts which are the result of his unwearied labours.

The Van Mons theory may be briefly stated as follows:

All fine fruits are artificial products; the aim of nature, in a wild state, being only a healthy, vigorous state of the tree, and *perfect seeds* for continuing the species. It is the object of culture, therefore, to subdue, or enfeeble this excess of vegetation; to lessen the coarseness of the tree; to diminish the size of the seeds; and to refine the quality and increase the size of the flesh or pulp.

There is always a tendency in our varieties of fruit trees to return by their seeds towards a wild state.

This tendency is most strongly shown in the seeds borne by *old* fruit trees. And "the older the tree is of any cultivated variety of Pear," says Dr. Van Mons, "the nearer will the seedlings, raised from it, approach a wild state, without however, ever being able to return to that state."

On the other hand, the seeds of a young fruit tree of a good sort, being itself in the state of amelioration, have the least tendency to retrograde, and are the most likely to produce improved sorts.

Again, there is a certain limit to perfection in fruits. When this point is reached, as in the finest varieties, the next generation will more probably produce bad fruit, than if reared from seeds of an indifferent sort, in the course of amelioration. While, in other words, the seeds of the oldest varieties of good fruit mostly yield inferior sorts, seeds taken from recent varieties of bad fruit, and *reproduced uninterruptedly for several generations*, will certainly produce good fruit.

With these premises, Dr. Van Mons begins by gathering his seeds from a young seedling tree, without paying much regard to its quality, except that it must be in a *state of variation*; that is to say, a garden variety, and not a wild sort. These he sows in a seed-bed or nursery, where he leaves the seedlings until they attain sufficient size to enable him to judge of their

character. He then selects those which appear the most promising, plants them a few feet distant in the nursery, and awaits their fruit. Not discouraged at finding most of them of medium quality, though differing from the parent, he gathers the first seeds of the most promising and sows them again. The next generation comes more rapidly into bearing than the first, and shows a greater number of promising traits. Gathering immediately, and sowing the seeds of this generation, he produces a third, then a fourth, and even a fifth generation, uninterruptedly, from the original sort. Each generation he finds to come more quickly into bearing than the previous one,—the fifth sowing of pears fruiting at three years,—and to produce a greater number of valuable varieties; until in the fifth generation the seedlings are nearly all of great excellence.

Dr. Van Mons found the pear to require the longest time to attain perfection, and he carried his process with this fruit through five generations. Apples he found needed but four races, and peaches, cherries, plums, and other stone fruits, were brought to perfection in three successive reproductions from the seed.

It will be remembered that it is a leading feature in this theory that, in order to improve the fruit, we must *subdue or enfeeble* the original coarse luxuriance of the tree. Keeping this in mind, Dr. Van Mons always gathers his fruit before fully ripe, and allows them to rot before planting the seeds, in order to refine or render less wild and harsh the next generation. In transplanting the young seedlings into quarters to bear, he cuts off the tap root, and he annually shortens the leading and side branches, besides planting them only a few feet apart. All this lessens the vigor of the trees, and produces an impression upon the nature of the seeds which will be produced by their first fruit; and, in order to continue in full force the progressive variation, he allows his seedlings to bear on their own roots.\*

Such is Dr. Van Mons' theory and method for obtaining new varieties of fruit. It has never obtained much favour in England, and from the length of time necessary to bring

\* "I have found this art to consist in regenerating in a direct line of descent, and as rapidly as possible an improving variety, taking care that there be no interval between the generations. To sow, to re-sow, to sow again, to sow perpetually, in short, to do nothing but sow, is the practice to be pursued, and which cannot be departed from; and in short this is the whole secret of the art I have employed."—Van Mons' *Arbres Fruitiers*, 1. p. 223.

about its results, it is scarcely likely to come into very general use here. At the same time it is not to be denied that in his hands it has proved a very successful mode of obtaining new varieties.

It is also undoubtedly true that it is a mode closely founded on natural laws, and that the great bulk of our fine varieties have originated, nominally by chance, but really, by successive reproductions from the seed in our gardens.

It is not a little remarkable that the constant springing up of fine new sorts of fruit in the United States, which is every day growing more frequent, is given with much apparent force as a proof of the accuracy of the Van Mons theory. The first colonists here, who brought with them many seeds gathered from the best old varieties of fruits, were surprised to find their seedlings producing only very inferior fruits. These seedlings had returned by their inherent tendency almost to a wild state. By rearing from them, however, seedlings of many repeated generations, we have arrived at a great number of the finest apples, pears, peaches and plums. According to Dr. Van Mons, had this process been continued *uninterruptedly*, from one generation to the next, a much shorter time would have been necessary for the production of first rate varieties.

To show how the practice of chance sowing works in the other hemisphere, it is stated by one of the most celebrated of the old writers on fruits, Duhamel of France, that he had been in the habit of planting seeds of the finest table pears for fifty years, without ever having produced a good variety. These seeds were from trees of old varieties of fruit.

The American gardener will easily perceive, from what we have stated, a great advantage placed in his hands at the present time for the amelioration of fruits by this system. He will see that, as most of our American varieties of fruit are the result of repeated sowings, more or less constantly repeated, he has before him almost every day a part of the ameliorating process in progress; to which Dr. Van Mons, beginning *de novo*, was obliged to devote his whole life. Nearly all that it is necessary for him to do in attempting to raise a new variety of excellence by this simple mode, is to gather his seeds—before they are fully ripe—from a *seedling* sort of promising quality, though not yet arrived at perfection. The seedling must be quite young—must be on its own root—not grafted;—and it must be a healthy tree, in order to secure a healthy generation of seedlings. Our own experience leads us to believe that he will

scarcely have to go beyond one or two generations to obtain fine fruit. These remarks apply to most of our table fruits commonly cultivated. On the other hand, our native grapes, the Isabella, Catawba, &c., which are scarcely removed from the wild state, must by this ameliorating process be carried through several successive generations before we arrive at varieties equalling the finest foreign grapes; a result, which, judging from what we see in progress, we have every reason speedily to hope for.

In order to be most successful in raising new varieties by successive reproduction, let us bear in mind that we must avoid—1st, the seeds of old fruit trees; 2nd, those of grafted fruit trees; and 3rd, that we have the best grounds for good results when we gather our seeds from a young seedling tree, which is itself rather a *perfecting* than a *perfect* fruit.

It is not to be denied that, in the face of Dr. Van Mons' theory, in this country, new varieties of rare excellence are sometimes obtained at once by planting the seeds of old grafted varieties; thus the Lawrence's Favourite, and the Columbia plums, were raised from seeds of the Green Gage, one of the oldest European varieties.

Such are the means of originating new fruits by the Belgian mode. Let us now examine another more direct, more interesting, and more scientific process—cross-breeding; a mode almost universally pursued now by skilful cultivators, in producing new and finer varieties of plants; and which Mr. Knight, the most distinguished horticulturist of the age, so successfully practised on fruit trees.—*The Fruits and Fruit Trees of America.*

TO HORSEMEN.—The New York Sun gives the following instructions in horseback riding: "When a horse runs away with you, have the presence of mind to catch hold of his mane, wind your bridle round his neck and pull upon it; it will have the immediate effect of stopping his career, however headlong it may be. Or if your bridle is not long enough, clasp your arms around his neck, and clinch his windpipe; by doing this you will effectually stop him the moment his respiration is checked. Persons having but a small portion of presence of mind may thus save their own or a fellow-creature's life.

WE believe in a clean kitchen, a neat wife in it, a spinning piano, a clean cupboard, a clean dairy, and a clear conscience.

**Downing's Book on Fruit Trees, &c.**

*Some remarks on the new work of A. J. Downing, on the Fruits and Fruit Trees of America, by S. B. Parsons, of the Commercial Garden and Nursery, Flushing, Long Island.*

In this excellent work which is at length laid before us, all must acknowledge that the author has performed an important service to the cause of Pomology in this country, in classifying and placing in a tangible and accessible form, the nomenclatures which were formerly scattered throughout various works in Europe and America. With the exception of some few omissions and incorrect descriptions, it seems substantially correct, and its comparative freedom from error in this respect, can be appreciated only by those who know from experience the great difficulty of procuring good specimens of fruit from a distance, and the necessarily great deterioration of flavor in fruit brought from various points between Boston and Cincinnati.

Many, however, of the author's opinions on Vegetable Physiology, and on the cultivation of fruit, will be somewhat questioned, and must be viewed merely as matters of opinion. Of this character are his remarks on the pruning of the foreign grape. On page 221, he says that if the spurring method is practised, the vine will soon bear only mildewed and imperfect fruit, and that the older and larger the vine, the less likely it is to produce a good crop. As I am not aware that the author has fruited the foreign vine himself to any extent, I am disposed to think that his opinions are formed from those of the gardeners of his vicinity, who may have been comparatively successful with the renewal method. Having recently erected some large vineries for the more full testing of all the varieties of the grape, I was very particular during my recent visit to Europe, in making inquiries respecting the most approved method of pruning; and for this purpose visited all the vineries within my reach. I do not recollect an exception to the general reply, that the spurring method was decidedly the best, and produced the largest fruit at an earlier period in the age of the vine. Where the vine is partially cut down every year, as in the renewal method, it becomes weakened and exhausted, and much of that sap which should be devoted to the fruit, is spent upon the formation of new wood for the next year.

Roberts, who is deemed the only really practical writer on the vine, is very decided in his approval of the spurring method. Our own vinery has not been erected a sufficiently

long time to enable me to speak from experience. I only give the result of careful inquiry. I am far from wishing to say that the renewal method is decidedly wrong, or that by it good fruit cannot be produced. On the contrary, I know many who succeed comparatively well with this mode. I am only desirous that the author's opinions on this head should not be taken as facts, and that the spur method should not be so unreservedly condemned, when there is such an array of evidence in its favour.

Well adapted as is this work to the wants of the community, it is much to be regretted that our excellent friend the author, has somewhat affected its usefulness in making it by implication a vehicle for the praises of his own very good establishment, and has so nicely adapted his theories to his own soil and climate. I have no objection whatever to the author's being born "in the largest garden," &c., for that may be a matter of opinion; neither do I dislike to see his deep rooted attachment to his own establishment, for this is perfectly natural, and all men have a perfect right not only to think, but to speak as loudly as they incline of those things which they highly value. But at the same time I cannot admit their right to make statements respecting others which are neither consistent with justice, nor in accordance with facts. No one can esteem the author or his useful labours more than ourselves, and we sincerely regret that he has allowed himself to make statements without endeavouring to ascertain their correctness. The statements seem intended to prove the inferiority of the Boston, Long Island, and other seaboard nurseries, to the inland nurseries, among which latter, the Highland Botanic Garden holds a conspicuous place. He first asserts that the soil and climate of the seaboard are bad, and that, in consequence, many fruits have become worthless. That this defect has extended to the young trees in the seaboard nurseries, and that when taken to the interior they carry their degenerate habit with them. He also states that young trees from the inland nurseries succeed much better in the seaboard orchards, and then very skilfully leaves the reader to draw the inference that it is only safe to obtain trees from the inland nurseries, and more particularly of the Highland Botanic Garden. On page 555, he says, "all along the seacoast where the climate is rude and the soil rather sandy, as upon Long Island, in New Jersey, near Hartford, and around Boston, many sorts of pears that once flourished well, are now feeble, and the fruit is often blighted."

We do not object to his statement that

our climate is rude, for we have always admitted that the exposed situation of the Long Island and Boston nurseries, rendered the trees grown there very hardy, and peculiarly eligible for removal to any latitude. It is well known that the cold is more intense on the seaboard than in a much higher latitude far from the sea, and that the sudden changes experienced in Boston and Long Island, have a very hardening effect on those trees which survive it. This seems corroborated by a fact stated on page 260, that the black Mulberry thrives well and bears good crops at Hyde Park, on the Hudson, 80 miles north of New York, while it is frequently killed on Long Island; and we have almost abandoned its cultivation. To this part of the author's statement, therefore, we have no objection; but we are much surprised, that without proper inquiry, he has stated, that the soil of Boston and of Long Island is "rather sandy." We do not wish to say that he stated what he knew was wrong, but we think that ignorance is much to be regretted in a work where correctness is indispensable.

I cannot speak advisedly of the whole vicinity of Boston, but must leave that to the editors. I am quite decided, however, in the opinion, that the soil in the nurseries of Hovey & Co.,—Winships, Kenrick, and others, is quite far from being sandy. Respecting Long Island, his remarks must be intended not for the south side, but for the rolling country which characterizes all the north side, and where alone nurseries are found, and good fruit to any extent is produced. There, and more particularly in the vicinity of Flushing, exists every variety of soil, excepting sand. The heaviest clay, porous, gravelly soil, and occasionally a spot of sandy loam are found, but the most prevailing is a rich loam. In the land attached to our establishment—about 250 acres—we have a great variety of soil, a portion being gravelly loam, other parts heavy clay, and a large portion of that planted with trees, a rich loam. Although we have abundance of clay soil for all our purposes, we rarely use it, for our own experience strengthens the opinion of others that a clay soil is superior to a loam for no class of trees, and decidedly injurious to many. McIntosh, the best practical writer on the cultivation of fruits, says that peaches and apricots "require a somewhat rich and mellow soil, richer than that for the apple, and much lighter than that for the pear;" that "apples delight in a soft hazel loam, containing a small portion of sand;" that "the cherry delights in a dry, light, and rather sandy soil;" that "plums are found to flourish best

in a soil neither too light, nor too heavy and wet;" and that "a dry, deep loam is the best soil for the pear tree, when upon a stock of its own species: a gravelly bottom is good, provided there be sufficient depth of mould over it, and a clayey, wet, spongy bottom is the worst of all." He farther states that climate has much less to do with fruit trees than soil, and that pear trees planted on a lighter soil, are not subject to barrenness. It will, therefore, be seen, that according to this excellent authority, our Boston and Long Island soil in its great variety, is well adapted to all kinds of fruit trees, while a stiff retentive clay is scarcely adapted to any. In corroboration of this, we planted a few years since, a square of young pear trees, where the soil was a very heavy clay, but after two years' trial, found them doing so poorly, and making scarcely any growth, that we transplanted them to a loam, where they are now throwing out fine shoots. One of the largest nurserymen on New York Island, informs us that he finds it exceedingly difficult to raise apples on his soil, which is a stiff, retentive clay. A clay soil is peculiarly injurious to cherries, and for these we never use it. Pears and plums will unquestionably do better than any other fruit on a stiff clay, but our experience is very conclusive to ourselves, that even these succeed far better on a good heavy loam. The author very justly observes on page 326, that trees in a damp soil are much more liable to that serious enemy, the frozen saplight; such being the case, they must peculiarly suffer in a clay soil, which is well known to be very retentive of moisture. It is mentioned, page 62, that R. L. Pell, on the Hudson, has been very successful in the cultivation of apples in a strong, deep, sandy loam, on a gravelly subsoil. A Perdignon plum stands behind my house, which has borne fine fruit abundantly for more than 25 years. I have also Seckel and other pear trees that have borne well for the same length of time. In my own orchard are produced every year as large, fine, and healthy peaches, as in those parts of Delaware, where disease is comparatively unknown. Some of my Crawford's Melocoton measured last year more than nine inches in circumference, and of delicious flavor. Judge Strong, of this place, has peach trees that are, I am informed, at least 20 years old, if not much more, and still produce fine healthy fruit. I am strongly of the opinion that the most suitable soil for all fruit trees, is a good gravelly loam. All fruit trees discharge from the root more or less excrementory matter, which, if accumulated and retained about the roots, is in-

jurious in a great degree. In a retentive clay soil this must inevitably remain, but in a porous, gravelly soil, the rain has free access to the roots, and washes away the injurious matter before it can produce any evil effect. The soil of Dr. Rhineland, of Huntington, L. I., is of this nature, and he is remarkably successful in the cultivation of every variety of fruit. I do not recollect ever to have seen finer peaches, plums, apricots, and nectarines, than I tasted in his grounds the last year.

The author asserts that a large number of pears have deteriorated on the seaboard. I cannot speak of Boston, but as applied to Long Island, those assertions are entirely incorrect. We know of but two varieties of fruit that have at all deteriorated,—the Virgouleuse and St. Germain pears; while we have originated several new varieties, of which the Lawrence pear, a winter fruit, equals the best foreign varieties. This deterioration is, we are satisfied, caused by an insect which attacks the tree in certain localities, but whose ravages are prevented by high cultivation and thinning of fruit, for it is well known that many insects will rarely attack thrifty shoots and fruit, and during a season of rapid vegetation and poor fruit crops, many of our Virgouleuse pears were fine and sound. The same appearance of disease was shown some years since among our Newtown pippins, which the author's brother informed us also appeared among their own. We immediately cultivated and manured the orchard very highly, and the year after were rewarded with perfectly sound apples of unusual size and fine flavor. I have not heard that this appearance of disease has disappeared from the Hudson river, but am convinced that high cultivation would effect that object. As the author observes, every fruit has its locality, and may be often inferior elsewhere, as the peach is attacked by insects and disease in New Jersey, while it is free from them in more Southern States. We think we have satisfactorily shown, however, that these casualties are owing neither to soil nor climate, for we have every variety of the former, and the latter has but little influence. They are owing to some of those inexplicable causes which still puzzle the best vegetable physiologists.

The author goes on to state that on the seaboard pears are propagated on unhealthy stocks. If he had visited our own nursery, or that of Hovey & Co., he would have discovered that healthy imported pear stocks from the wild seed are uniformly used, and that suckers are entirely discarded. They may be also discarded in the interior, but we

recollect some two years since seeing some pears on suckers which Hovey & Co. had obtained from an inland nursery, of the appearance of which, we do not wish to speak. Respecting the peach, it is always our custom to obtain the stones from those parts of the South not materially affected by disease, and also to inoculate the peach, apricot, and nectarine, on the healthy stocks of a wild plum, on which they are more hardy and longer lived.

The author also quotes a cultivator from Ohio, to prove that one tree taken from the seacoast soon decayed, while another from the interior, and by implication from the Highland Botanic Garden, preserved its good qualities. We do not wish to call in question any of the author's *facts* unnecessarily, but cannot avoid thinking that if such is the case, it is somewhat singular that nurserymen from Ohio and Kentucky, and some from Orange county, N. Y., men too of knowledge and experience, after examining all the principal inland nurseries, have for years purchased, and continue to purchase, of the Long Island nurseries. I need say but little when knowledge and experience thus manifest their judgment. As all the author's statements are founded upon his estimate of the quality of seaboard soil, which estimate it is in our power to prove totally erroneous, we trust that the error of those statements will be fully manifest. We have stated we possessed every variety of soil; that we know of no pears having the appearance of disease here, excepting the Virgouleuse and St. Germain, our stock of the former of which is only from buds furnished us by the author some years since; that the Newtown pippin was sound and good here, which at our latest accounts from Newburgh, was there decaying; and that we inoculate on seedling pear stocks only, and on peaches from comparatively healthy sections.

We have, therefore, as far as Long Island is concerned, stated respectfully but unequivocally, that the author's statements on this head are totally erroneous. While with our high esteem for the author is mingled a feeling of regret that he has impaired the usefulness of his work by employing it indirectly as an advertising medium, a somewhat stronger feeling is excited by his manifest endeavour to convey erroneous impressions respecting other establishments similar to his own. Should the work be so successful as to reach a second edition, we trust that the author's sense of justice will lead him to correct the impression by the only means now in his power.—*Hovey's Magazine of Horticulture.*

**The Teeth.**

L. M. CHILD says,—“The prevalence of defective teeth in this country is the general subject of remark by foreigners, and whoever has travelled in Spain or Portugal, is struck with the superior soundness and whiteness of teeth in those countries.

“Nobody need to have an offensive breath. A careful removal of substances from between the teeth, rinsing the mouth after meals, and a bit of charcoal held in the mouth—will always cure a bad breath.

“A lump of charcoal held in the mouth, two or three times a week, slowly chewed, has a wonderful power to preserve the teeth and purify the breath. The action is purely chemical. It counteracts the acid arising from a disordered stomach, or food decaying about the gums; and it is this acid which destroys the teeth.

“A dear friend of ours had, when about 20 years of age, a front tooth that turned black; gradually crumbled; and so broke off piecemeal. By frequently chewing charcoal, the progress of decay was not only arrested; but nature set most vigorously to work to repair the breach; and the crumbled portion grew again, till the whole tooth was sound as before! This I know to be a fact. Every one knows that charcoal is an antiputrescent; and is used in boxing up animal or vegetable substances, to keep them from decay. Upon the same chemical principle, it tends to preserve teeth and to sweeten the breath. There is no danger in swallowing it: on the contrary, small quantities have a healthful effect on the inward system, particularly when the body is suffering from that class of complaints peculiarly incident to summer. It would not be wise to swallow that, or any other gritty substance, in large quantities.”

**Proposed Tunnel through London.**

It is stated Mr. Stephenson has suggested the construction of a tunnel from Hyde-park corner to Mile-end, for the purpose of easing the great leading thoroughfares of their present throng of passengers. From this trunk line communication would be had with the streets above by means of spiral stair-cases, under cover, at regular distances, and branch tunnels would lead off to the various suburbs north of the Thames, Regent's-park, Highgate, Hampstead, Tottenham, &c.; in these tunnels railway omnibuses would run, and a journey from one end of London to the other might be accomplished in half an hour or forty minutes, while the streets above would be considerably cleared, and much of the present confusion prevented. Such a pro-

posal may at first to many persons appear absurd, but the plan is undoubtedly practicable, and though enormously expensive, the nature of the soil—London clay—is favourable, and the great traffic which would arise would probably pay a moderate interest.—*Miners' Rail Road Journal.*

**TO SCOUR CLOTHES, COATS, PELISSES, &c.**—If a black, blue, or brown coat, dry two ounces of fullers' earth and pour on it sufficient boiling water to dissolve it, and plaster with it the spots of grease; take a pennyworth of bullock's gall, mix with it half a pint of stale urine and a little boiling water; with a hard brush dipped in this liquor, brush spotted places. Then dip the coat in a bucket of cold spring water. When nearly dry, lay the nap right and pass a drop of oil of olives over the brush to finish it.

If grey, drab, fawns, or maroons, cut yellow soap into thin slices, and pour water upon it to moisten it. Rub the greasy and dirty spots of the coat. Let it dry a little, and then brush it with warm water, repeating, if necessary, as at first, and use water a little hotter: rinse several times in warm water, and finish as before.—*Ex. Paper.*

**A Good Cow.**

*To the Editor of the Maine Farmer:*

SIR,—I have a cow from which we made last season, from May 24th to the 1st day of January following, 270 pounds of good butter. The greatest amount per week, was 15¼ pounds. She made this season, in seven days, 16¼ pounds. She has no provender, nor extra feed of any kind; nothing more than common pasture, having been kept with the rest of my stock. She is about one half blooded Durham Short-horn, and is seven years old. Now if any person can produce a better cow, I should like to hear from him.

JOSEPH S. ATKINS.

New Sharon, Aug. 4th, 1845.

**SOAP-BOILERS' LEY AS MANURE.**—If, in making soap, wood ashes, lime, and common salt be used, a ley will be obtained containing much chloride of potassium, some gypsum, sulphate of potash, common salt, and three to four per cent. of brownish soap. The soap-boilers let the ley run off as useless. In some soils and for some crops it is a very good manure, as where the soil is deficient in chlorine and potash, and where plants are grown which require a considerable amount of those substances. It is most commonly used for meadows overgrown with moss, and is thought good for rye.—*English Farmers' Journal.*

### The Apple.

THE apple is the world renowned fruit of temperate climates. From the most remote periods it has been the subject of praise among writers and poets, and the old mythologies all endow its fruit with wonderful virtues. The allegorical tree of knowledge bore apples, and the celebrated golden fruit of the orchards of Hesperus, guarded by the sleepless dragon which it was one of the triumphs of Hercules to slay, were also apples according to the old legends. Among the heathen gods of the north, there were apples said to possess the power of conferring immortality, which were watched over by the goddess Iduna, and kept for the dessert of the gods who felt themselves growing old. As the mistletoe grew chiefly on the apple and the oak, the former was looked upon with great respect by the ancient Druids of Britain, and even to this day in some parts of England, the antique custom of saluting the apple trees in the orchard in the hope of obtaining a good crop the next year, still lingers among the farmers of portions of Devonshire and Hampshire. This odd ceremony consists in saluting the tree with a portion of the contents of a wassail bowl of cider, with a toast in it, by pouring a little of the cider about the roots, and even hanging a bit of the toast on the branches of the most barren, the farmer and his men dancing in a circle round the tree, and singing rude songs like the following:—

"Here's to thee, old apple tree,  
Whence thou mayst bud, and whence thou mayst blow,  
And whence thou mayst bear apples enow;  
Hats full—caps full—  
Bushels and sacks full—  
Huzza!"

*Propagation.*—The apple for propagation is usually raised from seeds obtained from the pounce of the cider mills, and a preference is always given to that from thrifty young orchards. These are sown in autumn, in broad drills, in good mellow soil, and they remain in the seed buds, attention being paid to keeping the soil loose and free from weeds, from one to three years, according to the richness of the soil. When the seedlings are a little more than a fourth of an inch in diameter, they should be taken up in the spring or autumn, their tap roots shortened, and then planted in nursery rows, one foot apart and three to four feet between the rows. If the plants are thrifty and the soil good, they may be budded the following autumn, within three or four inches of the ground, and this is the most speedy mode of obtaining strong, straight, thrifty plants. Grafting is generally performed when the stocks are half an inch thick.

Apple trees for transplanting to orchards, should be at least two years budded, and six or seven feet high, and they should have a proper balance of head or side branches.

*Soil and situation.*—The apple will grow on a great variety of soils, but it seldom thrives on very dry sands, or soils saturated with moisture. Its favourite soil, in all countries, is a strong loam of a calcareous or limestone nature. A deep, strong, gravelly, marley or clayey loam, or a strong sandy loam on a gravelly subsoil, produces the greatest crops, and the highest flavored fruit, as well as the utmost longevity of the trees. Such a soil is moist rather than dry, the most favourable condition for this fruit. Too damp soils may often be rendered fit for the apple by a thorough draining, and too dry ones by deep subsoil ploughing, or trenching, where the subsoil is of a heavier texture. And many apple orchards in New England are very productive and flourishing on soils so stony—though naturally fertile—as to be unfit for any other crop.

As regards site, apple orchards flourish best in southern and middle portions of the country, on north slopes, and often even on the steep north sides of hills where the climate is hot and dry. Farther north a southern or south-eastern aspect is preferable, to ripen the crop and the wood perfectly.

*Planting and cultivation of orchards.*—With the exception of a few early and very choice sorts in the fruit garden, the orchard is the place for this tree, and indeed when we consider the great value and usefulness of apples, it is easy to see that no farm is complete without a large and well selected orchard.

The distance at which the trees should be planted in an orchard, depends on the mode in which they are to be treated. When it is desired finally to cover and devote the whole of the ground to the trees, 30 feet apart is the proper interval, but where the farmer wishes to keep the land between the trees in grain and grass, 50 feet is not too great a distance in strong soils. Forty feet apart, however, is the usual distance at which the trees are planted in apple orchards.

Before transplanting, the ground should be well prepared for the trees, and vigorous healthy young trees should be selected from the nurseries.

As there is a great difference in the natural growth, shape and size of the various sorts of apple trees, those of the same kind should be put in a row together, or near each other, this will not only facilitate culture and gathering of the fruit, but will add to the orderly appearance of the orchard.

It is an indispensable requisite in all young orchards, to keep the ground mellow and loose by cultivation, at least for the first few years, until the trees are well established. Indeed of two adjoining orchards, one planted and kept in grass, and the other ploughed for the first five years, there will be an incredible difference in favour of the latter.

Not only will these trees show rich, dark, luxuriant foliage, and clean smooth stems, while those neglected will have a starved and sickly look, but the size of the trees in the cultivated orchard will be treble that of the others at the end of that time, and a tree in one will be ready to bear an abundant crop before the other has yielded a peck of good fruit.

Fallow crops are the best for orchards—potatoes, vines, buckwheat, roots, Indian corn, and the like. An occasional crop of grass or grain may be taken, but clover is rather too coarse rooted and exhausting for a young orchard; when this or grass is grown among young trees for a year or two, a circle of two or three feet in diameter should be kept loose by digging every season about the stem of each tree.

When the least symptom of failure or decay in a bearing orchard is perceived, the ground should have a good top-dressing of manure, and of marl or mild lime, in alternate years. It is folly to suppose that so strong growing a tree as the apple, when planted thickly in an orchard, will not after a few heavy crops of fruit, exhaust the soil of much of its proper food. If we wish our trees to continue in a healthy bearing state, we should manure them as regularly as any other crop, and they will amply repay the expense. There is scarcely a farm where the *waste* of barn-yard manure—the urine, etc., if properly economized, by mixing this animal excrement with the muck heap—would not be amply sufficient to keep the orchard in the best condition. And how many moss covered, barren orchards, formerly very productive, do we every day see, which only require a plentiful supply of food in a substantial top-dressing, a thorough scraping of the stems and washing with diluted soft soap, to bring them again into the finest state of vigour and productiveness.

The bearing year of the apple in common culture, only takes place every alternate year, owing to the excessive crops it usually produces, by which they exhaust most of the organizable matter laid up by the tree, which then requires another season to recover, and collect a sufficient supply again to form fruit buds. When half the fruit is thinned out in a young state, leaving only a moderate crop, the apple like other fruit trees

will bear every year, as it will also if the soil is kept in high condition. The bearing year of an apple tree, or a whole orchard may be changed by picking off the fruit when the trees first show good crops, allowing it to remain only on the alternate seasons which we wish to make the bearing year.—*Downing's Fruits and Fruit Trees.*

From the American Agriculturist.

### Agriculture in Scotland.

FROM Edinburgh to the Fala water, nearly twenty miles, the cultivation is generally good, and about Dalkeith the pasture fields looked remarkably well. But even thus near to the Lothians, there are here and there farms which are almost unimproved, whose fields show the baneful effects of indolence or prejudice. The noble parks about Dalkeith Palace and Newbattle Abbey, contribute greatly to the beauty of this section. From Blackshields the road rises rapidly to the top of Soutra Hill, one of the highest of the Lammermoors. It is, I believe, about 1,200 feet above the level of the sea. At the top is a wide, bleak, boggy tract, tenanted almost entirely by sheep, nearly all black-faced. A solitary shepherd's hut and ale-house rise alone in the middle, and tall wooden posts by the road-side show that marks are necessary during the winter storms. In this high bleak region we can scarcely hope to grow grain crops in regular rotation, even by the most approved methods now known; but I think that by draining, liming, and judicious plantations to form shelters on the more exposed points, the pasture might be increased in value many fold.

From this place to Lauder, and indeed I may say almost to Kelso, the farming generally is not good. The soil is formed from the slates of the great clay slate formation, which stretches across Scotland from St. Abb's Head to the Mull of Galloway. The different strata of slate differ in composition greatly; but they all form improvable soils. Many, or indeed I may say all, of these soils are rather stiff, naturally cold, and retentive of water. Draining is progressing among the farmers there, but not so fast as it ought; the fields are too often thrown up in ridges, with a fine crop ornamenting in a narrow stripe the top, and contrasting with a yellow dwarfish growth in the hollow. One field struck me particularly. Half of it only, the coachman told me, had been drained. The crop was turnips, sown on ridges across the field, which had a gentle slope. It had been raining violently during the night, and the water stood in pools be-

tween the ridges as far as the undrained land went; beyond that it was dry. I never saw so perfectly exemplified, the effect of thorough draining.

On drawing near to Kelso the aspect of things changes for the better. There are many very excellent farmers in that neighbourhood. We stopped half a day to visit Mr. Dudgeon, of Skylaw. This gentleman is extensively known as a most enterprising farmer. During a former lease many improvements were made, advances, in fact, fully equal to any of the time in that region. Now having a new lease and more light, he is proceeding with great vigor and confidence. The soil is chiefly strong and stiff, some of the clay making excellent tiles. The great evil on such soils is an excess of water; according to the earlier systems of draining it was attempted to remove this by cross drains to *cut off the springs*, but these have been found not to accomplish the object. The whole plan of draining, therefore, is changed, and every field is, or soon will be, drained straight down to the slope, the drains being twelve yards apart, and never less than thirty-six inches in depth. The effect of the drain, followed after a proper time by the subsoil plough, is such, that he is now growing crops of turnips on stiff tile clays. In some of the English counties over which I have lately travelled, Norfolk, for instance, even where the soil is deep, they merely skim the surface, four to five inches being the usual depth, and they call ten inches subsoiling. Mr. Dudgeon does not allow his men to go less than nine inches at the first ploughing, and follows that by subsoiling from six to nine inches farther.

The farm contains about 900 acres, and is laid out in large fields, of 20 to 40 acres. We found nearly all of the crops looking well, the turnips especially so. Of these there are this year 180 acres. In one turnip field I counted 29 hoes in full operation. Most of this company were women, they being generally quicker and more expert than the men. Very few potatoes are grown, merely enough for the family, and a certain portion to each labourer. The wheat looked healthy, but is rather thin in some fields, owing either to frosts in spring or the wire-worm.

We found on one corner of the farm a tile work in full operation. It turns out from 4 to 500,000 tiles in a year, but is not by any means able to supply the demand of the immediate neighbourhood.

At the same time that Mr. Dudgeon is improving most rapidly the long cultivated fields, he is bringing in others from a state

of nature. We saw one of about 30 acres, in which the drains are nearly complete. The upper part was a wild moor, overgrown with patches of furze, and the lower part a perfect morass. The soil looked stiff and unpromising; but when once dry and well broken up, it will repay the trouble and expense of subduing it.

Mr. Dudgeon has had three young Germans with him this summer, studying practical agriculture; one of them is to remain two years. To show the estimation in which Scotch farming is held, I may mention that at the present time no less than thirty young men attend Kelso market weekly, who are students with the farmers of the neighbourhood. They are for the most part from England, some from Ireland, and a number from the continent. There should be some from the United States. A year of such tuition would be quite invaluable to any of our young farmers, and my own experience of Scottish hospitality and kindness would warrant me in promising to any who might incline to try it, a pleasant as well as profitable year.

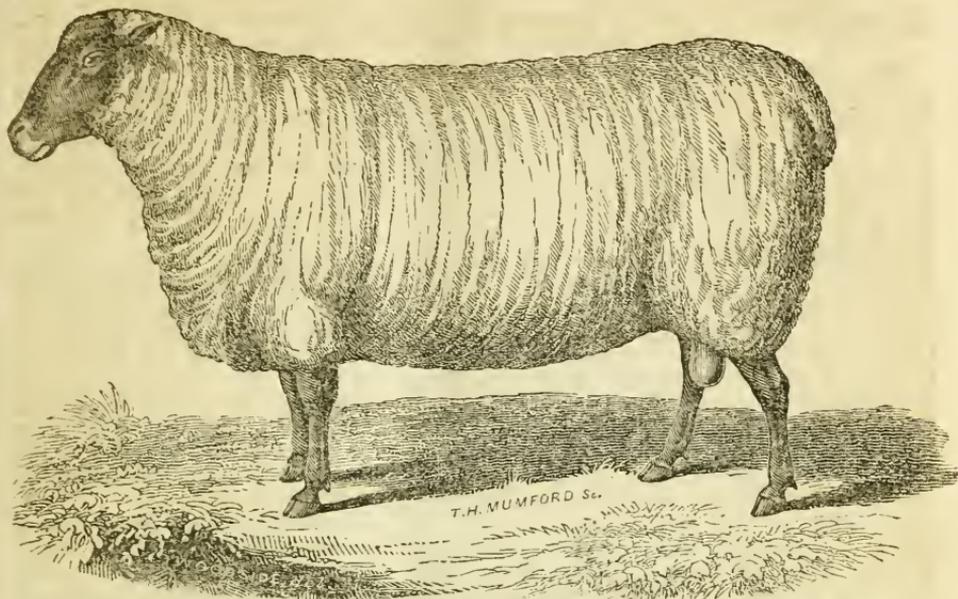
JOHN P. NORTON.

Edinburgh, July 11th, 1845.

**BUSY BEES.**—In the Island of Cuba bees are kept with great success. They are not enervated by the warmth and perennial fruitfulness of the climate, but work on accumulating stores, though there is to be no winter in which they will be wanted. Many of the Cubans have hundreds of swarms. All the owners do is, to furnish hives, which only requires them to cut a large hollow tree into pieces three feet long, and laying them under sheds, to fasten a stick through the centre, upon which the bees begin to build. The hives swarm frequently, and all are, as we said, trained to thorough industry, and their industry is abundantly rewarded among the fragrant Belle Flowers. When a hive is full of honey, the bees seal it up at both ends, and go to another; so that the planter has only to take away the rich stores from the deserted dwellings; for as there is no winter the bees are always laying up and never consuming.—*Journal of Commerce.*

WHEN molasses is used in cooking, it is a prodigious improvement to boil and skim it before you use it. It takes out the unpleasant raw taste, and makes it almost as good as sugar.

THE way to get credit is to be punctual; the way to preserve it is not to use it much; settle often—have short accounts.



PORTRAIT OF THE SOUTHDOWN BUCK "PRINCE,"

*The property of Aaron Clement, Esq., of Philadelphia.*

PRINCE is descended directly from an importation of pure bred Southdowns, made by E. P. Prentice, Esq. He is four years old, and produced at last shearing seven pounds of wool of excellent quality. He is remarkable for his proportions, neatness and beauty of form, as well as his great size, weighing in May last, 230 lbs.

The Southdowns combine the two great qualities most desirable in sheep, viz: wool sufficiently fine for general purposes, and superior mutton.

They are a hardy race of sheep, much disposed to fat, and when fatted, are capable of travelling a reasonable distance to a market. They are admirably suited to the high lands of the Southern States, perhaps more so than any other breed of sheep.

In describing these sheep, Ellman says, as quoted by Baxter in his *Library of Agriculture*, "The head should be neither too long nor too short, the lip thin, the neck neither too long nor too short, but thin next the head, and tapering towards the shoulders. Southdown breeders object to a long, thin neck; it denotes delicacy. The breast should be wide and deep, projecting forward before the fore-legs; this indicates a good constitution, and disposition to feed. The shoulders should not be too wide between the plate-bones, but on a level with the chine; if the shoulderblades are wide on the top, the animal generally drops behind the shoulders. The chine should be low and straight from the shoulders to the tail; the ribs should project horizontally from the chine, for the animal will then lay its meat on the prime parts; the sides high and parallel; the rump long and broad; the tail set on high, and nearly on a level with the chine; the hips wide; the ribs circular, and barrel-shaped; the legs neither very long nor very short; the bones moderately fine."

From the Inquirer and Gazette.

### The Agricultural Display in Delaware.

Wilmington, Sept. 18th, 1845.

DEAR SIR,—I have been here for the last two days, attending the Exhibition and Ploughing Match of the Agricultural Society of New Castle County, one of the most popular and successfully conducted in the whole country, particularly if we consider the limited extent of the population embraced in the territory represented by it. The exhibition of the stock took place on the first day. Accompanying the stock that came in from different directions, were long teams of oxen. New Castle Hundred sent twenty yoke attached to a cart containing the implements of the farmer, as the Horse-Rake, the Swing-Harrow, the Plough, Cultivator, &c., and products of the soil, such as the sheaf of wheat, rye, corn, oats, tobacco plant, and hemp, and the other "fruits of the season," as apples, peaches, potatoes, and the like. Over the front part of the cart was sprung a handsome arch wreathed with flowers. The cart from Christiana Hundred was dressed in a similar way, and drawn also by some twenty yoke of the most beautiful oxen I ever saw, with banners and mottoes attached to their yokes.

The exhibition ground, a beautiful field of some ten acres, in the rear of the town, was *graced* with the choice stock of the county, cattle, horses, hogs and sheep, of all sizes and ages. Major Reybold had present the celebrated Oxfordshire sheep, which his son, Mr. Clayton Reybold, at an expense of some forty guineas a head, has lately brought from Europe. Until I saw these celebrated sheep, which are, I understand, a cross between the Cotswold and Leicesters, I never fully comprehended, or rather apprehended, or *conceived* the extent to which the art of breeding might be carried. The weight of the largest is at the present time 267 pounds, and measures nearly one yard *across the back*. The Major is one of the best and most *efficient* friends the cause of agriculture has, either in Delaware or the Union.

The horticultural department of the Society, the exhibition of which was at the Town Hall, was one of the most interesting points of attraction. The fitting up, &c., was all under the immediate care and superintendence of the ladies, and though assisted by gardeners, we must give credit to their *artist* eyes and hands, that arrange and display everything in the most skilful and tasteful manner. The gardens of John R. Lattimer, Esq., Samuel Canby, Esq., and William C. Boulden, Esq., seem from the labels upon the fruit, flowers, and culinary vegetables in every part of the Hall, to have

been put largely under contribution. Mr. James, the Secretary of our Society, was here, and commended it all very highly, and I may also mention, "not being too old to admire pictures," that in addition to the honours done Flora and Pomona, there were certain living, moving forms and graces now flitting about the Hall, and now gracefully grouped together, rivalling their own festoons of roses or the clustering fruit that hung from the vine.

On the second story of the same building, was the Mechanics' Institute; and here the display, though not extensive, was nevertheless highly creditable to the mechanical skill of Wilmington; and an able report from James Canby, Esq., which was read at the dinner table, did full justice to the contributors, and also to the natural resources and physical capacities of Wilmington and its neighbourhood for extending still further the manufacturing interest.

At five o'clock an address was delivered by the Hon. Jonathan Roberts, of our State, whom all know as a veteran farmer, an able statesman and *an honest man*. I was surprised alike by the intellectual and physical effort of this venerable man, now seventy-five years of age. For one hour he held his audience in breathless attention, and though speaking in the open air, and in the most audible voice, seemed not at all oppressed, for when on the completion of the Address, the farmers and others crowded up to the venerable man, and desired introductions, he received them all, and continued to converse as though not at all oppressed or fatigued. The compliment thus expressively conveyed on the part of his audience, must, I think, have been highly gratifying to our respected fellow citizen.

The Ploughing Match took place on the second day, in the country, some two miles from town. As the hour of ten had been appointed for the start, we were early on the ground, and met crowds of all ages and both sexes, hastening forward, in vehicles, on horseback, and on foot, to witness the trial. I never saw anything like the same interest manifested by all classes of the population, to witness a ploughing match, but this is a grain growing district, and they are ploughing nearly half the year, and to excel in it, seems to be regarded as a high merit. The ploughmen, as we approached, were scattered about a twenty acre green sod field, surrounded and followed by groups of their friends, as they continued to practice their teams and regulate the running of their ploughs. Now the call was made to come forward, make their entries, draw for numbers, and take position ready for a start.

Each was permitted to first run out his land, as it had been staked. The ploughs entered—teams, ploughs, ploughmen, and all appointments seemed complete—and ten better looking, well-made yeomen, could not, perhaps, have been found in the county. The chairman of the committee, Mr. John C. Clark, standing out in front of the line, called out—"Ploughmen! are you ready? One, two, three—go." At the word "go," every team went down to its work, and they moved down the plain in a solid column, upturning and inverting the green sod in the most perfect manner—but soon the line was broken by some advancing at a more rapid gait beyond the rest. The efforts now of the ploughman, as with a quick eye and steady arm, he sought to direct his plough with his utmost skill—the interest and anxiety of friends, as on the completion of every furrow, some expression of admiration or hope, or fear, would escape them—the grouping on the back ground, here a weather beaten countenance wrinkled by age; there the hardy yeoman, with his bronzed and honest features; here the rustic beauty, and there the city belle; the rich green landscape, which tended to add so much to the picturesque of the scene; the lofty eminence that commanded the beautiful Delaware, lying 100 feet below it; the beauty of the autumnal day—all tended to render the scene and the occasion one of the most interesting rural sights ever beheld.

The successful competitor was Mr. James N. Cleland, an enterprising young farmer, living in the neighbourhood, who owns in fee simple the broad acres he cultivates, and the civic wreath fairly belongs to him, for it was no ordinary skill that enabled him to succeed against such able competitors. There were three other premiums delivered, one of which went to a young Mr. Sawdon, another to Mr. Carter, and I do not recollect the name of the fourth.

Now followed the second match, being entries for boys under 16 years of age; eight of whom entered. Their performance was indeed surprising. The first premium was won by a lad by the name of Janvier, the son, as I understood, of a poor widow woman; and when asked whether he would have a piece of plate or its value in money, replied he would take the money, "he wanted it for his mother." The second was won by master George Jackson, a *boy ten years old!* (a son of Mr. Bryan Jackson, a large farmer,) and thought small of his age. The clearing up furrow of this lad exceeded any effort I ever saw of the kind by a boy. In addition to the second premium, Mr. Pedder presented to him, through a member of the com-

mittee, as coming from the Messrs. Prouty, whose plough he held, a beautiful little watch, with chain, key, &c., and the possession of it seemed to gratify the little fellow much; nor was it scarcely less gratifying, apparently, to the numerous spectators, who all voted him the *General Tom Thumb* of the ploughing ground.

Two o'clock had been appointed for the delivery of a second Address by Doctor Meuse, and we got in town just in time to listen to a very able and scientific discourse from this gentleman, an eminent agriculturist and a man of science, from the eastern shore of Maryland.

At three o'clock, a large party of about one hundred, sat down to a good dinner at Hall's Hotel, Doctor Thomson, the president of the Society, presiding, and James Canby, Esq., acting as vice-president. The worthy president managed with his usual tact to mingle business with pleasure—now reports of committees—now a speech or sentiment from some invited guest, called out by a brief and happy allusion by the president to the agriculture of the State from which the guest came, or to his individual efforts in the cause. Mr. Roberts, of Pennsylvania, Doctor Meuse, Mr. Tilghman, Hornsly and Jackson, of Maryland, Mr. D. Wheeler, of Kent county, Hon. John Wales, Secretary of State, and others, were successively called out in this way. The Governor of the State was present as a member of the Society. Among the invited guests were a large number from New Jersey and Pennsylvania, among them Doctor Keasby, Col. Sinickson, Hon. Mr. Yorke, Doctor Tuft, Mr. Smith and Mr. Hanna, who were compelled on account of the hour fixed for the starting of the boat, to leave early. Messrs. Clement and Blythe, of our city, left from the same cause, nor could our friend Doctor Emerson, be prevailed on to stay longer than the first day, anxious as our Delaware friends seemed to honour a native of Delaware, and the editor and in good part author of one of the best agricultural books, the *Farmer's Encyclopedia*, that has been published. But worse than this, letters from several of our fellow citizens, including the venerable Doctor Mease and other members of our Agricultural Society, and from at least two gentlemen of the press, announced that other engagements, &c., prevented their attendance altogether. But as some recompense, one of them sent with a handsome letter a very pretty sentiment:

"Our Land and its Tillers—Nature and her Noblemen."

Yours, &c.,

P.

### Prospects of the Crops.

WITH the exception of a few partial showers in different parts of the country, the weather has continued uninterruptedly fine; harvest operations have consequently been rapidly proceeded with, and in most of the southern counties the bulk of the corn has been carried. In the north of England there is still a considerable quantity of grain abroad; but the lately experienced sunny days have brought the crops forward amazingly, and in situations where a month back it was feared that corn would never arrive at maturity, the sickle has lately been actively employed. On the whole our prospects as to the future have undergone an immense improvement since the 20th of August, but to suppose that the evil effects of a decidedly wet summer have been entirely remedied, would be altogether unreasonable. That a great proportion of the wheat of this year's growth will be of inferior quality and light weight is unquestionable, nor is it possible that the deficiency from the defective state of the ear, so generally complained of, can have been made good; we must, therefore, adhere to the opinion already expressed on former occasions, viz: that besides the falling off in meal in consequence of the want of weight, and otherwise inferior mealing properties of the berry, the acreable produce will be found short of an average. In judging of the probable value of wheat during the ensuing winter, the injury which potatoes have suffered in many of those districts where this article is most extensively grown, must not be overlooked. Until lately the blight, or to whatever else the failure is attributable, was supposed to have extended no further than the south of England and the Channel Islands. Within the last week, however, complaints have reached us from Lincolnshire, Cambridgeshire and Yorkshire, from which it would appear that the extent of the ravages made by the disease is not yet ascertained. Considering how large a portion of the food of all classes consists of potatoes, so extensive a failure must be regarded as a great calamity. Already prices have risen considerably, and it is certain that if the mischief should prove anything like so extensive as it is represented to be, the consumption of bread stuffs must be increased enormously. These considerations lead to the conclusion, that though no material advance may occur in quotations of wheat immediately, the article *must* hereafter rise in value.

In speaking of potatoes, we omitted to mention one important fact, viz: that orders have been received here from Holland and Belgium for the purchase of the article at

very high rates, whilst their export has been prohibited by the Government of the last named country. We have heard it reported, on good authority, that a contract has already been closed at Poole, to ship a thousand tons to Holland. The export of agricultural produce from England to the Continent, is certainly a new feature.—*Mark Lane Express.*

For the Farmers' Cabinet.

### Joseph Cloud.

It is no less a duty than a high obligation, to pay suitable tribute of respect to the memory of a good and useful citizen. The deceased, whom we now take up the pen to speak of, occupied a high place in the esteem of his fellow men; and was endeared to those who knew him best, by sentiments of pure affection. We speak more particularly at this time of his domestic relations and attachments, for history will record his other qualities and attainments as they deserve. During the latter part of his life he was devoted to the pursuit of agriculture, and demonstrated on his own farm in Chester county, the correctness and importance of his theories, on the science of agriculture, by the superior productiveness of his mode of cultivation, based upon scientific principles. Mr. Cloud's practical suggestions on the subject of chemistry, as applied to agriculture, were not appreciated by farmers generally. He was indeed in advance of the age, and it remains for the next generation to profit by the truths he inculcated from time to time through the *Cabinet* and other useful periodicals. He is now no more, and with the recollect on of his personal virtues, he has left behind him other evidences of usefulness to mankind, which will live after him and praise him. It would be consoling to dwell upon acts of kindness and humanity received at his hands, but such things are rewarded in the fulness of the human heart from which they emanated; and public expression of gratitude would only wound the holier satisfaction which is the meed of pure philanthropy, such as characterized many private traits of him who is the object of this humble tribute.

AN OLD FRIEND.

Philadelphia, Sept. 19th, 1845.

DORSETSHIRE possesses a valuable breed of sheep peculiar to itself. The pure breed are entirely white, the face long and broad, with a tuft of wool on the forehead; the shoulders are low but broad, the back straight, the chest deep, the loins broad, the legs rather beyond a moderate length, and the bone small. They are a hardy and useful breed, and the mutton is well flavored.

**Ploughing Match of the New Castle County Agricultural Society.**

WE the undersigned, appointed judges of the Ploughing Match that took place on the 18th instant, on the farm of Mr. Jacob Lyman, near Wilmington, Delaware, Report:

That we were deprived of the pleasure of witnessing the match, having been requested to go out of view of the different competitors, so that our decision could not fail but be impartial. The committee when called to view the ground, were struck with admiration at the regularity of the ploughing, and owing to the slight difference in much of it, were at some loss to decide. There were ten competitors, who entered in the following order: Thomas Sawdon, land No. 1; F. Sawdon, land No. 2; David Morgan, land No. 3; James N. Cleland, land No. 4; John Bradford, land No. 5; William Banks, land No. 6; Robert Fountain, land No. 7; John Eveson, land No. 8; Charles Carter, land No. 9; and Richard Carter, land No. 10; the committee after viewing the ground carefully, and taking into consideration the unevenness of the different lands, decided that James N. Cleland, who ploughed with J. B. Moore's plough, No. 8, is entitled to the first premium; T. Sawdon, who ploughed land No. 1, with J. B. Moore's plough, No. 8, is entitled to the second premium; Richard Carter, who ploughed land No. 10, Prouty plough, the third premium, and Charles Carter, who ploughed land No. 9, J. B. Moore's plough, is entitled to the fourth premium.

The committee were highly pleased with the boys. There were eight competitors, and nobly did they contend for the prize. They entered as follows: A. Janvier, land No. 1; J. Sawdon, land No. 2; T. Jackson, land No. 3; G. Jackson, land No. 4; J. Bradford, land No. 5; William Quinn, land No. 6; D. Flinn, land No. 7; and J. Young, land No. 8. We are of opinion that A. Janvier is entitled to the first premium, and G. Jackson to the second, who was well rewarded by the liberality of Mr. Prouty, who had provided a handsome silver watch for the winner of the second premium. No doubt the little fellow when he pulls out his watch, years hence, will remember with gratitude, his old friend Prouty, who the committee think deserves the thanks of the Society for his liberality.

D. W. GEMMILL,  
JOHN RICHARDSON,  
GEORGE JANVIER,  
*Committee.*

September 18th, 1845.

For the Farmers' Cabinet.

**Thaer's Principles of Agriculture.—On Manuring the Soil.**

MR. EDITOR,—As you appear to think Von Thaer may be of use to your readers, I will continue my condensation of his remarks, and go on with the chapter on *Manuring the Soil*. It is very long and very minute in its details, and it will therefore, take both time and labour to make that kind of abstract which will do full justice to the author, and be adapted to the circumstances of our farmers. "Skimming the cream," whether in literature or the dairy, is an operation of some delicacy; the product must be rich that will bear being thinned, and yet leave nourishing aliment. In the last communication, the author had gone through the various manures, their natures, applicability to various soils, &c., each one in course, except night soil. Of this, our farmers, at least many of them, are aware of the great utility; but there is a strong, almost invincible repugnance to its use, which will last perhaps until necessity forces them, as it has done the farmers of Europe, to make use of every material they can get for improving their lands. Our people may now, and for some years to come, let prejudices have full sway. They have vast territories, on which they may light like a flock of birds, take what they want, and be off to some yet more distant region. But this condition of things will not last, and our now wasteful, prodigal, and careless modes of farming, will cease with the growth of our population, and our cultivators be driven, like those of many parts of Europe, to yield a sensitive nicety to a stern necessity. In the neighbourhood of Philadelphia, this material is used largely by the gardeners, but so far as I know, very little of it at all by the farmers; however, its advantages are well known, and Von Thaer offers nothing new upon the subject.

On the important point of storing and preserving the manure; there is no suggestion that is not already known or practised by our best farmers, except one—that the manure should be left in the stable a week or two before being removed to the dung heap. It has by this time gone through a certain stage of fermentation, in which evaporation goes on with the greatest rapidity; but the adopting of this course must be governed by a matter of more importance, that of keeping the stables dry and clean. The manure may be increased in value, but this is all lost by the risk and injury to the health of your stock. The farmer has very little choice as to where he shall deposit his ma-

nure; large pits are inconvenient, both as to the drawing it out, and because the liquid portions arising from the decomposition, are liable to be lost in the removal. Von Thaer thinks the best arrangement is to have the place where the dung is kept, hollowed out and inclined towards the centre, through which an opening is to be made for the escape of its liquid portions. The urine should be incorporated with the dung and litter. There is no doubt that manure should be kept as much as possible from the sun and rain—how this is to be done is rather a question of the farmer's means, than of the propriety of the course. It will be hardly possible for the great majority of the farmers of this country to cover in their manure heaps, or build over their barn-yards—the expense would overbalance the profit. The only plan that it seems possible for them to adopt readily, is that of throwing dirt over the yard, and defending their manure in this way. This, unquestionably, where it is not attended with too much labour, is an excellent plan, and one every farmer should adopt; every method within his reach should be employed to preserve and keep in fine order the material on which all his hopes of profit, and all his success as an agriculturist, depend. Not all, but surely some of us, can go to the trouble of turving or throwing dirt over our dung-heaps, to absorb the gasses and the moisture during decomposition, or even go as far as they do in Switzerland, where the dung made from straw litter is put in regular heaps, and the outside of the heap is made of the more strawy portions, and folded over so as to shut out all contact with the atmosphere; in dry weather these heaps are watered, or the liquid from the manure thrown over them—the urine is collected separately in a trench dug on purpose, and used by itself. The time when manure should be carted to the field, and in what condition this manure should be, are questions to be decided very much by the experience of the farmer; some prefer the manure to be entirely decomposed, others would have it carted immediately from the stable to the field. On heavy, tenacious soils, there seems little or no doubt that fresh made litter buried in the soil, is better than fermented dung. The ammonia acts on the insoluble mould contained in such soils, and the nutritive portions of the soil are brought into action more readily by this undecomposed manure, than by that which has gone through its several stages of decay. On light soils it is the reverse, they derive no advantage from manure that has not fermented. One precaution appears necessary, as to the time

when manure should be put upon the land—it should be removed before fermentation takes place, or after it has subsided; as in either of these conditions nothing is lost by exposure to the air, but while in a high state of fermentation, many of its active and nutritive portions would evaporate. Von Thaer is strongly in favour of a practice not common among us, that of spreading fresh manure on the land and letting it remain till the spring before it is ploughed in. According to his experience, it is not only of the greatest present advantage to the land and to the crop, but all the succeeding crops are very superior to those raised on land where a larger quantity of decomposed manure has been used. He finds it difficult to explain this result, but it would seem in our opinion, to be owing to the juices of the manure being carried into the ground by the melting snows of the winter and the rains of the spring. This plan will only do on level ground; on declivities it would be washed away in heavy rains. The proper quantity of manure for any given quantity of land will depend on the nature of the soil. Cold clay, moist grounds, require heavy manuring, while light porous soils, will bear but light dressing. They require it more frequently, but less at a time. But among other important points in the manuring of land, there is one which appears very simple, but which in reality requires judgment and is of the greatest consequence, that is, the proper distribution of the manure. If not spread equally over the surface, in those parts where too much is thrown, the grain will very probably lodge or be laid, while where it is too thinly disposed, the crop will show it, and not only the present crop, but each succeeding. The hand that is now writing these words, undertook for the first time to spread manure this summer; it appeared a simple process, but after exertions in which he could feel nearly every artery throb, from his head to his feet, he found that it must all be done over again. He learned in this way, that there is in the seemingly coarsest operations of agriculture, an art and mystery that must be acquired by experience and practice.

After going through the solid manures we come to the liquid, as agents in cultivation. Of the utility of these there is but one opinion among the best agriculturists. The only objection there can be to their general adoption, is that they are as yet in this country, among those novelties from which the old fashioned farmer turns with doubt or disbelief. The amount of trouble or expense that it would cause to make all the arrange-

ments necessary for preserving them, is but small, indeed nothing, when the increased fertility of the soil and the increased crop are considered. It may not be convenient to make tanks or reservoirs with cemented floors and walls, but a hole could be dug in or near the barn-yard, into which all the fluid portions of the decomposing manure could be made to flow, and if not too troublesome or expensive, some kind of passage could be made for leading off all the fluid materials from the house into the same receptacle. Our farmers must learn that nothing should be wasted—not one of them can afford to throw away those resources that lie at his hand. It is asking too much from nature, to be kind to the improvident. In England, and several other parts of Europe, where necessity makes them alive to every thing that can be made available in the cultivation of their lands, they are very particular in the preservation of liquid manures. The same judgment must be exercised in their use as in the other manures. On light and porous soils they are of great benefit in giving strength and consistency, but on tenacious, clayey soils, it will be unsafe to give up the use of solid manure—with these the liquid are used with better effect as a top-dressing.

Sheep-folding, as a mode of collecting manure, is another European device to keep their lands in condition. So few persons in the United States have large flocks of this animal, that it cannot be considered as a plan of much importance to our farmers. But as a matter of curiosity, they may know that the ground is ploughed, and then the sheep sometimes in flocks of two thousand or more, are enclosed by a movable hurdle fence, within a given space. They stay there during the night only, and in the day are sent forth to feed. The next night they are put on a new portion of ground, and so on, till the whole field to be manured is gone over. On a small scale many of our farmers might do the same thing, by having a fence made with wheels, that could be drawn from one field to another. It would be a mode of preserving the manure and turning it to an immediate advantage, that may in some circumstances be worth while.

But besides the excrements of animals, of whose utility there is no doubt, the animal itself may be made to play its part in the art of cultivation. Instead of the bodies of our various animals when they die, being buried, and serving no purpose whatever, they may, by being covered with quick lime and earth, and after they have gone through the most offensive part of the process of putrefaction, be turned to an extremely active

manure, and their bones softened by quick lime and pulverized, are equally efficacious. Horn is a still stronger manure than bones, but should only be used for such crops as do not suffer from an excess of manure; and indeed, all parts that we now reject, hair, blood, &c., are all highly nutritive.

A. L. ELWYN.

NOTE.—As to the remark of fresh manure being put on in the autumn and allowed to remain till spring, one of my neighbours seven or eight years ago, did this accidentally on a field, where now the effect is easily seen and contrasts with the rest of the pasture. The strong effect noticed, is no doubt from the slight evaporation during winter, and from the stronger parts of the manure being carried into the ground by snow and rain.

### At Home! Sweet Home!

From "Songs in the Night"—a beautiful volume of Sacred Poetry, recently published in Boston.

Where burns the fireside brightest,  
Cheering the social breast?  
Where beats the fond heart lightest,  
Its humble hopes possessed?  
Where is the hour of sadness  
With meek-eyed patience borne?  
Worth more than those of gladness,  
Which mirth's gay cheeks adorn!  
Pleasure is marked with fleetness  
To those who ever roam,  
While grief itself hath sweetness

At home—sweet home!

There blend the ties that strengthen  
Our hearts in hours of grief—  
The silver links that lengthen  
Joy's visits when most brief;  
There, eyes in all their splendor,  
Are vocal to the heart,  
And glances, bright and tender,  
Fresh eloquence impart;  
Then, dost thou sigh for pleasure?  
Oh do not widely roam,  
But seek that hidden treasure

At home—sweet home.

Does pure religion charm thee,  
Far more than aught below?  
Would'st thou that she should arm thee  
Against the hour of woe?  
Her dwelling is not only  
In temples built for prayer,  
For home itself is lonely,  
Unless her smiles be there;  
Wherever we may wander,  
'Tis all in vain we roam,  
If worshipless her altar

At home—sweet home!

For the Farmers' Cabinet.

**Fungi, Insects, &c.—how to prevent their attacks on plants.**

MR. EDITOR,—The fact that the disease which has injured the potatoe crop so severely for several years past, has been attributed to the attacks of the fungi, by some highly scientific gentlemen, induces me to give you a few remarks on the *cause of the fungi*.

Close observation will show that all plants of the fungi tribe grow where there is a deficiency of alkalies. We never see mushrooms, toadstools, or anything of the kind grow on or near a heap of ashes, or lime. But we almost invariably see them growing on or near a pile of stable dung, or any thing yielding a large proportion of carbonic acid. The cause of this is easily demonstrated by chemistry. A chemical analysis of plants of the fungi tribe, will show that they contain an extremely small proportion of alkali, far smaller than any other class of vegetables. This fact is of the highest importance to farmers; by its aid they can always tell when their soils need alkaline substances to make them more productive, without going to the trouble and expense of a chemical analysis of the soil for that purpose. Upon whatever spot of ground the fungi make their appearance, *there* is a want of alkali, and no time should be lost in supplying it, if we would raise profitable crops; for such crops as wheat, corn, oats, hay, potatoes, &c., will not grow well there even if they are supplied with the very best stable manure. They need ashes, lime, &c., in such places, *and they cannot do without them*.

The fungi being composed principally of carbon, oxygen, and hydrogen, feed upon carbonic acid and water chiefly, and consequently if lime or potash be added to the soil where they grow, and the carbonic acid be thereby changed into a salt, the fungi have nothing to feed upon, and therefore die, for they cannot feed upon a salt. When the potatoe crop has been furnished with sufficient alkali, particularly potash, and the carbonic acid in it is in the form of a carbonate, the fungi have nothing to feed on, and do not attack the potatoe. On the other hand, when there is *not* sufficient alkali given to the potatoe crop to cause the carbonic acid to form a salt by union with such alkali, then the carbonic acid in the potatoe is in its own form of carbonic acid, and as such the sickly root offers the proper food to the fungi, and it avails itself of it; unfortunately, for doing so, it brings down upon

itself the charge of being the cause of the potatoe disease.\*

The same is the case with other plants. If they lack alkali to form a salt in connection with the carbonic acid they receive, the superabundant carbonic acid will give nutrition to the seeds of fungi, and they will sprout and grow. We see this effect produced in wheat in the case of mildew, rust, or blight, and also in smut in the same plant, the ergot in rye, the "devil's snuff-box" in corn, the mildew in oats, buckwheat, and the grasses, and the mossy growth on the bark of fruit and other trees. This is demonstrated by the fact, that if we apply strong alkalies in sufficient quantities to any of these plants before they are attacked by the fungi, *they will not be attacked*; and if we supply them after they are attacked, *they will soon be freed from them*. It is to this purpose that our most successful farmers and fruit raisers apply salt and lime to protect wheat from rust, mildew, or blight, and smut—and put ashes and lime upon corn to protect it from the "snuff-box"—and sow ashes on potatoes to save them from the rot—and wash fruit trees with whale oil, soap or other alkaline substances, to restore them to health. These alkaline substances, too, by uniting with the carbonic acid, prevent the commencement of decay. This commencement, in all carboniferous substances, is called in chemistry, the "saccharine fermentation," the product of which is a sweet substance, which gives food to flies, bugs, &c., and which flies and bugs are also charged by other scientific gentlemen, with being the cause of the potatoe rot, and other diseases of plants. The Hessian fly, in my opinion, finds nothing suited to its palate in a healthy stalk of wheat, or one that has enough alkali, and therefore does not attack it; but in a sickly plant, or one with a deficiency of alkali, she finds the sweet substance upon which she feeds, and there lays her eggs; which eggs, in the course of time, hatch and produce worms, and if the plant is in such a condition as to furnish food for these worms, they will still remain there; but a healthy plant will not furnish that food—the same in regard to the wheat-

\* Some of the practical chemists of your city, with their balances, tests, &c., might do the agricultural community a great service in connection with this matter, by analyzing sound potatoes, and giving their constituents, and then analyzing the rotting potatoes, and giving their constituents also. The public might then compare them, and see what was wanted, and supply it: I would do so myself, had I the requisite materials.

worm, muck-worm, and all other worms that attack plants. I am led to this conclusion, Mr. Editor, by numerous observations and some experiments. I have found that where there was the proper quantity of alkaline substances plants were not injured by worms, bugs, or flies, in any other way than by being eaten up by them. And, indeed, they are not so apt to be eaten when they have a sufficiency of alkalies, for by their aid they form carbonate of lime, phosphate of lime, silicate of potash, &c., and make their stalks and leaves so hard and strong as to be almost impenetrable to the attacks of many insects that infest them. And their juices are so insipid that they are not so well relished by such insects.

Hoping, Mr. Editor, that my poor labours may be of some service to my fellow men, I take leave of you for the present. If my services are acceptable, perhaps I may have occasion often to write an article for your paper.

Yours, &c.,

CHEMICO.

Wilkesbarre, Pa., October 4th, 1845.

### Rotation of Crops.

We take the following extract from Petzholdt's Agricultural Chemistry, as we find it published in the second number of the Farmers' Library. If this work, now publishing by Greeley and McElrath, of New York, and edited by J. S. Skinner, does not succeed, it will not be for lack of valuable matter, both original and selected.—Ed.

THE practice of rotation of crops, has arisen out of pure experience. The practical farmer observed that, in most cases, when the same plant was grown for two, three, or more years consecutively upon the same soil, it did not yield the same abundant harvest; whilst, when another crop was tried upon that soil, the production was satisfactory. Observation and experience subsequently and gradually established for different parts a different alternation of crops, but the practical agriculturist has never been able to devise a fixed rule for every kind of soil; although many efforts have been made to attain this desirable end, the subject has not been able to pass the limit of mere empiricism.

While the practical farmer was content to rest simply upon the facts supplied by his experience, and remained satisfied with believing that some plants exhaust the soil, while others do not, the theorist endeavoured to discover a key to this remarkable phenomenon. Of all the hypotheses devised to explain it, that of secretion and excretion by the roots of plants, seems to have had the

greatest number of adherents, because it appears to explain satisfactorily the necessity for the rotation of crops.

According to this hypothesis, all plants secrete or form certain matters during vegetation, which they cast out by their roots, and the accumulation of these in the soil exercises an injurious influence upon future crops of the same plants, but does not interfere with the growth of a different crop; nay, it was further supposed that the excrements of one species of plants might furnish an appropriate nourishment for another species. The framers of this hypothesis, no doubt, imagined that plants in this respect exhibited an analogy with animals, because we see animals turn with aversion from the excrements of their own species, whilst the same excrements are sought and eagerly devoured by animals of a different species. But this supposed analogy is utterly fallacious; and if we examine the adaptation of the hypothesis to the facts of the rotation of crops, we shall find it to be altogether unsatisfactory.

The experiments made to prove that certain matters are secreted by the roots of plants, are by no means conclusive; but, since it is well established that plants possess the power of absorbing and adapting matter for their growth, we may also suppose, in the absence of direct proofs, that they likewise secrete matter by their roots. For brevity's sake, we will admit that such secretion takes place, and enquire into the proofs adduced to render the opinion probable, that these secretions exercise an injurious influence upon the growth of plants of the same species, whilst the same matter favours, or, at least, does not exert any injurious effect upon the growth and development of plants belonging to other species.

The facts brought forward to establish this theory are such as these—1st. That fruit trees, planted on the same spot where previously others of the same species had long grown, have not produced so well as usual. 2nd. The camomile—*matricaria chamomilla*—when, to a certain extent, present in a field, interferes with the growth of the cereals, owing, as it is supposed, to its secretions in the soil being offensive to the latter. 3rd. After the culture of peas, vetches, clover, buckwheat, &c., far finer crops of cereals will be produced than if consecutive crops of grain were attempted.

But, in objection to the theory of the excretions of one plant being injurious to another, we might allege, that it often happens that trees of the same kind will flourish upon spots where they have previously grown; and that in many countries, espe-

cially in Hungary, successive crops of grain plants may be grown year after year continually, on the same soil, without disadvantage. In meadows and forests, also, we see the same species of plants succeed each other for ages, and suffer no injury from the accumulation of the secretions of preceding generations. To explain such cases as these would require a new theory to be added to the first, and without the aid of chemistry, this would be as weak and unsatisfactory as we have shown the former theory to be. We must, therefore, reject the hypothesis of the secretions of plants being the cause of the advantage or necessity of the rotation of crops, and endeavour to discover another, capable of affording a satisfactory explanation of the known facts, perfectly consistent with true science, and especially with chemistry; and if such a theory be thus established, it cannot fail to be of great use in practice.

If we assume that the cause of the utility of the rotation of crops depends exclusively upon the circumstance that cultivated plants withdraw from the soil unequal amounts of certain ingredients for their nutrition, all the observed facts are at once and satisfactorily explained, and the possibility of determining the rotation of crops, or of avoiding it altogether, if desirable, rendered evident.

I need not here repeat what I have already told you, respecting those constituents of plants which they derive from the soil, but I must remind you that plants of various species differ very much with respect to the nature as well as to the quantity of mineral or saline constituents which they require for their growth and development.

Bearing this in mind, it is obvious that the growth of a plant may be impeded, simply because the mineral constituents principally needed, indeed essential to their proper development, have already been drawn from the soil by the previous cultivation of another plant, requiring nearly or altogether the same constituents. If, for example, we take a field the soil of which contains the mineral and saline materials required to produce wheat, and yet only in a quantity exactly sufficient to produce a single crop, it follows, of course, that a second crop of wheat cannot be reared upon the same field. The soil is completely exhausted for the moment, and will remain so for ever, if it does not contain substances which may by disintegration and decomposition furnish a new supply of the ingredients necessary to the growth of plants, or if these essential matters are not artificially supplied.

Such a complete exhaustion of the soil as we have supposed, for the sake of illustra-

tion, to be effected by a single crop, is not very likely ever to happen in fact. But what really happens, and that commonly enough, is, that although all the salts are not exhausted, yet being present in the soil in relative proportions very different to the amounts required by various plants, a single crop of wheat may deprive the soil so completely of one of its mineral constituents, that another crop of wheat would not grow upon it, and yet this soil may still contain abundant mineral constituents for the production of a good crop of clover or turnips.

It will now be obvious that it is possible to grow three, four, or more successive crops of the same grain upon the same fields, whenever the soil contains a sufficient amount of the necessary mineral constituents, and that if a soil possessed an illimitable amount of these substances, or received a constant and sufficient supply of them, it would be able to produce successive crops of the same cereals continually and for ever, and moreover that a rotation of crops would be in such cases wholly unnecessary.

What we have stated with respect to the cereals, applies equally to all other cultivated plants; so that any plant may be grown upon the same field continually, and good crops obtained, if the ingredients of the soil which the plant requires either are present originally to an unlimited amount, or the farmer furnishes the field with a constant and sufficient supply of these substances.

Viewed in this light, the subject will be clearer to you than perhaps has hitherto been the case. You will now understand that an *exhausting plant* must be one which in comparison with other cultivated plants requires many inorganic constituents, and consequently requires for its successful cultivation a soil rich in those constituents. We need by no means wait for the perfect development of a plant, and subsequent trials upon the same soil where it is grown, in order to know whether it is an *exhausting plant* or not; we can arrive at a positive conclusion upon this point immediately by burning the plant and examining the ashes. The case for example may occur that some hitherto unknown plant is recommended for cultivation, and tried in a soil equally unknown, as to its amount of the constituents which that particular plant may require.

Practical experience, arising from the growth of this plant in one field or soil, may pronounce it to belong to the class of *exhausting plants*, whilst in another soil it may be found to be a non-exhausting crop. Thus, the most contradictory conclusions may be drawn from practical experience,

and many a farmer has paid the penalty of this uncertainty. It is frequently only after the lapse of a long time, and after a series of successful and unsuccessful trials, that it is at last found out which soil will suit this particular plant and which will not. All this may be obviated, and the question determined at once, by burning the plant, examining its ashes, and carefully analyzing the soil; this will enable us to determine whether a given field will repay the cultivation of the plant or not.

Thus you perceive that the terms, "exhausting" or "non-exhausting plants," are merely relative; a chemical analysis of the ashes of plants, as well as of the soil, can alone enable us to decide upon this point. Strictly speaking, only those plants can be called exhausting which find an insufficient amount of ingredients necessary to their growth present in the soil. So that plants requiring a considerable amount of mineral constituents, such as wheat, for instance, when grown in a soil rich in those constituents, cannot be designated an exhausting crop relatively to the soil; whilst on the other hand, plants requiring but an inconsiderable amount of mineral ingredients, when sown in a soil not adequate to supply even a small amount of these ingredients, must relatively be considered exhausting plants. From the preceding remarks it will be evident how ill-founded the assertion is, that certain plants improve the soil by enriching it. It is a fact, proved beyond the power of controversy, that all plants whatever, withdraw certain mineral constituents from the soil, and thus so far impoverish it. All such notions of improvement, founded upon practical experience, are mere illusions.

It is frequently asserted that fallow crops, such as clover, peas, vetches, lucerne, buckwheat, &c., and even tobacco, potatoes, beet root, carrots, &c., do not exhaust the soil, but on the contrary are, in a certain measure, capable of improving it. This is especially said to be the case with buckwheat, which is frequently sown during fallow, and subsequently, when nearly in flower, ploughed into the soil in order to improve and enrich it. The power of the soil to produce cereals, after having grown crops of these plants, is thought to prove their non-exhausting nature. The term *fallow crops*, indeed, indicates that fields left fallow in order to restore their fertility for the cereals, have been found by experience to be capable of yielding crops of these plants without their subsequent ability to grow the cereals, being affected.

From the New York Farmer and Mechanic.

### Sowing Wheat.

New York, Sept. 2nd, 1845.

*H. Meigs, Esq., Sec. N. Y. Farmers' Club:*

My dear friend—Being engaged to attend the meeting called for this day, in the town of Greenburg, to form a "Farmers' Club" in that town, in accordance with the constitution and by-laws of the Society of Agriculture and Horticulture, of Westchester county, I shall not be able to attend the discussions at the New York Farmers' Club, on the subjects proposed at the last meeting—"The preparation of the ground and the seed for the wheat crop," &c. The wheat crop is so valuable, so intimately connected with the prosperity of not only the agricultural but also the manufacturing, mechanical, and commercial interests of the whole country, that we cannot be too well informed on the subject. Land that has been well manured in a previously cultivated crop, such as corn and potatoes, is, with proper ploughing and harrowing, very suitable for winter wheat. It is always best that the manure should have been applied in the previous crop, particularly if it is rank or recently formed, or your wheat will produce too much straw, be weak, and fall down. There are a few exceptions to this rule. Bone dust, oily fish, street manure, &c., have often been applied at the time of sowing, to secure a good crop. A sandy loam, with a good supply of calcareous earth or lime, forms the best soil for wheat—a certain amount of sand or silex, clay, and lime, being essential to secure a good crop. When I say that the land should be thoroughly ploughed three or four times, and harrowed as often, I am fully aware what is the usual practice, and also of the loss sustained by only one ploughing and two harrowings. I do not apply these observations to land just cleared from the forest (though then, the more and better the ploughing, the larger the crop) or the prairie sod just turned over; but to the land in all the old States, and all lands long under cultivation. The object in ploughing the ground so much, is to turn under more completely atmospheric air, which consists of nitrogen, oxygen, and carbonic acid, a thorough mechanical mixture of which with the soil will insure a great increase of crop; it also acts as a manure. The thorough pulverizing of the soil, so as to make it fine, is secured in this way, which renders it so much better for the fine roots, in the early growth of the plants, to get well rooted before winter sets in, thus securing it from being winter killed. This also enables you to pasture your sheep and young cattl

upon it in the fore part of November, without any fear of pulling it up. They will secure it from the Hessian Fly by eating off the larva.

It is also very important to prepare the seed properly; you should have the most plump and clean seed that can be obtained. Six shillings or a dollar more per bushel for the best of seed, are no consideration when the advantages are taken in the account. In a barrel or half hogshead make a brine that will bear an egg, from the old salt taken from your meat and fish casks; or, if you have not saved this, ordinary fine or coarse salt, the former dissolving much the soonest, and is generally preferred for that reason. Put in one, two, or three bushels of wheat, and mix well with the brine, and skim off all the chaff and other foul seed and light wheat that rises to the top. There should be brine enough to cover the wheat three inches deep. Stir up the wheat with a stick occasionally, and let it remain in the brine three or four hours. Some persons let it remain all night, but I think there is some danger of swelling the grain and acting upon the farina too much, by leaving it so long in the brine, and there is no real necessity for it. Draw off the brine into another cask, and lay the wheat on an oblique surface, so that the brine may run off; then to every bushel of wheat add three or four quarts of fine air-slacked lime, and rake and shovel it through every part, so that every grain is coated with the lime, and the seed as much separated as possible from each other. Some good farmers use more lime than the above. If you have not lime, and cannot readily obtain it, use unleached wood ashes instead. You must measure your wheat before you prepare it, or you will likely, when you sow it, put less seed in than is proper. You will also find it difficult, from the increased bulk, to hold enough each time in the hand. It is therefore better to sow twice, and at right angles; that is, take rather less than usual in the hand, and when you have gone over the field, begin and sow it over again in due proportion across the first sowing. You will thus have it more even, and secure sufficient seed, which is rarely the case. When you have taken pains to prepare your land well, use plenty of good seed—a virtue rarely practiced in this part of the world. The object gained by the above preparation of the seed is, first, you destroy all the smut, which is a parasitical plant placed on the fuzzy end of the grain; also all the eggs of insects, that frequently may be seen with a glass on the same part of the grain. The salt and lime also act as a manure to stimulate the germ of the young plant, so as

greatly to invigorate it in the early stage of its growth.

Yours, truly,  
R. T. UNDERHILL, M. D.

### The Galway Fair.

A VERY large fair is held at Galway, Ireland, in the county of Galway, called the Fair of Rose Mount, at which I was present. This was chiefly for the sale of ponies, or horses of a small breed, with some few cattle. On this occasion, the collection of people was surprisingly great; and I could then well understand what was intended by the public meetings in Ireland, called "monster meetings," in respect to which, until I saw this collection of people, I had always supposed the account of the numbers assembled had been much exaggerated. There were here, on this occasion, some cattle and sheep; but there were, also, four thousand ponies, the catching of which, for examination or sale, as they had, in general, neither bridle nor halter, was sufficiently amusing, and I was about to add, sufficiently Irish. The fair was held on the sea-shore, where the receding tide left a large bed of mud. The ponies, when required to be caught, were surrounded and driven into this mud; and here, in a very ignoble way, they were secured, though it was not always without some difficulty they were extracted after being caught.

1. *Temperance in Ireland.*—There were two circumstances connected with this fair at Rose Mount, a reference to which, though not having an immediate connection with the principal object of my Reports, yet having a direct bearing upon rural manners and customs, may not be considered wholly out of place. Here, as well as at the fair at Donnybrook, where immense numbers of people were congregated, I could observe most distinctly the beneficent effects of that powerful reformatory movement, which, under the ministry of a good man, worthy of the name of an apostle, has effected a glorious moral triumph throughout Ireland, such as the pages of history scarcely record. I cannot say that at either place there was no drinking and no quarrelling; but there was comparatively little; and knowing, from report and from the natural excitableness of the Irish temper, what had been usual on such occasions, I could not but feel how much had been accomplished, when a foreigner might truly say, of such vast and mixed assemblages, they were quiet, orderly, and kind; and a well-behaved man, disposed to keep his elbows to his own sides, might feel an almost equal security as he would feel in church.

2. *The Galway Women.*—There was an-

other circumstance, perfectly unique in its character, to which I shall be pardoned for alluding. There was another species of live stock exhibited at the fair, which I cannot say is never seen at such places, but which does not always present itself under the same frank circumstances. The kind nobleman who accompanied me, and who, like many others, noble and simple, whom it has been my good fortune to meet with on this side of the water, left no effort unessayed for my gratification, after looking at the various objects of the fair, asked me, at last, "if I would like to see the girls." I confess my natural diffidence at once took the alarm; and my imagination cast a few furtive glances over the sea at some precious objects I had left behind. However, upon a voyage of curiosity, why should I not see what was to be seen! and, confident that my good friend could have no sinister design, I gave him an affirmative reply. Upon inquiring of one of the trustees, or masters of the fair, "if the girls had come," we were informed they would be there at twelve o'clock. At twelve o'clock we went, as directed, to a part of the ground higher than the rest of the field, where we found from sixty to a hundred young women, well dressed, with good looks and good manners, and presenting a spectacle quite worth any civil man's looking at, and in which, I can assure my readers, there was nothing to offend any civil or modest man's feelings. These were the marriageable girls of the country, who had come to show themselves on the occasion, to the young men and others who wanted wives; and this was the plain and simple custom of the fair. I am free to say that I saw in the custom no very great impropriety. It certainly did not imply that, though they were ready to be had, any body could have them. It was not a Circassian slave-market, where the richest purchaser could make his selection. They were in no sense of the term on sale; nor did they abandon their own right of choice; but that which is done constantly in more refined society, under various covers and pretences,—at theatres, balls, and public exhibitions; I will say nothing about churches,—was done by these humble and unpretending people in this straightforward manner. Between the noble duchess, who presents a long train of daughters, rustling in silk, and glittering with diamonds, at the queen's drawing-room, or the ladies of rank and fashion, who appear at public places with all the beauty and splendor of dress and ornament which wealth, and taste, and art, and skill, can supply, meaning nothing else but "Admire me!" and these honest Galway nymphs with their fair com-

plexions and their bright eyes, with their white frilled caps, and their red cloaks and petticoats,—for this is the picturesque costume of that part of the country,—all willing to endow some good man with the richest of all the gifts of Heaven, a good and faithful wife, I can see no essential difference.

"Let not ambition mock their useful toil,  
Their homely joys, and destiny obscure."

I hope I shall be excused, if I say something more of these Galway women. I never saw a more handsome race of people. I have always been a great admirer of beauty; natural beauty, personal beauty, mental beauty, moral beauty. For what did the Creator make things so beautiful as they are made, but to be admired? For what has he endowed man with an exquisite sense of beauty, but that he may cultivate it, and find in it a source of pleasure and delight? As I have grown older, this sense of beauty—and I deem it a great blessing from Heaven—has become more acute; and every day of my life, the world and nature, nature and art, the animal, the vegetable, and the mineral creation, the heavens and the earth, the fields and flowers, men, women, and children, wit, genius, learning, moral purity and moral loveliness, deeds of humanity, fortitude, patience, heroism, disinterestedness, have seemed to me continually more and more beautiful, as, at the setting of the sun, man looks out upon a world made richer and more glorious by his lingering radiance, and skies lit up with an unwonted gorgeousness and splendor. But the human countenance seems in many cases to concentrate all of physical, of intellectual, and of moral beauty, which can be combined in one bright point. Why should it not, therefore, be admired? In the commingled beams of kindness and good humor brightening up the whole face, like heat-lightning in summer on the western sky; or in the flashes of genius sparkling in the eyes with a splendor which the fires of no diamond can rival; or in the whole soul of intelligence, and noble thoughts, and heroic resolution, and strong and lofty passions glowing in the countenance,—there is a manifestation of creative power, of divine skill, unrivalled in any spot or portion of the works of God.

The extraordinary personal beauty of these Galway women was not mere imagination on my part, nor the result of any undue susceptibility. I said to the coachman, as we passed through this part of the country, that I never saw a handsomer people. "That," said he, "travellers always remark," and when I left the country, in casting my eye

over a recent book of Travels in Ireland, I found the author's impressions correspond with my own. Tradition says that a colony of Milesians formerly settled in this part of the country, and that the remains of this race, or the offspring of the intermixture of them with the native tribes, present these results. This is a remarkable fact, and not without its bearing upon one great branch of agricultural improvement.—*Coleman's Agricultural Tour, No. 4.*

**FRENCH AGRICULTURE.**—The French commission on irrigation states the following facts as to the present condition of several branches of agriculture in France. 1st. The supply of cattle is so deficient that animals and animal food of the value of ninety-four millions of francs are imported yearly. 2nd. Fifteen thousand foreign horses are required every year to supply the demand for horses for war and industry. 3rd. The ploughed land in France is to the grass land as six and a half to one, whilst in most of the neighbouring countries it is only as three to one, and in England and Holland two to one; and 4th, there are means of forming not less than two millions of hectares of artificial irrigated meadows in France, which would produce a revenue of about eight millions sterling.—*New Farmers' Journal.*

**THE POTATOE ROT,** which for two or three years has been so destructive in the middle States, and last year in Massachusetts, and to some extent in New Hampshire and Maine, appears to spread this year over all New England, Nova Scotia and New Brunswick. Some few locations may escape with little damage, but the destruction is very widely spread. In Somerset and Franklin, thousands of acres have been planted in potatoes for the starch factories.—*Kennebec Journal.*

**BOILED CORN.**—A writer in the *Indiana Farmer* says, the way to prepare corn for the table, is not to put it into a pot and boil it for an hour, or rather until it is good for nothing, but simply to put on your water, and when it boils, put in your corn with a little salt—cover it up tight, and let it boil five minutes, or until the cob is heated through; then the corn is done, and you have all the sweet and nutritious qualities without any of its injurious effects.

The British government has appointed Professors Farrady and Playfair, says the *Rail-way Express*, to ascertain how far it is possible to consume the smoke from steam engine chimneys.

## THE FARMERS' CABINET, AND AMERICAN HERD-BOOK.

PHILADELPHIA, TENTH MONTH, 1845.

THE continued abstract on Manures from Von Thaer, furnished by Dr. Elwyn, and which we give this month, will be found to contain a number of very valuable hints to our practical farmers. "It is too much to ask from nature, that she should be kind to the improvident." Why not preserve what we have at our hand?—why submit to the necessity and inconvenience of going many miles to our cities to purchase so much of foreign manures, when from the cow-yards of many farmers, hogsheads and hogsheads of the very essence of those yards, are suffered to run into ditches and ravines, where they are totally lost! It is strange that we should so willingly, and yet so inconveniently, go many miles to buy that, of which we suffer so much to run to waste at our elbow.

THE leading article from J. G., on the great Cattle Show, &c., at Utica, will, we are aware, speak for itself, as it will be read with lively interest by every one who takes up the Cabinet; yet we cannot refrain from saying, that the energy and enthusiasm which run through it, deserve to be more broadly diffused among us. They are delightful, and should help to rouse us up to the more complete development of our own great resources.

**THE AMERICAN SHEPHERD:** being a History of the Sheep, with their Breeds, Management and Diseases, illustrated with portraits of different breeds, sheep-barns, sheds, &c. With an Appendix embracing upwards of twenty letters from eminent wool-growers and sheep-fatteners of different States, detailing their respective modes of management; by L. A. MORRELL, of Lake Ridge, New York.

This work has been recently published by Harper & Brothers, New York, and placed on our table by Grigg & Elliott of this city. Its title conveys a just idea of its contents, and from the hasty glance we have given it, and the knowledge we have of the writer, we have no doubt it will prove a valuable auxiliary to those engaged in the business of sheep husbandry. The author states he has been a practical manager of sheep for many years, and is enthusiastically attached to the vocation. His affection for this domestic animal is greater than for any other, and he has studied its instincts and habits at all seasons, and under all circumstances, as well as shared with his labourers in every department of its management. What is offered therefore, is the result of the experience of a practical man.

THE late Annual Exhibition of our Horticultural Society was as usual made attractive by the great variety of plants, vegetables and flowers of every description, that could please the eye of the common observer, or gratify the taste of the thoroughly instructed amateur. The arrangement of the articles throughout the magnificent rooms of the Museum building, were judiciously made, and during the three days, upwards of 15,000 persons witnessed the grand display.

PHILADELPHIA AGRICULTURAL, HORTICULTURAL, AND SEED WAREHOUSE.

No. 194½ Market street, between Fifth and Sixth streets, South side.

For sale as above, Prouty & Mears' Patent Centre Draught Self-sharpening Ploughs, with all the new improvements attached. These ploughs have taken nine premiums the last fall, in the States of Pennsylvania and Delaware. Subsoil ploughs for one or two horses—Taylor's new Patent Straw-cutters—Guillotine Improved do.—Corn-Planters—Cultivators—Harrow; Turnip-Drills, &c. Garden tools of every description. Also, *Vegetable and Flower seeds*, crop of 1844, grown for this establishment, and warranted true to name. Among the collection are several new kinds, very superior—as Seymour's White Giant Celery—Union Head Lettuce. Also, Peas—Beans—Potatoes, &c.—Fruit-trees—Bulbous roots, &c., for sale at the lowest prices, by  
D. O. PROUTY.

**Poudrette.**

A valuable manure—of the best quality, prepared in Philadelphia, for sale at the office of the FARMERS' CABINET, No. 50, North Fourth Street, or at the manufactory, near the Penitentiary on Coates' street. Present price, \$1 75 per barrel, containing four bushels—\$5 for three barrels—\$15 for ten barrels, or thirty cents a bushel. Orders from a distance, enclosing the cash, with cost of portage, will be promptly attended to, by carefully delivering the barrels on board of such conveyance as may be designated. The results on corn and wheat have been generally very satisfactory. Farmers to the south and in the interior, both of this State and of New Jersey, are invited to try it. It is now seasonable for wheat. &c.

JOSIAH TATUM.

**Agency for the Purchase & Sale of IMPROVED BREEDS OF CATTLE & SHEEP.**

THE subscriber takes this method of informing his friends and the public, that he will attend to the purchase and sale of the improved breeds of cattle, sheep, &c., for a reasonable commission. All letters post paid, addressed to him at Philadelphia, will be attended to without delay.

AARON CLEMENT.

March 15th, 1845.

**FRUIT AND ORNAMENTAL TREES, EVER-GREENS, SHRUBBERY, &c.,**

In great variety, for sale as heretofore, by the subscriber, at his Nursery, near Haddington, four miles west of Philadelphia. Orders sent by mail, or left at the office of the Farmers' Cabinet—where catalogues may be obtained—will be attended to, and the trees well packed when ordered to distant places. City gardeners supplied with trees suitable for the streets, at a liberal discount.

SAMUEL RHOADS.

Tenth mo. 15th, 1845.

THE quantity of rain which fell during the Ninth month, 1845, was nearly two inches and a quarter.

..... 2.15 inches

*Penn. Hospital, 10th mo. 1st.*

LECTURES ON AGRICULTURAL CHEMISTRY:

By Alfred L. Kennedy, a member of the Philadelphia Agricultural Society.

A course of familiar Lectures, illustrated by experiments, specimens and diagrams, on those portions of Chemistry, Botany and Geology, which are applicable to agriculture, will be commenced early in November next, and continue semi-weekly until the latter part of February. The subjects treated, will be those most interesting and valuable to the *practical agriculturist*; and to those who are now learning, or about to learn the practice of the farm:—the economy of animal, mineral and vegetable manures, their action on siliceous, argillaceous and calcareous soils, analyses of soils, structure of plants, drainage, irrigation, &c.

Circulars containing a synopsis of the course, time of delivery, terms, &c., may be obtained at this office.

Philada. October 15th, 1845.

2t.

**GUANO.**

TWENTY-FIVE tons first quality Ichaboe Guano, in bags or barrels, for sale in lots to suit purchasers, by

S. & J. J. ALLEN & CO.,

No. 7 South Wharves, 2nd Oil Store below Market street, Philadelphia.

October 15th, 1845.

6t.

THE fourth part of *Colman's Agricultural Tour* is published, and will be forwarded to our subscribers as soon as the numbers are received. We give a graphic and amusing extract from it, describing one of the accompaniments of the Galway Fair, in Ireland.

THE Lectures advertised by A. L. Kennedy, will afford facilities for acquiring a certain kind of valuable information, that has been heretofore hardly offered to farmers of this vicinity, or to young men who would make themselves acquainted with those portions of Chemistry, Botany and Geology, which are every day applicable to agriculture.

THE October number of the *Farmers' Library* comes to us filled with information which we could wish every farmer would avail himself of. It contains also a beautiful, lithographed likeness of Liebig. This will be particularly acceptable to the thousands with whom his name is so familiar.

THE fourth number of the *Pennsylvania Journal of Prison Discipline and Philanthropy*, published from this office, has just made its appearance. Like the numbers which have preceded it, it is filled with matter highly interesting and important to the philanthropist, and to those who are active in framing, or administering the provisions of the penal code.

SHORT ADVERTISEMENTS, 

The subject matter of which, may correspond with the agricultural character of this paper, will be inserted at the rate of one dollar for each insertion of ten lines or less; and so in proportion for each additional line. Payment in advance.

We keep on hand at this office, and will supply our friends with Agricultural works generally. Among which are

THE FARMER'S ENCYCLOPEDIA, full-bound in leather;—Price	\$4 00
YOUATT ON THE HORSE, with J. S. Skinner's very valuable Additions;	2 00
BRIDGEMAN'S GARDENER'S ASSISTANT;	2 00
THE AMERICAN POULTRY BOOK;	37½
THE FARMER'S LAND MEASURER;	37½
DANA'S MUCK MANUAL;	60
Complete sets of the FARMERS' CABINET, half-bound, 9 vols.	7 50
DOWNING'S Landscape Gardening,	3 50
Downing's Fruits and Fruit Trees of America,	1 75
SKINNER'S Every Man his own Farrier,	50
AMERICAN Poulterer's Companion.	1 25
BOUSSINGAULT'S RURAL ECONOMY,	1 50
FARMERS' & EMIGRANTS' HAND-BOOK,	1 00
MORRELL'S AMERICAN SHEPHERD,	1 00
BEVAN on the HONEY BEE,	31½
BUISTS' ROSE MANUAL,	75
SKINNER'S CATTLE & SHEEP DOCTOR,	50
AMERICAN FARRIER,	50
THE FARMER'S MINE,	75
HANNAM'S Economy of Waste Manures,	25
LIEBIG'S AGRICULTURAL CHEMISTRY,	25
“ ANIMAL CHEMISTRY,	25
“ FAMILIAR LETTERS,	12½

As well as his larger works on Chemistry and Agriculture.

Subscriptions received for Colman's Agricultural Tour—or single numbers sold.

☞ We are prepared to bind books to order.

### Seed Store,

No. 23 Market Street, Philadelphia.

The subscriber keeps constantly a supply of White and Red clover, and other grass seeds. Field seeds, consisting of Spring and Winter Wheats, Potatoe, Oats, Barley, and choice varieties of Seed-corn. Also in season, Fruit and Shade Trees. Garden and Bird seeds generally. Guano in parcels to suit purchasers.

Philad., March 15th. M. S. POWELL. tf.

## COATES' SEED STORE,

No. 49 Market Street.

### FRESH TIMOTHY SEED,

Of various qualities, from good common seed to the purest and finest that can be produced,

TOGETHER WITH A COMPLETE ASSORTMENT OF

### GRASS & GARDEN SEEDS,

Of the finest Quality and best Varieties.—Bird Seeds, &c. JOS. P. H. COATES, 1 yr. Successor to George M. Coates.

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## THE FARMERS' CABINET,

IS PUBLISHED MONTHLY BY

JOSIAH TATUM No. 50 NORTH FOURTH STREET, PHILADELPHIA.

It is issued on the fifteenth of every month, in numbers of 32 octavo pages each. The subjects will be illustrated by engravings, when they can be appropriately introduced.

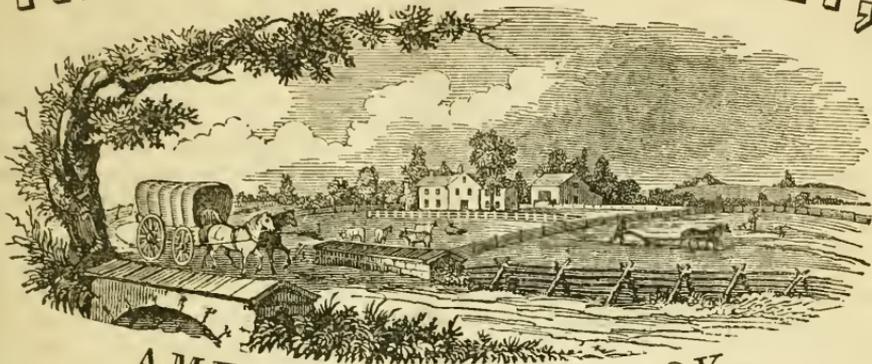
TERMS.—One dollar per annum, or five dollars for seven copies—payable in advance.

All subscriptions must commence at the beginning of a volume. Having lately struck off a new edition of one or two of the former numbers, which had become exhausted, we are now able to supply, to a limited extent, any of the back volumes. They may be had at one dollar each, in numbers, or one dollar twenty-five cents half-bound and lettered.

For six dollars paid in advance, a complete set of the work will be furnished in numbers, including the tenth volume. The whole can thus readily be forwarded by mail. For twenty-five cents additional, per volume, the work may be obtained neatly half-bound and lettered. Copies returned to the office of publication, will also be bound upon the same terms.

By the decision of the Post Master General, the "Cabinet," is subject only to newspaper postage. To any Post office within thirty miles of Philadelphia, they will go free of charge.

# THE FARMERS' CABINET, AND



## AMERICAN HERD-BOOK.

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

Perfect Agriculture is the true foundation of all trade and industry.—LIEBIG.

Vol. X.—No. 4.]

11th mo. (November) 15th, 1845.

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BY JOSIAH TATUM,

EDITOR AND PROPRIETOR,

No. 50 North Fourth Street,

PHILADELPHIA.

Price one dollar per year.—For conditions see last page.

For the Farmers' Cabinet.

### Exhibition and Cattle Show of the Chester and Delaware County Agricultural Society.

THE Exhibition of this Society came off on the 7th inst., at Westchester. Having been seven years in operation, and being composed of practical farmers, in one of the best and most celebrated agricultural districts in the Union, it was an interesting fact to find by the very large number of farmers present, that the benefits of these associations are appreciated here as well as in other places, and that they do not depend for success, as has been asserted, on the efforts of fancy and amateur farmers in the vicinity of large towns, or the transient enthusiasm of opulent citizens, who farm on paper and theorize in broadcloth and velvet, about ploughing, planting, and improved breeds of live stock.

The exhibition just closed is certainly highly creditable to the public spirit of the

farmers and farms in that section. The country within a circle of a few miles round Westchester has long been considered unrivalled for the richness of its pastures, and here of course, must be the *home* for the various improved breeds of stock, and where must be brought out the peculiar excellencies of each. Importations of Durham cows and bulls, Southdown and Bakewell sheep, have been made here within a few years, which have greatly improved the native stock of the two counties, and full-bloods were shown, descendants of "His Grace" and "Yorkshireman," worthy to compete with any others for size, handling, neatness of form, and other valuable points. The premiums on full-bloods were divided between S. S. Woodward, George Brinton, John Worth, J. Burton, Abner Hoopes, and Paschall Morris. The latter exhibited his celebrated milking cow, "Imported Bessy," now somewhat in years, but showing in her beautiful head and neck, prominent eye, rather flattened rib, light hind quarter, and enormous milk veins, her deep capacity for the pail. All the premium animals seemed to be descended from one or the other of these two celebrated and superior bulls. Of native home raised stock there was a considerable number, both of steers, oxen, heifers, and cows, showing the great advantages of a cross between the Durham bull and good common cows. Such a cross is within the reach of all; and while the improved carcass was very obvious, it was a

high vindication of the Short-horns to find that the milking properties of the cows were well kept up, if not increased. Paschall Worth exhibited three enormous steers home raised and half-bloods, four years old, which will probably weigh near 1,400 lbs. each, perfect standards of beauty. Two of them were got by "His Grace" and "Yorkshireman." There were also some very superior oxen on the ground of great size and excellence. In this vicinity oxen are generally preferred to horses for farming purposes, and care is taken to have them well mated and easily managed. John Worth brought two pairs of home raised, part Durham, which were much admired, and one of them obtained the premium. As regards sheep, although the number exhibited was not so large as usual, their superiority was fully maintained. Indeed it is generally admitted that at no Agricultural Shows south of New York, are there to be seen such sheep as at those of this Society. The importation of Southdowns a few years since by Joseph Cope, direct from the flocks of Ellman and Grantham, are to be found here, in addition to Bakewells and crosses more or less deep of these two celebrated breeds on other stock, and with each other. The hills and pastures of Chester county are highly favourable to sheep, and it is only natural to suppose that in the hands of skilful breeders they have attained a size and quality rarely found elsewhere. The pure and mixed breeds shown here would grace any agricultural exhibition in the country. The premiums for sheep were distributed between John Worth, George Brinton, P. Hannum, Paschall Morris, and N. Middleton.

Of hogs, not a pure Berkshire was to be found; they have either made away with themselves, or been made away with by others. The farmers seem to think themselves better suited by a small dash of Berkshire into the white Chester county hog. This makes a very perfect animal, giving rather more size, and perhaps a little more lard. Of these some very good specimens were exhibited.

The chickens also had their representatives, and had good reason to crow at the encomiums lavished on them. The "Jersey Blues" seemed to be the favourites. They are found to be good layers, and reach almost the size of turkeys. A pair of spring chickens which obtained the premium, weighed over thirteen pounds; they were raised by John Worth. The display within doors far surpassed any thing previous, and was highly creditable to farmers, gardeners, and fruit growers. The peaches, quinces, grapes,

apples, fall pears, &c., although not so numerous, would vie in quality with those at the Horticultural Exhibition in Philadelphia. Besides the fruit, butter, and honey, there were a great number and variety of vegetables, sugar-beets, turnips, pumpkins, squashes, cabbages, carrots, garden beets, turnip cabbages, egg plants, celery, &c., all very superior and beautiful; the whole ornamented and set off with bouquets and pyramids of flowers, cultivated and arranged with female taste and judgment.

The exhibition on the whole is said to have been the best of the kind since the formation of the Society, and is calculated to encourage to renewed efforts for more extended usefulness. There is no reason why the Chester and Delaware County Society should not embrace a wide sphere of action, and produce at their annual festivals a display of the different kinds of improved stock, of fruit, vegetables, and articles of domestic manufacture, equal to any in the Union, and have them resorted to from all sections of the country. She has groundwork for it which no other place can boast of, in her unrivalled soil, her well managed farms, her various manufactories, and intelligent farmers and citizens.

The *finale* to this interesting day was an Address in the court-house by John S. Bowen, practical in its suggestions, and at times eloquent in advocating the importance of an enlightened agriculture upon the general prosperity of the country. It had many hints which should not be lost sight of, and I would suggest its insertion in the Cabinet, particularly as it contained a handsome allusion to it.

I am tempted to extend this already lengthy paper, by alluding to the ploughing match which took place the day previously in a field adjoining the borough. Three ploughs started, the *Moore* plough, *Roberts'* plough, and *Prouty* plough, the first of which took the premium. As I was a disinterested spectator, having no interest in either plough except from the fact of having used a *Prouty* plough for the last three years, I intend to speak plainly in expressing the opinion that this award is a sad error of judgment on the part of the committee, and after learning the grounds of their decision, I concluded that were I the patentee of the *Prouty* plough, I would never again exhibit her for a premium in a neighbourhood where she is but little known, and where the farmers consequently have not had an opportunity by actual *experience* of *understanding* her peculiar merits. Take for instance this case: here was a committee of intelligent practical men, but who had been used to the ordi-

nary ploughs of the country, and who value a plough according as it may make *smooth work*; that is, with a light draft will turn over a wide and deep furrow, lay it over carefully and smoothly, with unbroken surface or edge. If in addition to this it is held by a good ploughman, and a furrow is made as straight as a line, why you have the *ne plus ultra* of a plough. It is granted that the *Moore* plough may do all this, but it is only necessary for the committee or any one else, to try the *Prouty* plough a *single season on their own farms*, to satisfy them by *observation* that this is precisely what the farmers do not want. It will no doubt be admitted, that if we could cultivate our fields as we do our gardens, it would be better for us. Now what would we think of a man undertaking to dig our gardens, were he to take up a spadeful of earth and lay it down carefully to prevent its breaking or falling to pieces? Do we not on the contrary tell him to pulverize it thoroughly, and break up all the toughness, and knock the lumps to pieces. The *Moore* plough indeed, proved itself at this exhibition to be good of its kind, but the *Prouty* plough works on a different principle from all other ploughs, and it is in favour of this *principle* I would urge it upon the attention of every man who has an acre of ground to be ploughed, viz: the principle of ploughing the ground and at the same time pulverizing it, opening the turned furrow into cracks, breaking its texture, and admitting the sun and air between the particles of soil, and thus reducing it to a state of garden mould or fineness, and giving no harbour in the shape of impenetrable clods, to seeds of weeds. That the *Prouty* plough will do this, is known to every one who has given it a fair trial *on his own farm* for a single year. But how is this to be known to a committee who have never seen it before, and on an hour's trial, and in the hands of a new ploughman, unused to the peculiar manner of holding it? Their attention would first be drawn to the rough and broken condition in which it leaves the soil, and on this account, which is one of its recommendations; it would be condemned. Ploughing with the *Prouty* plough, is said to be allied to spading, and it is in my opinion, one of the most valuable additions to our farming tools for the last twenty-five years. It makes us approach in our field culture to what we do in our gardens. All this can be said without any disparagement to the *Moore* plough or any other plough. They are different implements, and should be called by different names.

Suppose a furrow of any given length

turned over by *any* of the common ploughs of the country, and by the *Prouty* plough, and allowed to lay a couple of weeks before harrowing for the reception of the crop; a comparison will then show that in the former case, by the action of the sun and air upon the smooth upturned surface, it has been hardened into clods and masses of earth which are often impervious to the harrow, and afford a shelter for seeds of weeds. In the latter the sun and air have penetrated between the interstices of soil left open by the plough, mouldering it down, and a single harrowing reduces the soil to a fine and friable state. At least such has been my experience for the last three years, and these are *effects* of the *Prouty* plough which *can not* be seen by a committee on a trial for premium. OBSERVER.

Tenth mo. 10th, 1845.

Communicated for the Farmers' Cabinet.

#### ADDRESS,

*Delivered before the Chester and Delaware Agricultural Society, Oct. 7th, 1845:*

BY JOHN S. BOWEN, ESQ.

GENTLEMEN,—One of the most remarkable features of the present age, as compared with all other periods in the history of the world, is to be found in the organization of associations to promote objects of great public interest. "There is scarcely an art, or a science, scarcely any thing agreeable, useful, or instructive, for which we have not established special societies, and thus wonderfully increased and strengthened the imperfect means and powers of individual man. The value, the efficiency, the simplicity of such unions is conspicuous in each and all."

But there is no branch of human knowledge, there is no field of extensive inquiry, in which the benefits of association may be so richly found, are so conducive to personal interests, or the general good, as that which now engages our attention; and when we for a moment reflect that all the art of agriculture is the pure result of experience, it becomes a principle little short of self-evident, that the interchange of experience through the medium of these associations, is the most direct and sure means of mutual improvement.

In former ages, when the devastations of war were the chief medium of communication;—when all neighbouring provinces were at enmity, through the incessant feuds of their brutal lords, the farmer had little knowledge beyond the experience of his own valley. In our day of prolonged peace, when the nations are seeking *great-*

ness by opening the channels of social intercourse, and *prosperity* by developing the productions of labour and of art, the experience of all lands is thrown open to our examination; the farmer is no longer the secluded occupant of a narrow vale; he no longer follows the ancient routine which custom had prescribed.

The diffusion of knowledge, which has changed the aspect of civilization, has raised agriculture to an ART; an art which is fostered by every science, and to which diligent attention is paid, as well by statesmen as philosophers. But with all the aid of science, the principle still remains unshaken, that agriculture is an art dependant upon *actual experience*. It is true that the geologist and the mineralogist teach us wherein the difference and the value of different soils consist. It is true that the chemist has done, and is daily doing, much to direct us in the application or preparation of manures. The botanist also ascertains important facts in the physiology of plants, as does the zoologist in the animal kingdom. It is true that science is thus, and in many ways, shedding a flood of light and pointing the way to future improvements: but the practical application must, nevertheless, be always tested and ascertained by the careful hand of the farmer in his fields.

I would not for a moment be understood as undervaluing the labours of scientific men. Far be it from me, or from you, gentlemen, to cherish any contempt for the discoveries which careful analysis or diligent investigation is every day bringing to light. The province of science and the province of art, however intimately related, are separate, and their bounds may be clearly defined. Practical agriculture is an art, and is to be conducted by rules of practice. There are few who have the means and the leisure to study this branch of knowledge as a science. And if so, it is, of necessity, theoretic, and must be confined to the study, and is of little use to the grower of grain, or the feeder of cattle. What we ask of the chemist or the botanist, are the *results* of his investigation. If the former assure us that a loose and finely divided soil retains moisture better than when settled and compact: and if, in dry weather, experience proves that the well-harrowed corn thrives the better, we have then a practical rule of no little value. If the botanist give us, as the result of his inquiries, that the tender rootlets of many plants are injured by the settling of the fresh-ploughed soil; and we find that wheat, in fact, stools best upon a seed-bed prepared ten days before sowing, we acquire another rule. But when the chemist tells us that

ammonia is the food of all plants after the first germination and young shoots, we have made no acquisition, important as the discovery in itself may be. We must wait till, happily, some more practical adept shall give us an artificial manure of which ammonia may be the chief ingredient. This done, and the farmer perceives at once its value; and he either rejects or varies, or adopts the rule as it answers to the proof.

But while we unhesitatingly reject mere *theory*, and with it all those discoveries of science which do not present themselves in a practicable form to the farmer—while we reject these from *practice*, we would not reject them from the *fireside*. On the contrary, the winter evening can in no way be more pleasantly and profitably employed, in general, than by the study of agricultural chemistry, and other kindred branches. Farmers are well known to be sober-minded, and it is not very likely that they will carry their theories into the field, however they may spend their leisure in their books.

Besides the treatises which we have on chemistry, husbandry, cattle, horses, and the like, there is a class of publications which has a strong claim upon his attention, inasmuch as they present to the farmer the actual experience of men in his own vicinity—I refer to the periodicals; such as the Farmers' Cabinet. I am aware that in such publications much that is of little value may find place; it is unavoidable. Many a seasonable hint, many a prudent suggestion, many useful directions, many valuable improvements, endorsed by genuine practical farmers, are, however, given; and the cheap rate of the paper I have named, and its being designed for the use of those in the vicinity of Philadelphia, entitle it to a preference over more distant periodicals, and to a general subscription throughout this region.

There is a healthy tone of feeling among farmers which is seldom found among any other class. "Tricks in all trades but ours," is a common proverb; a sarcasm which may be thrown in the teeth of almost any trade or profession, excepting that of agriculture. Here there are no mysteries to be kept as the "secrets" of the trade. Each is ready to impart all the knowledge he possesses. Every improvement in culture is immediately made known. What has been acquired by repeated experiment, at whatever expense or risk, is forthwith communicated far and wide. The stranger is welcome to all the added experience of the neighbourhood into which he comes. Emulation does not degenerate into mean and ungenerous rivalry. Hence in these associations all come with a perfect confidence that there

will be kept back no part of the price, that no false baits will be thrown out to lure him to his hurt. Already, through the local associations over the land, has an amount of valuable practical information been accumulated, which can only be appreciated by looking back to the period of their origin. True, there have been no startling changes produced. The general course of agriculture remains the same. Could it have been otherwise, the result would have been, for a time at least, disastrous; for all experience would have been unsettled, and confidence destroyed. But as the friendly visitor often sees improvement in the patient which the watchers at the bedside fail to notice, so the gradual improvement in our own counties, and throughout the land, has been too uniform to attract marked attention. If we look back, however, but a few years, we shall be enabled to institute a comparison highly pleasing. I am aware that much, very much, remains to be done; and I know that the improvements made here and there, are rather to be considered as specimens of what may be done, than as evidence of what has been done. Yet, among other things, we may notice a decided improvement in the style and completeness of the farm-buildings in many quarters. The barn is no longer a road-side structure, unenclosed, and surrounded by wagons, carts and rollers, litter and hogs; stables are not now muck-heaps, nor the barn-yard an impassable swamp. But order and management prevail to a far greater extent than formerly. There is a place for every thing, and every thing is *beginning* to find its place. Good shelter for stock and implements has been found true economy. Cleanliness and order fatten both the barn-yard and the cattle. So the venerable hedge-rows that used to adorn our fences have greatly disappeared. Our woodlands are now frequently enclosed. Healthy orchards, of a rich variety of superior fruits, are not uncommon. The meadows are drained and improved. By the greater attention to manures and composts, and to top-dressing, grass-lands are more productive, and more cattle per acre are fed. The corn crop is not doubled, nor is the highest product of wheat attained; but each is greatly increased. The implements of husbandry are vastly improved. Formerly any wheelwright could make the plough, if we were lucky enough to get the right mould-board. Now we have ploughs of approved make for every description of work. The mania of speculation, which threatened to plough every hill-side with rail-roads, and trench every valley with canals, did indeed lead to some excess in the matter of improved

Short-horns, Southdowns and Berkshires; but even that was better, as many can testify, than certain "fancy stocks" we wot of, whether Vicksburg, Navigation, or Monsters of whatever paper variety. We are indebted to England in a very different sense for our importations of *bulls* than of *bullion*; of *cows* than of credit. "Large growth is always the result of sudden expansion." By the aid of this temporary excitement, more has been done for the permanent improvement of our stock of every kind, than could have been effected otherwise in a great many years. The earlier we begin in such matters the better. Had we waited until the great West had been filled with mongrel cattle from Virginia, Kentucky and the South, as well as from New England and New York, how immeasurable would have been the work of improvement.

Having thus briefly alluded to some of the indications of improved agriculture in our midst, allow me to say, that every encouragement is presented to further efforts. Under our form of government every thing of this kind is left to individual enterprise. The praiseworthy efforts of the recent Commissioner of Patents were entirely voluntary on his part. It is only by associations in every section that proper energy can be maintained and directed.

What has been done is but little when compared with the field of improvement opened up before you. The former discoveries of science have already, to a good degree, been reduced to practice. But within a few years there have been such advances in chemistry, and in other branches, as to render it certain that a new era in agriculture is about to commence. The great German pioneer, Dr. Liebig, has hewn away the barriers of agricultural chemistry, and every year we may expect to realize the benefits of his research.

In respect to these fruits of science, we must await the perfection of their experiments, and their ultimate reduction to practical rules. There is, however, much to be learned by experience in the fields. The *rotation of crops* is a subject worthy of far greater attention than has as yet been paid to it in this vicinity. What the former mode may have been I do not know; but the fact has often been stated, that our present system of corn, oats and wheat in succession, is of comparatively recent date. The reasons inducing this course are evident enough, but scarcely sufficient; at least in my opinion. The corn crop was formerly the great object. It requires the whole season. For this reason, and because it was fancied that the buried sod gave firmness to the tall corn,

it was always the first in the course. After the corn was cut off and cured, it was too late to sow. In the spring following the stubs of the corn-stalk formed an impediment to any crop then thought of, excepting oats, which was accordingly sown; and after this a convenient season offered for putting in the winter grain. Rye was then much more commonly sown than wheat. Bad farming could afford no more manure than was sufficient for about three out of eight acres, and, after oats, wheat stubbornly refused to thrive without a supply. With this limited stock of manure, no further cropping could be supported by the land: it needed rest; and as the rye and wheat afforded a good opportunity, grass seed was sown. Precisely the same routine, which a poor soil and limited resources in the way of manure rendered necessary, is still in full practice, and in repute, with all the benefits of enriched soil and ample manure. The fact, however, that the soil is improved, would seem to be good proof of the value of that system under which it has become so: and doubtless it is a good system as compared with many others; but if there be a better, if there can be shown any radical defect in the present, the sooner we find it out and make the requisite change, the sooner will our fields become most fertile, and our crops reach their highest limits.

There are several most serious objections: in the first place it is directly at variance with one of the best settled rules of practical agriculture, *that two white grain crops should not be taken in succession from the same soil*. Now, wheat after oats, is a complete violation of this standard rule. We all admit that oats is hard on the soil. We know that without manure wheat can seldom follow it and thrive, and that rye itself, a far safer crop on exhausted land, is often a failure. The reason of this is readily given: grains of this kind—rye, barley, oats and wheat—feed upon precisely the same aliment, and one crop takes away so much, that unless in some way replaced, a second has little left to subsist upon.

But while this is a sufficient objection, to my mind, and is the plainest and most readily understood by all farmers, there is another well worthy of examination, if not satisfactory at first sight.

There is a great difference in plants. Some will grow, like the mushroom, on a bed of fermenting manure. The tomato will flourish in the most rank heap of stable litter. In this class are most, or all, of our root crops. They are coarse broad-leaved plants, requiring rank manure, and are called *coarse feeders*.

There is another class of plants, which not only do not require, but seem to suffer by the presence of such fermenting, or putrescent manures. A load of stable dung will as effectually eradicate grass as a load of lime, if shot down upon the soil and left there to ferment for a few weeks. Among these plants may be reckoned almost all the grasses, so called by the botanist, including wheat. They are called *delicate feeders*; they require that the food upon which they subsist shall not only be fully fermented and no longer putrifying, but that it shall be thoroughly mixed with a finely divided soil. In other words, wheat demands a rich, clean, well-harrowed seed-bed, free from fermentation.

Now, what do we do? We first exhaust the seed-bed of its richness, by the oats crop, and then plough in the contents of the barnyard. It is true, however, that our long summers cause the fermentation of the mass to proceed nearly to completion, and thus better fit it for the purpose; add to which, the fact that our best farmers turn the whole over once or twice in the season, and thus prepare the food for the winter crop. Whether by the introduction of root crops, or otherwise, a better system can be devised, I leave for experience to determine.

The much discussed subject of lime is still worthy of regard, and it is not wisdom to grow weary of the investigation, because so much has been said to so little purpose. The attention which I have given to the matter has satisfied me that there are many important facts not generally taken into account. Very little, if any, pure carbonate of lime is to be found in Chester county; it is mixed with magnesia in all proportions from five to forty per cent. One fact may be considered as certain, that magnesian lime makes the best cement, and the best stucco or plaster. Magnesia is much lighter than lime. Marble lime is often objected to, because it is so much heavier to haul. But the farmer gets 95 bushels of lime, at least, out of 100 bushels measured; while of the strongest magnesian lime, he only has 60 bushels out of the 100—<sup>40</sup> being magnesia and other impurities.

But that is not the real question. If magnesia is worth as much as lime to the farmer, why he loses nothing by the mixture, and he gains in the hauling. The difference between them, and their respective qualities may be stated in a few words. Lime unites very closely with water, and does not easily part with it. Magnesia unites with three times as much water at first, but it soon loses the whole. It is for this reason that it is so valuable for cement.

Lime discharges a great deal of heat from the water when slacking, magnesia, little or none. Both in a little time become carbonates in the soil. Magnesia never becomes soluble to any appreciable extent; lime—in the form of super-carbonate—becomes perfectly soluble. Lime in almost all its combinations becomes soluble in the soil; magnesia in very few. Lime is food for plants and enters into the formation of many, as wheat and other grain; magnesia is seldom found in plants. But while lime is absolutely necessary to some extent in the soil, its chief value lies in the changes which it undergoes; and this value, it seems to me, is just in proportion to the capacity of lime—or of magnesia—to undergo this ceaseless change. It is only when soluble in the moisture of the soil, that these changes can be effected; and as magnesia is very sparingly soluble after losing the water of slacking, and lime becomes more so after lying some time in the soil, it should seem that pure lime is far the best for farmers' use.\*

It may be, however, that the combination of magnesia and lime possesses power which separately belongs to neither. There is apparently a definite proportion in which these unite, as in the mineral Dolomite, which is found in the southern part of this county, but the repute of which among farmers in its vicinity I have not learned. The whole subject is well worthy of diligent investigation; but as without analysis of many specimens from various quarries in repute, no satisfactory results can be obtained, we must leave the matter to the chemist who will bestow the requisite labour and expense.

While the various discoveries before noticed, tend to the improvement of agriculture, there are other causes in operation which are well worthy of examination, because they must eventually change, in a great degree, the whole character of our husbandry.

The immense products of the great West

\* It is well known that marble lime acts most quickly, while the magnesian is supposed to last the longest. This may be accounted for on the supposition that magnesia is injurious, and that not until it is reduced to an insoluble substance, as the carbonate, does the lime manifest its fertilizing power. This accords with the experience of farmers that such lime does not act for two or three years, and if put on the soil before ploughing for corn—except to backen oats—has no effect until grass is again sown. Pure lime fertilizes from the first, but it does not follow that it ceases sooner than the other. If an uniform field were equally divided, each part lined with equal quantities of the respective kinds of lime, would not the fifth or tenth year find the pure lime as active as the magnesian; that part, at least, as fertile as the other?

are already affecting the market value of both grain and cattle. The productions of past years are nothing, however, in comparison with what they must soon be. One of two things must take place if we are still to compete with them. Either a new market must be found equal to the vast increase, or we must double our crops with little additional expense. A larger market may be furnished by the growth of the iron and coal operations of our own State, and the increase of manufactures throughout the Union. So, on the other hand, improved culture may greatly augment our grain products and the number of cattle fed for the market. To this end the recent introduction of machinery as a saving of labour, may have some effect. A more efficient means is rapidly coming into play in the splitting up of our large tracts into small farms of less than 100 acres. How frequently have we seen the fourth part of a large plantation as productive in the hands of a son, as was the whole in the father's time. Our best lands have already become too valuable to remain much longer covered by wood, and the swamps by the side of the streams are rapidly converted into sweet and luxuriant meadows.

All this will aid in maintaining for a considerable period the competition with the West. In the meanwhile, another cause of change is slowly operating, and to which both counties are already to some degree subject, especially Delaware. It is the demand for the minor products of the farm, created by the proximity to Philadelphia, and to some extent by the growth of other towns around and among us. Wheat, corn, oats, may be cheaply freighted from the Hudson, or the Mississippi river by sea; from the lakes, or the Ohio by rail-roads and canals; and fattened cattle continually pass along our roads from the West. So, in times of scarcity, potatoes, and the fall fruits, whether fresh or dried, may be sent from distant points. But in general for these and for all minor articles, the region around is looked to.

Dairy farms we have had for many years. Once a year, at least, farmers generally send their poultry, pork, roll butter, and other articles to market. But each year has given additional value to these items, not by raising the price, but by calling attention to them as a sure means of swelling the annual profits of the farm. It has now become an important consideration, how much time, labour and expense shall be devoted to the production of market produce. And as this demand is constantly and rapidly extending, while the market for grain and cattle is diminishing, a change must necessarily be

effected. Two interesting results will follow. The owners and tenants of small farms will gain by it; for on large tracts attention cannot so well be paid to the truck patch, or the poultry yard. Small farms favour high culture. The general products of the districts will thereby be enlarged, the country will be more thickly settled, and the whole community benefited. Another result will be the introduction of such a rotation of crops as has been already advocated as essential to a complete development of our agricultural resources.

The groundless fear of expense, and especially of the payment of wages, has done much to hinder the agriculturist from making a profitable advance; and this is the more to be wondered at as farmers are generally the proprietors of the soil. Tenants cannot be expected to make permanent improvements; for without long leases, which are not often granted, there is no interest to induce them. On short leases, or rather on our system of letting from year to year, with frequent change, the constant complaint is, that the farms run down and are soon in bad condition, and in wretched repair. The system abroad ought here to be adopted. The plan with us is to reserve the hay, straw, and manure remaining at the close of the year. Hence there is no inducement to economy. Every thing is consumed, but with no regard to the production of manure. Now most of the farms in the care of guardians are thus rented, and by the time a minority of eight, ten, or twelve years is past, the patrimony is not worth much more than half its value when it first descended to the heirs. Were a system universally adopted by which the remaining stock of hay, straw, or other fodder, and the manure in the yard, could be appraised and taken at the assessed value by the incoming tenant; or by the guardian or owner of the farm, upon his refusal, much of the complaint against tenants would cease. Out of this appraised value might be deducted the expense of repairs made necessary by the neglect of the former tenant. The same arrangement might also be made as to the grain in the ground. Still, on short leases, farms cannot be improved except by special agreement at the expense of the landlord. But experience has again and again proven that a profitable outlay may often be made, although the expense incurred may seem great. Take, for instance, a wet meadow covered with alder bushes and growing in tussacks, affording no profit to the farmer. The cost of clearing, and French draining ten acres in this state, if well done, especially, will seem large. It would, perhaps, pay for half as

many acres of dry ground. But it is already enclosed, and the fences must be kept up, wet or dry. The taxes are to be paid, either way, and 100 acres on the hill would not remove the eye-sore. And when at last it is done, the meadow ploughed, levelled, sown, and in good grass, the full advantages will be realized, not for one but for many years. In much the same manner the propriety of bringing some out field into good culture, at an outlay of even ten or fifteen dollars per acre, might be shown. All good farmers make such improvements and rejoice to see them made by others. Now, if these heavy outlays are expedient on what was waste land, how much better, at small cost, *to bring up our fields, already in some degree of tillth, into high cultivation.* On naturally good soil it is easier to make a field which bears 40 or 50 bushels of corn to the acre, produce 80 or 90, than to bring an outlying field into ordinary culture.

It may be a poor argument, but it is a good fact, that the neat farmer is always a thriving one. In other words, he who is not always calculating the immediate profit of every stroke of labour, or every penny laid out; who is willing to spend half a day in driving a nail here, or setting a stake there, before a dilatory man would say it was wanted; who will pay wages to clear out the fence corners, turn the whole yard full of manure, re-set a worm fence, or dress up his ditches, and make a compost therefrom, where a cise man would grumble at the board; such an one always proves not only a good farmer, but a thriving one, has always more change in his pocket, and more time to spare than the slovenly husbandman, whose barn-doors have broke from their fastenings, and whose fences have gone to rest among the elder bushes.

Gentlemen, in the midst of the business of this day, I could not consent to detain you long; yet the brevity of my address has rendered it impossible to do justice to the subject, were I equal to the task. It is much to be desired that the advantages of agricultural associations should be known and appreciated. The petty chapman, whose small wares and limited dealings seem unworthy of thought, deems it necessary to exercise all his skill to fit his goods to, and take advantage of a changing market. The store-keeper, and on a larger scale, the merchant, surveys carefully the sphere of his operations, and studies well the causes which may work to his advantage, or his loss. The manufacturer descends to the very minutie of his trade, examines every process with scrutinizing care, makes himself master of all its details, superintends every operation

until his goods are fairly packed, invoiced and shipped to the consumer. Not less careful, not less skilful, not less informed, should the farmer be for his own honour and profit. It is the first of arts, and the first object of all natural science. The study of agriculture is the Encyclopedia of nature; in practice it is more essential, and not less dignified, than the highest calling or profession among men. The physician, as much for the marked rectitude of his class as for his skill, is entitled to our esteem. The lawyer, from time immemorial, the champion of civil rights and liberties; and the statesman, who stands in the gap in the hour of his country's peril, justly receive their respective honours. Nevertheless, society rests upon the bosom of agriculture. When war spreads its terrors, it is the devastation of fields and firesides, rather than the loss of treasure, or of armies, that she mourns; when peace returns, it is the placid sweets and the prolific bounties of nature, that gladden every heart. While mad fanaticism or frantic anarchy heaves the populace of cities, it is to the unmoved yeomanry the nation looks for succor; for that steadfast bearing that will not yield to every wave of passion. All other classes and callings of men have heartily joined in the march of improvement; all others have enthusiastically sought the means of future development. It is to agricultural associations we must look for the like results in this the first of arts; and on you, gentlemen, devolves the honourable task of placing our sister counties in the van.

Communicated for the Farmers' Cabinet.

#### Chester and Delaware County Agricultural Society.

At the Exhibition on the 7th ult., premiums were awarded as follow:

##### HORSES.

To George Kirk, best stallion for field and road service—Nathan Garrett do. draft—John Way, gelding—John Smedley, best mare for field and road—John Hannum best colt—Caleb Ring, two year old filly—Paschall Worth, for field and road service.

##### CATTLE BETWEEN 2 AND 3 YEARS OLD.

The first premium to the bull Nero, property of Abner Hoopes; second to the bull Nero, property of George Brinton; for heifers, the first premium to Rosanna, property of Abner Hoopes.

The committee report Abner Hoopes as having the best bull calf under one year,

and John Worth the second best; Thomas S. Woodward the best heifer calf, and George Brinton, jr., the second best.

##### SHIIEP.

To Pennell Hannum for his Leicester buck; George Brinton, jr., for his Southdown buck; John Worth for the best pen of Southdown ewes; John Worth for the best pen of lambs; Paschall Morris for the best pen of ewes of mixed breed; Nathan Middleton for the best buck of mixed breed.

##### CATTLE BETWEEN 1 AND 2 YEARS OLD.

1st, To Paschall Morris, for his bull Louis Phillippe; 2nd, to George Brinton, for his bull Rodney.

##### HEIFERS.

1st, To George Brinton, for his heifer Dairy Maid; 2nd, to Thomas S. Woodward, for his heifer Lady Washington.

##### HOGS.

To Amos H. Darlington the premium for the best boar pig; to Benjamin Hickman the premium for the best boar under six months: no sows over six months, or pens of hogs, or shoats, exhibited. A very fine pig three weeks old, was exhibited by John Jackson.

##### NEAT CATTLE OVER 3 YEARS OLD.

First best bull, Glendow, to Joseph Burton; first best cow, Victory, George Brinton; second best do., Mary, Abner Hoopes; very fine cows were also exhibited by Thomas S. Woodward, Paschall Morris, A. Bolmar, and John Hannum.

##### FOWLS.

To John North the first premium, for the best pair of Jersey Blue chickens; and to Abner Hoopes the second premium, for the second best of the same variety. Paschall Morris also exhibited some of the same variety. The pen of fowls exhibited by Abner Hoopes, deserved the highest commendation. To Isaac G. Darlington the premium for the best capon.

##### OXEN AND STEERS.

To Job Darlington, for a pair of fat cattle, the first premium; to John Worth, for the best working oxen, the first premium; to Chalkley Harvey, for working oxen, the second premium; to Paschall Worth, for the three best feeding steers, the first premium.

The number of cattle submitted for inspection was not very large; but they were all highly creditable to the farmers of Chester and Delaware counties.

## BUTTER.

To Caleb H. Bradley is awarded the premium offered by the Society for fresh butter. That of Rachel Taylor was considered as of very fine flavor and well wrought; and that of John Jackson and Paschali Morris, of very excellent quality and deserving of especial commendation; but the butter of Caleb H. Bradley being firm, well made, of good colour, rich and well flavoured, was thought, on the whole, the best either for the table or the market. Rachel Taylor is entitled to the premium for the best firkin butter.

The Committee on Honey after careful examination awarded the first premium to A. R. McIlvaine, and the second to Isaac G. Darlington. Several specimens exhibited by Dr. Hartman were not only remarkably fine, but evinced great skill in the management, as they afforded honey from distinct classes of flowers.

Many beautiful specimens of garden flowers were offered, and premiums were given to Davis Garrett, jr., Abner Hoopes, Dr. Rivinus, John D. Steele, and Martha Sharpless. J. and M. Bennett and others contributed pot plants, which were highly commended.

A fine display of vegetables was noticed. Premiums were given to Paschall Morris for his table turnips and sugar beets—one to Julia Bennett for celery—to Rachel Taylor for hominy corn, and to Joseph Strode for fine large sweet potatoes. A number of others were highly commended for their skill and success in horticulture.

## FRUIT.

For the best apples the premium is awarded to Jonathan Baldwin, for a lot deposited by him called the "Smoke-house." Mr. Baldwin also exhibits specimens of the "Golden Pippin," "Maiden's Blush," and "Roman Stem," each of which are worthy of a premium; but this not being within the power of the committee, they are forced to be content with this commendatory notice.

But two parcels of quinces were deposited, Of them, the committee think that furnished by Jonathan P. Cope, are much the finer, being, indeed, of very large size, and, apparently, excellent in quality.

Several specimens of fine late peaches are displayed upon the table, exhibiting strikingly the great progress made of latter years, in the culture and improvement of this delightful and invigorating fruit. These belong to Messrs. Abraham R. McIlvaine, John Rutter, and Basil Graves. After some difficulty, arising from the excellent character

of each specimen, but particularly of those furnished by the two first named gentlemen, the committee award the premium to the Clingstone, called the "Late Heath," of Mr. McIlvaine, as being the finest peach of this season of the year. While doing so they cannot, however, avoid recommending the "Late Free," deposited by Mr. Rutter, as well worthy the best attention of the farmer and orchardist. From their general appearance, the variety furnished by Mr. Graves also deserves a commendatory notice.

Of Fall Pears, but one specimen is exhibited in such quantity as to authorize the committee to notice it. This is the "Seckel Pear," furnished by John Rutter. These are very much finer than those usually seen, being large and of the finest flavor. Though there is no competition, it is thought these pears, for their excellence, are entitled to the premium.

Of native Grapes, the "Isabella" and "Catawba," are the only varieties exhibited, which the committee deem it necessary to notice. Specimens of these, and very fine ones, too, are furnished by Messrs. Johannes Phaler, John Rutter, Olof Stromberg and Joshua Hoopes. Where all are so near of equal excellence, the difficulty of selecting is great. The committee so feel it, but, after much hesitation the premium is awarded to Mr. Phaler. The "Isabellas" furnished by the several gentlemen named, are also very palatable and refreshing, and as a valuable variety highly deserving of sedulous and careful culture. This exhibition of grapes is an earnest of what may be produced by proper attention, assisted by intelligence, and encourages the hope that at no distant day, the cultivated grape will be found every where in this region, ornamenting and enriching the cot of the day labourer and the homestead of the farmer, and adding a harmless luxury as well to the table of the poor as of their more wealthy neighbours.

Among the fruits which grace the exhibition tables, are some lemons, raised and furnished by Mr. John D. Steele. These, although not among the objects of premium, well deserve notice, as showing what may be expected by care, culture and taste.

It will be seen our exhibition does not present a very great variety of fruits; still it is a large increase over former years, and shows that this community is beginning to feel additional interest in a culture, which, at a small expense of money and labour, yields a rich return, at least so far as minor comforts and tastes are involved. We may therefore, hope that the apathy which has heretofore too generally existed, is about to be replaced by a properly moderated emula-

tion in the pursuit of this branch of agriculture. The committee will be much mistaken, indeed, if this day's display does not assist very materially, to create so laudable a rivalry.

#### REPORT OF THE COMMITTEE ON PLOUGHING.

The committee having witnessed the performance of the competitors for the Ploughing Match, after carefully viewing the ground and taking into consideration the respective merits of the different operations, as directed by the requisitions laid down for the guide, take great pleasure in saying that the performance was highly creditable to each individual engaged, and that the merits of all concerned were worthy of great praise and commendation. Under these circumstances they are fully aware of the delicacy of performing the duty necessarily devolving upon them, namely, of awarding the premiums. But upon mature reflection, they are unanimously of opinion that the plough of J. B. Moore, No. 8, letter A., of Wilmington, Del. Charles Carter, ploughman, is entitled to the first, and those of Prouty & Mears, to the second premium.

For the Farmers' Cabinet.

#### Great Crop of Corn.

WE, the undersigned, two of the committee appointed by the Chester and Delaware County Agricultural Society on Crops, do report, that we have this day viewed the cornfield of Paschall Morris, Allerton Farm, near Westchester; that we have calculated the field to contain over ten acres, and that the average yield on the whole field is *a hundred and one bushels and three pecks to the acre*. The corn was planted in hills, four and a half by four feet apart, each way, four grains generally in a hill. The corn was cut up and put into shocks containing six hills each way. Several of these shocks were taken down from different parts of the field, being an average in size, as far as we were able to perceive, and upon being husked, yielded nearly three bushels and a peck of ears each. An average one was shelled in our presence, and yielded one bushel and a half and a pint of shelled corn.

Each shock having occupied 648 square feet of ground, which being divided into the number of square feet in an acre, will give the number of shocks in an acre: this multiplied by the amount in each shock, will give the result as above stated.

A portion of this field yielded seven half bushels of ears to the shock, which will give an amount of over one hundred and ten bushels to the acre. The committee will

further take occasion to observe, that the whole field was remarkably clean and free from weeds, and the soil appeared to be in a mellow and friable condition.

There being no other crop brought to the notice of the committee, it becomes their duty to award to Paschall Morris the premium offered by the Society, to which they consider he is fairly entitled.

Signed

JOHN WORTH, Jr.  
JAMES PAINTER.

11th mo. 3, 1845.

The Society requiring, in case of an award of premium for crops, the details of culture, &c., it may be stated that the field was an old green grass sod, not having been ploughed for probably twenty years. Seven years ago it was limed on the surface at the rate of fifty bushels to the acre, since which it has been regularly pastured. It was broken up last spring with the Prouty plough, to the average depth of about seven inches, harrowed over with the common harrow, and marked out for planting as stated in the report. The planting was done between the first and fifth of the Fifth month, six grains being dropped into each hill, and afterwards thinned out to four.

When the corn was up two or three inches, each hill received a sprinkle of plaster; no other manure was applied. The after culture was done with the common corn-harrow, and one going over with the shovel-plough and the hand-hoe, where the weeds in the hill were too near the corn to be reached by the harrow. Much of the merit of this crop, its freedom from weeds, and continued growth and vigor from the start, are attributable to the deep ploughing and use of the Prouty plough. This plough, by its peculiar mode of operation, breaking the texture of the sod at the same time that it lifts it up and throws it over, pulverizes and crumbles to a certain extent the furrow slice, and by opening it into seams or cracks, admits a passage for the sun and air to the particles of soil, meliorating them, and preparing for the reception of the crop; and when the harrow is afterwards used, the whole is reduced to a finely pulverized state, highly favourable to the action of the atmosphere, and the absorption of its gases, and affording no harbour for weeds, in the shape of hard and impenetrable clods of earth, not uncommon after the use of many other ploughs.

This field, when the ploughing was finished, owing to the open and pulverized appearance of the sod, and the interstices between the furrows being all filled up, allowing no grass or weeds to be seen, resembled one already harrowed, and continued mellow through the season. PASCHALL MORRIS.

### Colours of Flowers.

To find the colours that contrast, the following simple and ingenious method may be resorted to. Take a sheet of white paper, upon which place a red wafer; look at it steadily with one eye for half a minute or so, without allowing the eyelids to close, and then look from the red wafer to another part of the white paper; a green spectrum will be seen, of the same size as the wafer; and this is the colour which would form the true contrast to red; in like manner, an orange wafer will produce a blue spectrum; and hence blue is the true contrast to orange; yellow to indigo; green to reddish-violet; blue to orange-red; indigo to orange-yellow; and violet to bluish-green. By a little attentive study, it will be seen how easily any gardener might make himself acquainted with the principles of the science, sufficiently to avoid gross errors in the composition of colour in his flower-beds.—*Gardeners' Jour.*

### James Gowen's Letter to Gen. Richardson on Farming.

DEAR SIR,—The many and various matters that have pressed upon me since you visited Mount Airy, crowded out to this moment the possibility of attending to your enquiries. The time may appear long since the subject was left with me, but you will recollect, however, that I was to answer at my leisure. I advert to this merely to show that I cannot be accused of either forgetting or neglecting you, and may add, that in turning to you even now, I may be accused by others, having previous claims, of having overlooked them. Be this as it may, or however situated, I feel a strong desire to oblige you by taking up your interrogatories at once, and have only to regret that I have neither the time nor the ability to respond to them as I could wish. As to the quantity of land I farm—the crops I cultivate—the average crop per acre, the stock I keep and have fed—I must refer you to my Report to the Committee on Farms, as published in the June No. of the "Farmers' Cabinet" of the present year; likewise to my Reports to the Committee on crops for 1842, '43, and '44, also published in the Cabinet; which will afford you a tolerable idea of my practice and success.

I take up then, your list of inquiries, where you remark that I have said "a farmer cannot grow wheat at one dollar per bushel, and that he would find it more profitable to graze and breed cattle," and where you add "how would I carry out this system?" Before replying, I must premise that my re-

mark did not embrace all farmers; it was only applicable to farmers situated pretty much as I am as to climate, soil, and market. Where land and wages are high, much should be taken from the land to cover expenses—that\* is, by an improved culture, the land should be made to yield double or treble the product it does under the careless or common system. The new States, with their cheap lands and rich soils, can grow grain much cheaper than we can, and every year their facilities to market will be increasing, and their competition rendered thereby the more formidable. Where wheat lands are worth no more than five to ten dollars per acre, and of such exceeding richness in soil as to require no manure; where, in many places, as I am informed, they husband no manure, but burn even their straw; I am not surprised that they can grow wheat at fifty cents per bushel—but where land costs from fifty to one hundred dollars per acre, and of a quality that requires much care and manure, it is my opinion that wheat at one dollar per bushel, will not pay the husbandman a fair compensation for his capital and labour, in view of contingencies of failure in the crop from rust, fly, &c. While I make this remark, I must not be understood as forbidding entirely the culture of wheat among such farmers as I have pointed at: I intend no more than to suggest that wheat being made so generally a staple of their farms, is an oversight, and must prove unprofitable in the main, should the article be nominally about one dollar per bushel. Some farms are better adapted to grain than others—those so good for grain, should, to some extent, be sown with wheat; others not so good, may at times, under certain circumstances, be made to yield wheat. I would even have the cotton planters of Mississippi to grow wheat—to raise at least as much as they consume; and so of corn, cattle, and hogs. To say that they can get their wheat, corn, beef, and pork cheaper from Ohio, than they can raise them, is an admission not very creditable to their management. It is one thing to think of rivalling Ohio in the production of these commodities for export, and another thing to be independent of her for a home supply. Hence there is no particular practice I could recommend, that would prove advantageous or applicable to all: I can only suggest more attention to raising and feeding cattle. Some, according to the condition and situation of their farms, as breeders, both for the dairy and the stall; others, while keeping dairy, may breed occasionally from fine stock; the choice animals raised, paying them well for their time and trouble. These branches of husbandry,

adopted exclusively, or in part, as circumstances may justify, and carried out with skill and spirit, would soon change the character of our farming from the monotony of the dull and stupid practice of merely sowing and reaping grain, to a varied and interesting pursuit, as animated, as it would be enlightened and profitable.

Suppose a man in the possession of some 100 to 150 acres of tolerably good land in the neighbourhood of Richmond, how shall he make that land support his family comfortably? Not I am sure, by sowing some 20 or 30 acres of wheat to reap about 15 bushels to the acre—30 or 40 acres of corn at 40 bushels to the acre—rye and oats in proportion, and the keeping of 10 to 12 head of ill favoured cattle—had he to pay a rent of but \$200 a year, he could not pay it, under such a practice. Well then, suppose the same farm as fit to raise wheat, &c., as above, should be put under a different practice—say begin with some 12 or 20 head of grade or improved cattle, and a thorough bred young bull—if the capital be small, the cattle can be selected of the finest of the native breeds—choosing them for their fine forms, the property of milk, and easy feeding—the young thorough bred Durham bull is held to be indispensable; his calves will be at least half blooded. Every fine heifer calf should be raised, the bulls sold. If grazing were intended, the bull calves of even half blood should be kept for steers; but I contemplate this farm as considerably dairy, a little truck or horticultural, &c. In two or three years the bull should be changed for another young full blooded Durham: this new bull and the heifers of the former bull will produce an improved stock; and in two or three years more another change of bull will bring a stock of cattle, if care shall have been taken, that will be worth a considerable sum of money. In all this time they will have cost nothing more than the same number of inferior cattle would have cost; while the sales made of those that can be spared, and the intrinsic value of those on hand, would, under a fair valuation, amount to a sum that would surprise many: and this result is produced at the trifling sum found between the price of a yearling Durham bull calf, and a common one. So much for the cattle on this farm. But it may be objected, there are too many cattle on so small a farm;—that this is not the case, I shall attempt to show, and offer my practice as reported, in proof. The increase in manure from such a stock, if properly husbanded and applied, will increase the crop of grass, corn, &c., three-fold. It would occupy too much time to give even a sketch of what the root

crops have done for England, Ireland and Scotland. Why, then, cannot we attempt this culture on a small scale in this country—in Virginia, if you please? Turnips there will grow well as a fall crop, and it strikes me that the sugar beet could be raised also, as a spring crop, to advantage. The cooling manure of the cow stable, mixed with muck, scrapings of the yard, with sprinklings of gypsum, and light dressings of lime, would produce good crops of these roots and ruta bage. If this be so, who then can fear to be overstocked with 20 to 30 head of cattle, on a farm of 100 acres arable land? Four or five acres devoted to this culture, would produce as much winter provender for cattle as some twenty could do in the ordinary way. Then for summer, red clover and orchard grass, lucerne, and corn, sown broadcast, cut green, and fed to the cattle, will be found to be equally profitable, and save much land for hay, grain, corn and oats. Under good management, with such a stock, in such a climate as Virginia, the land should be made to yield 80 bushels of corn to the acre; 30 to 40 of wheat, in the absence of fly and rust; and of rye and oats, and hay in proportion—by good management, I mean in the main, deep ploughing, judicious manuring, and careful seeding. The hay and corn fodder should be carefully secured for winter; and if there could be kept a simple steaming apparatus to steam the corn-stalks, with the roots, it would be a great saving. The milk and butter that in a few years might be sold, together with the cattle that could be spared, ought to produce a pretty round sum. If to these be added the produce of a well cultivated vegetable patch, and the market wagon kept regularly going with the milk and butter, fruits and vegetables, to the city, there could be no doubt of success. But who among you will put to his hand first, and demonstrate this practically?

Those who live at a distance from a market, and have large farms, should turn their attention principally to breeding and grazing; they should not separate these two branches. It is but too common for the grazier to depend upon the drover for his supply of cattle; in that way he can never be assured of the good feeding properties of the young cattle he purchases; better by far to select a good bull, the character of whose breed he can depend upon for easy feeding and early maturing, and progress steadily and patiently for a few years, and in that time he will have possessed himself of a breed that will show good proof of his attention and skill. I am persuaded that the improved Durham steers, under proper man-

agement, can be turned off regularly at four years old, to weigh from nine to ten cwt. If this be so, and I have not a doubt of it, what a saving in time and feed is here—nine to ten cwt. of fine beef in four years, against five or six cwt. of the hard feeding tribe in six to seven years. It appeared strange to me, as passing through several farming districts, to see such devotedness to raising grain, to the almost utter neglect of cattle. As far as the eye could reach from the road, nothing could be seen but grain, with here and there a corn-field; while a few stunted cattle and sheep might be seen running along the road-sides, excluded from the fields, till they and the swine should have a harvest feast in the stubble-field:—I speak now of some parts of Maryland and Pennsylvania—how short-sighted to neglect the cattle, or to keep such a breed! not one in a hundred of them could, by any force of feeding, be made to weigh 6 cwt., or could be put in a condition, from the time it was taken up, at an expense short of the whole value of the animal when he came to be slaughtered. When I have spoken of this ill-judged policy, I have as often been met with the assertion, that those farmers knew what they were about, and made more money at farming than I did: but this making, meant no more than that they saved more money, by expending less upon themselves and families than I did; for *I deny that they can make more by farming than I can, upon a like quantity of land, so far as the products or yield in crops and cattle are concerned.* If some of the farmers alluded to were to be charged with their own labour, and that of their sons and daughters, at such rates as they should be entitled to in another's employ, I would not hesitate to enter the lists with the best of them. But, if they and their children do all or most of the work, and, by denying themselves many of the comforts of life, lay up some money, does it prove that their system of farming is the best? Certainly not. If they could be prevailed upon to improve their practice, it would tend to lighten their load of toil—afford, without impairing their income, some relaxation of the drudgery to which they and their children are doomed—and enable them to avail themselves of the education furnished by their own involuntary contributions, under the school law: it would redound immeasurably to their prosperity and elevate their children to that rank in society, which of right is their legitimate prerogative. It is lamentable to think of the ascendancy lawyers, doctors, merchants, and manufacturers, have acquired over the more numerous and wealthier class—the farmers; who

seem content to drudge on, unmindful of their position, and the burdens imposed upon them by the nobles—par excellence—and that distinguished class, the professional politicians! Such is the false position of classes; and so will it be, until the farmers rid themselves of the trammels in which faction has so artfully involved them, in the name of party, and qualify their sons to participate in the Government, proportionably to their means and numbers. Let me not, however, be understood as condemning industry and economy: I mean nothing more than that the hardest toil and the most rigid economy should not be received as evidence of good farming. I am an advocate for industry. No business can ever prosper unless it be carried on with spirit and constancy; nor can the most profitable returns make rich or independent, without the rational and commendable prudence which teaches us to limit our expenses within the line of our income. The extremes, extravagance and penuriousness, should be avoided by all; and by none more than the farmer. His prudence and sense of propriety can in no way be more fully tested, than in that of bringing up his children. To reduce his offspring to the condition of slaves, or to bring them up in idleness, is alike censurable—so much so, that it were difficult to draw the line, and show which had the advantage; when, as let it be supposed, the common drudge and the genteel idler inherit each a valuable estate. The youth trained up in idleness and folly, and the uneducated, who, from childhood, has been bound to drudgery and incessant toil,—being now in possession—which has the advantage? Why, the idle and fashionable sprig of mock-nobility will have the shortest race; his lands will soon pass to others, while his stupid contemporary will *hold, not live*, upon his all the days of his life; but then to think of such an existence, without one ray of intellectual enjoyment to brighten or change its gloomy and stagnant monotony!

To the question whether I think it profitable to raise hogs, either for market or domestic consumption, and what breed do I consider best? I answer, that on such a farm as is under view, it would not be profitable to raise hogs for market, that is, for fattening to sell on foot or to be slaughtered; while with a good breed of hogs, and under circumstances of superabundance of food, such as clover, roots, waste vegetables, large crop of corn, a few might occasionally be fed over and above the necessary supply for family use; in like manner, sometimes it might be proper to fatten one or more steers; while in the main, it would be more profit-

able to buy of the grazier or lay in a supply of beef from the butcher. These are matters that will depend solely upon circumstances, and must be governed by them; but as a general rule, the farmer should endeavour to produce whatever he may require for the comfort and support of his family, and avoid the laying out of money for things which it were in his power to have produced himself. The raising of hogs for family consumption is *indispensable*; upon such a farm there will, of course, be considerable waste or refuse victuals, which would be lost were it not for the hogs; then so far as this quantity of feed is concerned, there is a clear gain, and he must be a poor farmer indeed who cannot make his hogs pay for the extraneous supply they will require over and above the portion which has cost nothing; then there is the satisfaction to know that his bacon, hams and lard are all of healthy, well fed animals, and of his own raising.

Two or three sows, and one choice boar, of a distinct family, should be constantly kept, and well taken care of. It is a great waste of time, and often vexatious to the farmer, to be compelled every spring or fall to look out for pigs to stock his pens, running the risk of getting animals that will empty the corn-crib without filling themselves. Far better to raise pigs from a boar and sow known as easy feeders; and should there be too many to keep over, there is no neighbourhood in which those that can be spared will not find a ready sale, if the breed be an acknowledged one; to say nothing of the satisfaction of having it in one's power to promote the interests of his neighbour, by supplying him with a boar or sow pig to improve his stock.

The best breed of swine that has come under my notice is the English Hampshire, especially the sows for breeding. A real Hampshire sow, after producing three or four litters, may be made, with all ease, to weigh 5 cwt. when slaughtered. The Chester county hog, so called, seems an indifferent specimen of the true Hampshire. The next best for boars is the Lincolnshire; for compactness they are almost equal to the pure Berkshires, while they excel them in size: but of the Hampshires and Lincolns there are few to be found of the genuine breed. The improved Berkshire is, for easy feeding and compactness, equal to any specimen of the swine kind ever produced; but they are sadly injured by injudicious breeding and the imposition of dealers, who sometimes have sold any thing that was black or spotted, in the shape of a hog, as Berkshire. The objection some bring against the Berkshire, especially the sow, for breeding, is

their want of size. The sow for breeding should, it is true, have great length and depth of carcass; but for fattening, this objection is of little consequence, for the want of size can easily be provided for by increasing the number. If twelve Berkshires, in twelve months, with the same amount of feed, will weigh as much as ten of other breeds, which consume as much as the twelve, the difference in handling twelve instead of ten, is hardly worth noticing. There are other breeds, but from careless breeding, there can hardly be a distinction or difference pointed out among them: so it will soon be, I fear, with those distinct breeds already referred to, from the general carelessness that pervades American husbandry. At first a high price is given for a pair of pigs, from some crack breeder; these, very injudiciously, are from the same boar and sow; and thus, at the very start, a fatal error is committed, in the affinity of the young pair which have been purchased to breed from; and this system is possibly continued for years, with their produce, until the heads of the animals become as large as their bodies. There is no animal on the farm that will so soon degenerate from breeding "in and in," as it is called, as the hog.

There is another grand mistake in the management of hogs, which I am bound to notice—that of turning them out to graze, as if they were sheep or goats. I do not class as farmers coming under censure, those who provide no stables or sheds for cattle, nor barns for hay or grain. To such, admonition or advice would be useless as to the necessity of pens for swine. The ass, the goat, the buffalo, and wild boar, have the characteristics of the stock adapted to *their* practice. But to those who have large barns, comfortable stables, sheds and pens, I would take leave to point out the folly of turning out their hogs to graze with the cattle during the fall. The hog loves ease, and he should be indulged; keep him clean, give him suitable food, without putting him to the trouble to range for it, and he will doze and grow fat, and be tender; turn him out in the field to seek his food, and you make him wild, sinewy and tough, and hard to fatten after he is taken up. It is to this cause that the bacon, in many instances, is so coarse and disagreeable. When I have witnessed the hogs feeding with the cows, and the eight-rail fences, with the massive posts, to keep hogs *in* and *out*, I have been astonished; for it struck me that the expense in maintaining the four extra rails, with the extra size and boring the posts, would make a considerable item in the expense towards fattening the hogs in pens, to say nothing of

the injury done to the pasture, and the danger of sinking in the cows, and young heifers with calf, from the offensive effluvia of the droppings of hogs.

I must come to a conclusion; time will not permit me to go more into detail; the reports referred to in the "Farmers' Cabinet," will make up for many of the deficiencies in this paper; and above all, I rely on your own good sense in adopting and carrying out the best practice under existing circumstances.

I rejoice to find that you, and many other intelligent men, are putting your hands to the plough—then by every proud and patriotic consideration, do not look back. Think of what Virginia was, and what she now is, and what should be her purpose. Is there a son of the old Dominion who can be so recreant as to abandon her soil—the land of his spirited and hospitable ancestors? No!—perish the thought! Roll up your sleeves, then—devote yourselves to the noble and ennobling pursuit of agriculture—resuscitate your lands! Be not ashamed to dig, and you will never have to beg or borrow. Let your lands no longer reproach you for neglecting them. Then will health, plenty and prosperity shine upon you, and old Virginia be again, as she ever was, the boast of hospitality and the flower of chivalry.

JAMES GOWEN.

GEN. WM. H. RICHARDSON.

### Cherokee Agriculture.

We have occasionally adverted to the agricultural improvements of the Indians, particularly those of the Cherokees. In a late number of the *Cherokee Advocate* we find the following interesting statement.—Ed.

SATURDAY last a highly respectable number of citizens met together at this place, in compliance with the invitation extended through the columns of this paper, for the purpose of taking into consideration the propriety of forming a Society for the promotion of the agricultural interests of the Cherokees. The meeting convened in the Court House, and was organized by appointing—

W. S. Coodey, President; Rev. S. Foreman, W. S. Adair, John G. Ross, Vice-presidents, and Wm. P. Ross, Secretary.

After a few remarks from the President, suitable to the occasion, on motion of Mr. Thomas F. Taylor, the officers of the meeting appointed Mrs. Rachel Orr, Mrs. Eliza Ross, and Mrs. Sarah Foreman, the committee to award the premiums offered by our agent, Governor Butler.

The meeting was then briefly addressed by the Rev. S. Foreman, who drew a con-

trast between the state of agriculture as it is now found among the Cherokees, and what it was comparatively, a few years ago, when they planted their little crops of corn, beans, &c., by using the shoulder-blade of the deer, instead of the plough and hoe; and enumerated some of the advantages that would accrue to the people from the formation of an Agricultural Society, in the cultivation of the soil, in the management of their household affairs, in the rearing of stock and in the dissemination of useful information on a variety of subjects intimately associated with their present condition.

The committee on the premiums then reported that they had unanimously awarded to Mrs. Nancy Adair, of Flint District, the silver cup, worth ten dollars, for the best specimen of home-made cloth, the piece containing not less than ten yards.

To Mrs. Jane Dougherty, of Flint District, a silver cup, worth five dollars, for the best coverlet.

To Mrs. Jinny Wolf, of Tahlequah District, a silver cup, worth five dollars, for a beaded belt.

To Miss Catharine Gunter, of Tablequah District, a cup worth two dollars, for the best cradle coverlet.

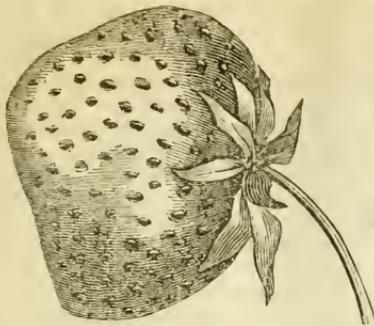
And to Mrs. Martha Daniel, a cup worth three dollars, for a pair of socks.

On this committee Messrs. W. S. Adair, Stephen Foreman, Wm. P. Ross, Thomas F. Taylor, Wm. S. Coodey, and Moses Daniel, were appointed; when the meeting adjourned to meet at this place on Saturday, the 11th day of October, next.

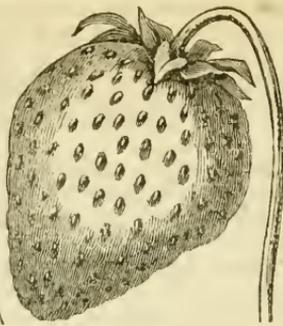
The meeting, as before stated, was alike respectable in number and character, and manifested a disposition on the part of at least a portion of our citizens, which under proper directions, must exercise a beneficial influence upon their social and industrial interests. We need scarcely say, that we sincerely hope that this disposition will be encouraged, and that it may have a tendency to harmonize our people, to unite them more closely as members of one family, and to improve their general condition.

A committee was appointed for a more complete organization of the National Society.

**TOBACCO IN MASSACHUSETTS.**—The Springfield Republican says, the cultivation of the tobacco plant has been very largely entered into in that town and vicinity, within a year or two. One gentleman has twenty-six acres of it this season. When successfully cured it proves a very profitable crop, but its cultivation requires much care, and it exhausts the soil in a large degree.



No. 40, C.



No. 62, B.

For the Farmers' Cabinet.

**Two new Varieties of Strawberries, by  
W. D. Brinckle, M. D.**

MR. EDITOR:—

THE PRESIDENT.

The President—No. 40, C. of my collection—was produced by artificially crossing, in the spring of 1843, Hovey's Seedling with the Elton. As soon as the berry was ripe, which was on the 23d of June, the seed was planted. The plant fruited for the first time in June, 1845. Blossom large, with perfect anthers. Leaf small, leaf stem hairy. Fruit very large, highly glazed, irregular in shape, of a dark rich crimson colour, with seed of a lighter shade—flavour fine.

**CLARA VICTORIA.**

The Clara Victoria,—No. 62, B. of my collection—so called after one of my little daughters, is the result of a cross between the Methven Castle and the Elton, the latter being the male parent. This cross was also made in the spring of 1843, and the seed was planted on the 28th of June of the same year. It fruited for the first time in June, 1845. Blossom large, with perfect anthers. Leaf of medium size, somewhat cupped, and of a dark colour. Fruit very large, beautifully symmetrical in form, broad at the base, and gradually tapering to a point; of a light crimson colour and fine flavour.

These two plants with many more of my new varieties, have been sent to the following nurserymen: Mr. Hancock, of Burlington; Mr. Buist, of this city; Mr. Kenrick, of Boston; and Mr. Prince, of Flushing.

Mr. Edwin Middleton, near Darby, has upwards of fifty of my new kinds in cultivation, and will fully test their merits. Next

summer I will probably give you a full and interesting report on the subject of my recent experiments.

Yours, &c.,

W. D. BRINCKLE.

Philadelphia, October 28th, 1845.

**Peaches and Plums.**

On the estate of Mr. Halsey, of Astoria, L. I., is a peach orchard, in which he has made an experiment between growing his trees in grass land, and that of keeping them under constant cultivation, treating them otherwise precisely alike. Those in the cultivated plot are at least twice the size at six years old of those in the grass-plot; they also bear well, while from the others little fruit has been plucked, and that of an inferior quality. The crop usually grown among these trees is potatoes, well manured. Where peaches are cultivated in large orchards, it is generally considered best to plough the land well, and keep the ground in potatoes or corn; but the smaller grains, especially wheat or rye, have been found highly prejudicial to both trees and fruit. The finest variety of peaches cultivated here are the George the Fourth. They are indeed juicy and luscious in the extreme.

Another little experiment made by Mr. H., was with plum trees. He had two rows of these standing in the open garden several years, without producing fruit. He then took them up, and set them against a high brick wall, since which they have borne well. He attributes this to the root pruning they underwent in transplanting, and adds, that since removed, they have not been attacked by the curculio. For this exemption no reason can be given, save that the insect does not find the trees so readily when trained against a wall, as when in open ground.—*American Agriculturist.*

**Extracts from an Address**

*Delivered before the Agricultural Society of New Castle County, Del., on the first day of its Exhibition, Sept. 17th, 1845, by the Hon. Jonathan Roberts, of Pennsylvania.*

"MR. PRESIDENT,—I have noticed the successful progress of your Society and Institute, through a long series of years. To be with you on your Tenth Annual Exhibition is a realization I could hardly have hoped for. Age may well have taught me, it is too late to seek distinction for any thing I may say on this occasion. I appear before you with a just apprehension that I may come far short of what the time and subject call for. In mixing with you I have felt those sentiments arise in my mind that merit ever demands. I cannot be unmindful of those who have preceded me, and the resources and qualifications they brought to awaken and command your attention. In the discharge of the office you have been pleased to assign me, I can but little hope to enlighten you on arts which your Exhibition proves you to understand and practice so well.

"The plan of your Society and Institute, so far as my knowledge goes, is original. Nowhere else has the whole series of rural, domestic and useful arts, been brought into exhibition, as we have witnessed them to be here. It is not a mere show of stock and field culture, with a view to excite appetite for high profit. Here a great variety of tastes may be gratified and pleasurable feelings awakened, little connected with the mere love of gain. Hard handed labour can relax its vigor to mingle with that delicacy, refinement and grace, which woman can shed over every scene where her presence is afforded. No moral purpose can reach its best result, in which her hand and mind have not had participation. For what end were flowers made to bloom, of every form and tint, redolent with fragrance? surely not all to be wasted on the desert air. Eden still blooms for those who delight in the culture of the garden. It is there alone flowers reach their greatest perfection. Botany has only very lately turned its attention to garden flowers, which it had before denominated monsters: they are now held justly, to be a happy display of the wisdom and goodness of the Creator. The perfection of flowers by culture, is no more monstrous, than that. grace and beauty, which are woman's embellishment. It is not to gratify the senses of seeing and smelling only, that divine goodness has provided; the crabs and wildings of nature have become

our delicious fruits by the art of culture. The grove and the shrubbery give shade and invite the feathered tribes to comfort and shelter, who reward us with their melody. While labour ministers a rich repast to all our senses, it gives health to realize the full fruition of enjoyment.

"Woman in her right place, ought not to be, and cannot be exempt from care and labour. Within my memory, she assisted in the field to gather in the harvest; it was virtue then when her home was small, and her furniture simple. The wealthiest farmers then drank from wooden bowls and fed off wooden platters. Her dwelling has now become spacious, and gives her a full range of employment better suited to her character, and demands for her mind a higher culture than was called for when her task was mere drudgery."

"A taste and fondness for plants seems inherent in woman: they become dear and interesting, though silent friends. They can exercise the affections without disturbing the passions. Who can look upon the doors and windows of the humblest cottage, shaded and embellished with plants, and not feel respect for those who inhabit it. Plants aid to effect a great moral purpose, in softening the heart and soothing and tranquilizing the mind. A little care and attention, compatible with every condition, will surround us with foliage and flowers through every season, and put smiles on the sternest winter."

"We have all witnessed the good effects of bringing together the fruits of rural labor; with those of the artizan and manufacturer, they are among the great pillars on which rests the social fabric. They form but one interest together with those who pursue trade and commerce, distribute justice, cultivate science, minister relief to disease, and consolation to the mind. The fruits of the labors of these latter classes cannot be brought into exhibition, they can only be felt, not seen. No stronger ligaments of interest can exist than those which run through the whole people, who look to some kind of employment to supply their wants and comforts, or for public usefulness. They may all feel brotherhood and interest here, as they will find room and will be hailed with warm welcome.

"Human subsistence must be drawn from the earth, while to the mechanical and useful arts man must owe his comforts and enjoyments of high convenience."

"We may ask with gratification, what changes and advances have been made in less than half a century, immediately around us? Our cities from Boston to Baltimore

have become by the facilities of communication, one commercial community. Provisions bought in the morning market of Philadelphia, may be dressed for dinner in her neighbour cities. Very soon intercourse will pass with lightning speed. Your beautiful city of Wilmington, will share full largely in the prosperity of this sisterhood. Your markets have been opened and enlarged for the products of your industry, and the access to the lime of the upper country, has awakened an almost enviable activity and thrift among your citizens. Your position allows you to share in the benefits of a stupendous combination of improvements, unencumbered with the burdens which good things pushed to extremes, have levied on some of your neighbours. The thrifty man ever deserves, as he enjoys, the reward of his labours.

"It is our felicity to cultivate a soil of varied products. To the bread crops of the old world we have superadded the corn plant, fully perfected by our warm nights and hot suns. It must result from the skill and sagacity of one of your members, that we have not realized nor learned half its value.

"Next after bread and flesh, salt and sugar, form the most necessary ingredients in our aliments. Chemistry has disclosed a multitude of facts in regard to the composition of sugar, and to the substances from which it may be extracted; it remained until recently, to be made known, that maize was among those which gave the richest return. Sugar is no longer necessarily an intertropical product, or one of a low latitude.

"It is a good practical maxim, to raise whatever we can, and to buy only what more our means and comfort require.

"There are few farms where less than three to six hundred pounds of sugar are consumed annually. Mr. Webb's estimate, based on experiment, gives assurance that this amount may be approached, from the product of one acre of ground. Between high prices for produce, and reduction of expenses by growing our own comforts, there will be found little difference."

"The farmer has to encounter unfavourable seasons, liability to disease in his crops and the depredations of insects. At best he is not to look for a sudden acquisition of wealth or continued large profits; he is, however, exempt from the anxieties of great risk, while health and peace accompany his engagements; a boon great gains cannot bestow. Large profit is contingent on the hazards of trade, and even there, instances of success bear a small proportion to disas-

trous failure. It seems to have been too much the habit, to stimulate agricultural improvement by a spirit of gain uncongenial with the pursuit. A cow or sheep has been made to sell for thousands, a bud or a potatoe for a hundred cents. A great crop is sometimes held forth as what all may obtain certainly by a certain process. In fifty years I have seen no such harvest as that of 1803; it resulted from no better or more diligent culture, than in the forty-nine other years; some of which were almost entire failures. It is perhaps no unfair estimate to look for something equal to a failure of the wheat crop, once in five to ten years. Corn may be put at fifteen, it gives to the farmer the most certain return of all the plants we cultivate. The whole summer cultivation is more certain of good product than that which has to encounter the winter's exposure. In a well prepared, strong soil, with rare exceptions, they will succeed. The extended summer culture in latter times has very much increased the products of the soil.

"I have not witnessed a mere premium crop, disregarding every thing but the return, to have been of much value in the progress of farming. It will rarely square with a good practical husbandry. A great product to be practical, must enter into a course of culture that will leave the ground undeteriorated if not improved. In a system of farming suited to our grounds, it is not so much great products in special cases, as a judicious course of culture and application of manures.

"The cultivated grasses have become of the highest value, both as to their product and in a course of good culture. They are equally important in good farming connected with ploughed crops, and it is required in their growth for success, that there should be a thorough working of the soil during two seasons, to destroy weeds and make the ground friable. A full course of crops, from the breaking up of the lay until another course is commenced is necessary, to give the proper elements, to form a just estimate of the success and merit of the farmer. A single crop as has been noted, may occur more by accident, than as due to skill and management. It may also be very much magnified in the amount, by sacrificing to obtain it, the great consideration of keeping up the fertility of the soil. Land should never be impoverished in a good course of culture. In this as in much of human affairs, the stationary point is hardly to be maintained, it must either improve or become worse.

"In the close of the last century and the

early part of this, the foreign demand for farm produce was such as almost to give spasmodic stimulus to rural industry. Such unnatural prosperity affected our habits, as to produce evils not yet fully realized. It was found much easier to lower the standard of habits and manners, than to bring them back to a right point, when those who till the earth control their wants by their means. Through all those piping times, there were those who looked to what we now see and feel, a world at peace. Every people are compelled to nourish and to husband home resources. Maritime commerce is about to be brought within the compass of a wholesome exchange of commodities, not to be paid on one side with gold."

"In proceeding thirty miles north from this city, what a variety of soils we find crowded into that narrow space, demanding treatment and attention equally various. In the first settlement of this section of country, while the lands were yet fresh, wheat gave a pretty certain return and became the first object of cultivation. Buckwheat was almost the only summer crop, sometimes yielding a great return, but liable to injury from drought, hot suns, and frosts. It agreed well, however, with the wheat culture in open fallow, but has very much ceased to be raised in our stronger lands, because it can no longer enter into a judicious course of tillage. The flour is still sought as a great delicacy; but this demand has not tended to restore its cultivation. Wheat having frequently of late years given but light harvests, rye, oats, corn and potatoes have claimed attention. Rye became in a great measure, a substitute for wheat, as an article of bread stuff. In 1836 and some subsequent years, rye has proved less certain in return than even wheat, and the potatoe has at length been affected with a disease unknown until a very late period; it has always been liable to injury from drought, the more so, since it has been cultivated in a short season. These occurrences urge the expediency of a varied culture, even in the crops we look to for the great and essential article of bread.

"The rapid opening of fresh lands for the growth of wheat, has in recent years, given a large amount for export, and in consequence its price has been reduced, so as hardly to meet expenses in this vicinity, even under good tillage. Still it is and must remain an article for which the farmer can find no substitute. But the richest soils found in the wide domain of the West may be exhausted, and our experience teaches that a system of renovation can only be looked for, under the promptings of stern

necessity. Wheat must remain to be a crop of great value in the interior, and the open fallow system will be followed, as it was in this region, until the increase of people together with uncertain returns, will impose a necessity for a more diversified tillage. We may look for the impoverishment of the Western paradise in process of time, before renovation succeeds. There and everywhere, the farmer must adapt his crops to his soil and his market, to effect which, all his sagacity will be called into exercise. Lands may be fertilized to be fruitful, but adaptation of crops, with skill and judgment is only of second importance. Success in one or a few instances, will be found not to warrant the conclusion, that, because one or a few great results have been obtained, that they may be looked to with certainty.

"The root growing for animal subsistence, cannot in this climate be of so great importance as in the moist and high latitudes of Europe. The potatoe there has become the best succedaneum for bread. Though a valuable growth with us, its quality and product must ever be less certain and of less consequence. The varieties cultivated, in my early remembrance, were but of little culinary value. Here and even further south, it has become an important vegetable. A quick growth in a cool atmosphere, is necessary, fully to perfect its quality with us. Wheat is adapted to a wider cultivation; it will vegetate in air where our native grasses are stagnant, and will mature at a proper elevation under a vertical sun. It has given a good crop on the Kennebec, as cotton might chance to succeed here; but in either case it would hardly repay the attention it would call for. Of the four staples of which piece goods are composed, cotton is now applied most extensively and to the greatest variety of purposes. It never can, however, become a substitute for animal wool, lint and silk. It would be an error, therefore, to look to it as our main resource. Woollen and linen garments are as desirable a comfort through the whole cotton growing region as they are further north. How broad a basis is thus presented for domestic exchanges."

"Manures present an object of primary importance in cultivation of every kind. An adequate supply has become with us a cardinal concern. It ought to be a never omitted effort, to make the farm produce its own manures. This though the best, will be most likely a late resource. Lime made caustic or combined with acids, is an article found in limited extent; but seldom beyond the reach of farmers in a well settled country."

and it is of high necessity in almost every soil. It is sometimes applied, however, with little apparent advantage. No substitute has been or can be found, for barn-yard manure. It never fails to produce effect. It is not easily overdone in application, and acts as a fertilizer after its stimulating properties have ceased. Both lime and gypsum are often wasted by excess in use. When soils have become saturated with them they very much cease to act. They are nevertheless almost indispensable in the fertilizing of land, but they go but a short way unaccompanied by dressings that have passed under animals. While quick lime is beneficial to every soil, gypsum seems not to have that quality. An eminent farmer and writer in New York has stoutly denied that it has any effect on vegetation. He would be a bold man that would deny it to have that quality here. In Britain it has been little known as a manure; while it is held in estimation with us, and in Germany. Bone-dust has been represented as producing very surprising results. I have never witnessed its application, nor has it so far as I know, scarcely been used as a manure on this side of the Atlantic. It must be of limited obtainment under the most saving economy. It is perhaps the most practical embodiment of the phosphate of lime, and a good application for a wheat crop.

“Guano is the latest substance that has been brought into notice in the list of manures. I have witnessed its application but to a very limited extent. The benefit afforded, if any, was not striking. Its analysis indicates that it has stimulating qualities, and it seems to be better adapted to soils already fertile, than those of more meagre condition. To stable manure we must mainly look, to fit our lands for more costly stimulants. The early application of lime produced a much greater effect upon ploughed crops, than it has subsequently done. It is now found to be most beneficial to the cultivated grasses; and thus adds greatly to the wealth of the barn-yard. Experience has not allowed me to place much value on green dressing. An equal amount passed through the stables will pay any additional labour that may be required for that process.”

“The gathering of the harvest is no longer the hazardous and laborious employment it remained to be even in recent memory. Much more is now better done and in shorter time, than in previous periods. In early life I spent some eight years in a mechanical employment; and though my skill never could satisfy my taste, yet I look to that era of my life when I was a tradesman,

with pride and gratification. It has tended to make me a happier man, and one more useful to others than myself. Though I have been for half a century a tiller of the earth, I feel full fraternity with those who exercise the mechanic arts. In the sequel of life man seems by a sort of instinctive impulse, to recur to the art of cultivation. No matter what has engaged his earlier attention, or what may have been his success in business, to the field and garden he looks at last to realize enjoyments no other scene can give. Cultivation owes much to the taste and enterprise of some of our distinguished merchants and professional men. We have still to look for much from them. They will act more from taste and public spirit, than for mere profit, which will have lost to them much of its charms. They bring to their new avocation means to experiment, and leisure to observe and weigh the result. By such a process are useful truths only to be wrought out.

“This country, as it were, but yesterday was found by our ancestors, overshadowed by ancient forests. The labour was to remove, not to cultivate; a labour not yet wholly accomplished. Our oaks and pines are, however, fast receding from us before the potency of the axe. Our hickory, recently admitted by botanists to rank as a family, has become scarce. I know of no substitute for its timber in the useful arts, either native or foreign. Who has thought of rearing or sparing this tree? Having a tap root, it is as little hurtful to grain and grasses as almost any other tree. Its growth is accelerated in the open air. The fruit of some of its varieties is of such richness and flavor, that commerce has found throughout the world no rival. I have heard the venerable Duponceau say, ‘it graced the board and gave zest to the meals of the father of his country, at Valley Forge.’

“Europe has long held our locust in high desert as an ornamental tree. Its flowers and its leaflets are formed in the line of beauty, yet fragrance added to this, forms but a small part of its merits. It is peculiarly fitted for cultivation, and its growth is rapid without impoverishing the soil. The monotony of the ocean prairies of the West is spoken of as painful to the sight; a country denuded of its trees, as too much of ours is becoming, is little less painful to behold. To animals, cool and refreshing shades are as vivifying in summer heats, as the shade of a rock in a weary land, to the way-worn traveller of the desert. Trees properly placed are not more a relief from summer heats, than a protection from the blasts of winter and the storms incident to every

season. You have that excellent variety of quicks, known to us as the New Castle thorn. On sites suited to its growth, it forms a good and durable enclosure. Timber fences have advantages in interior situations, being easily removed and giving less harbour to intrusive vegetation. The hedge is the most permanent fence; but in many localities it may be fairly questioned if it be cheaper than timber structures. We have noticed the locust; not inferior to which perhaps, is the red cedar. It is of spontaneous growth; requires but small space, and is easily trained to make a fair bole. The cedar is a highly protective tree, and it has been represented by experienced engineers, as preferable for rail-road sills, to any species of oak of this region, or even the locust. By some it is hunted out as a nuisance more noxious than the ox-eyed daisy.

"Farming has been too much confined with us to the culture of annuals, or of plants of few years duration. The time is fast approaching when we should think of growing the oak and the pine, which require more than a century to mature, and which will endure for many. If they be planted "it must be for posterity and the immortal gods," as Lucian makes an old man answer, when he was interrogated for whom he was planting an oak. The largest trees during their growth may be made to give present value to the ground they occupy. I have seen a white pine tree, within twenty miles of Philadelphia, growing in the open air, with a bole one hundred and fifteen feet high. This is an interesting fact. Twenty trees of similar dimensions could have stood on the ground around the mansion, little occupied by anything else. This was on a soil very inferior to that upon which this tree grows in the valley of the Susquehanna."

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For the Farmers' Cabinet.

### Crossing Seeds.

TO THE EDITOR :

SIR,—Through the medium of your valuable work, I would give to the public a new idea on the growing of grain. I call it new, because I never saw it in print or heard it advanced by any person:—and that is, to cross all grain in sowing. If you have a good kind or quality of wheat, never sow it longer than two or three years without getting some of the same from a neighbour, and mix it well on the barn floor previously to sowing. By this means, when the grain blossoms, the farina will cross with such grain or blossom as it had for a long time

not come in contact with, and will produce a more thriving and healthy stalk than if we sow the same grain for a long period without mixing. To make it plain,—I put it upon the same principle as *crossing* in the animal creation; we know, if we have the best stock of any kind, it must be crossed with others, if we would keep up its character.

It is well known that hogs, sheep, or any other stock, will soon degenerate if left to run together without crossing; and I hold it is equally necessary in grain and seeds of all kind. This idea occurred to me some five or six years ago, and I have practised it since on my farm, and have recommended it to my neighbours; and among others, to several medical gentlemen, who concur with me in opinion. I think I must have taken the idea from seeing corn mix, and observing single stalks growing in the garden on which I never saw a good ear of corn, being diminutive, or only speckled with a few grains over the cob, its own farina not having fully impregnated it. We know that corn will cross, and why not wheat, rye, oats, potatoes, and every plant of the same species? Women who attend their gardens, know that cabbage will cross, and radishes run out, &c. Some may suppose if grain will cross in the blossom, that wheat and rye would mix, but this does not necessarily follow, they being different kinds of grain.

It is a generally received opinion among farmers, that it is necessary to change the grain from one soil to another, to ensure a good crop; this, in my opinion, is erroneous; the changing from one soil to another is of little or no benefit; it all depends on crossing the blossom, and if this is done every two or three years, the grain will never degenerate; it will answer equally well to cross different kinds of wheat, if they ripen at the same time. Several farmers whom I have spoken to on the subject, remarked it so happened that they mixed up different kinds of wheat in sowing, not having seed sufficient of one kind, and they had always a better crop, without suspecting or knowing the reason.

I have sown the red chaff white wheat, sixteen years, and now raise as good crops as at first sowing; for the last six years I have crossed it regularly, and since I mixed my potatoe seed with my neighbours, alternately, with one and another, I can raise a much better crop than before I did so. If my opinion be correct, I consider it a matter of much importance in agriculture; farmers will give up the erroneous idea of changing from one soil to another, and persons need not speculate by offering or advertising a

new kind of wheat for sale at a high price, when there is nothing new about it.

S. HEISTER.

Chester co., Pa., October 23th, 1845.

### Annual Exhibition of the Philadelphia Agricultural Society.

This display took place at the Lamb Tavern, on the 22nd and 23rd of last month, and the Ploughing Match on the 24th, in a field in the vicinity. The weather was fine and clear as could be wished. We could scarcely have had more thoroughly delightful specimens of a Pennsylvania autumn, than the three days thus occupied by the Society: and when we speak of a delightful American autumnal day, those who have enjoyed it in the country, will know that we would embrace every thing that is elastic and bracing in the air—that is comfortable in the temperature, and gorgeous in nature's clothing. Our autumns are proverbial for their superior richness in beauty, but to be appreciated, they must be witnessed. Our farmers and others made good use of the occasion, and gave a large attendance throughout. On the 23rd, at noon, immediately after the premiums were announced by Kenderton Smith, one of the Vice-presidents of the Society, Dr. George McClellan, of this city, was introduced, and addressed a large, attentive, and highly respectable audience, evidently much to their gratification. He took occasion to remind us, among other things, that facts and experiments in agriculture could be but slowly obtained, and however important in themselves, were not to be relied on to the exclusion of principles. The man who can go to work with the light of sound principles to guide him, will doubtless make more rapid and certain progress in his pursuit, than he who depends upon his own tardy accumulation of facts from experiments.

The Society dined together on each day, and the sparkling of the champaign, and wit, and rich flow of eloquence, made joyous occasions. We cannot help thinking, however, that Adam's ale is about, after all, the best digester of an agricultural festivity: and that our Agricultural Societies would do well on these occasions not to lag behind the age, but to respond to the wholesome and well understood opinions of the community.

We regretted the absence of our friend James Gowen, from the ground, as well as his splendid cattle and hogs: and still more regretted that serious indisposition should be the cause. Those who had the labour and responsibilities of the preparations, no doubt felt the want of his judgment and assistance on the occasion. The following are the reports of the different committees.—Ed.

#### ON HORSES.

The undersigned having discharged the duty imposed upon them by the Society, beg leave to submit the following report:

To the thorough-bred horse, "Sir Peter Teazle," the property of Joseph H. Wallace, of Philadelphia, they award the premium of \$5.

For the best stud-horse, adapted to the field and road, to "Comet," the property of Robert K. Redding, of New Jersey, \$8.

For the second-best stud-horse, adapted to field and road, to "John Consul," the property of William Cottman, of Montgomery county, \$4.

For the best mare, adapted to the field and road, to "Victoria," the property of Robert K. Redding, of New Jersey, \$8.

For the second-best do., do., to "Tippoo," the property of William Runyan, of Easton, \$4.

For the best horse colt, between two and four years old, to "Bay Blacklegs," the property of John Sharpless, of Delaware county, \$6.

For the second-best do. do., to "Grouse," the property of James Dicks, of Delaware county, \$3.

For the best mare colt, between two and four years old, to "Miss Gip," the property of R. J. Ruffner, of Philadelphia county, \$6.

There were no horse colts one and two years old, worthy of notice, offered.

The committee express their regret that the display of horses should have been so limited, especially in a district of country which can boast with truth, of its thoroughbred and other excellent stock. The community does not seem to regard these exhibitions with that degree of interest which they certainly deserve, and the committee can therefore only express the hope, that at future displays of the kind there will be no deficiency to complain of in this respect.

OWEN SHERIDAN,  
JACOB PETERS,  
THOS. PENN GASKILL,  
P. R. FREAS,  
GARRETT WILLIAMSON,  
*Committee.*

#### CATTLE OVER TWO YEARS OLD.

The committee on cattle over two years old, report, that after having carefully examined the character and quality of the different animals presented to them, they award the following premiums, viz:

For the best Durham bull, over three years old, to John Hunter, for "Duke of Wellington," by "Prince of Wales," \$10.

For the next best do. to do., for "Bruce," by "Prince of Wales," \$5.

For the best Durham bull, between two and three years old, to Jacob Serrill, for "Carbon," \$8.

For the next best, to S. R. Simmons, for "Comet," \$4.

For the best Devon bull, to R. T. Potts, for "Merion," \$6.

For the best Ayrshire bull, to David Boyd, for "Rob Roy," \$6.

For the best Alderney bull, to John R. Supplee, for "Stephen Girard," \$6.

For the best Durham cow, over four years old, to I. W. Roberts, for "Jessie," \$8.

For the next best do., to Dennis Kelly, for "Patience," \$4.

For the best Durham cow, between two and four years old, to Dennis Kelly, for "Sally Walker," \$8.

For the next best do., to George Martin, for "Victoria," \$4.

For the best heifer of mixed breed, between two and three years old, to Samuel Owens, for "Lucy," \$4.

For the next best do., to Dennis Kelly, for "Delight," \$2.

For the best heifer of native breed, between two and three years old, to R. T. Potts, for "Blossom," \$4.

For the best cow of Durham blood, to Owen Jones, for "Dumpty," \$6.

For the next best do., to R. T. Potts, for "Kitt," \$3.

For the best Alderney cow, to John Hunter, for "Kitty Clover," \$6.

For the best cow of mixed blood, to Samuel Cooper, for "Fair Helen," \$2.

For the best cow of native breed, to George Martin, for "Fanny," \$4.

For the next best do., to Michael Daly, for "Sally," \$2.

For the best yoke of working oxen, reference being had to their performances to George Blight, \$8.

For the next best do., to Alexander Johnson, \$4.

For the best fat steer, to David S. Bunting, \$6.

The committee noticed with pleasure some thorough-bred Durhams, that were by the rules prohibited from again entering into competition, among which were Mr. Kelly's "Prince of Wales," and Mr. Roberts' cow "Victoria."

Some very fine Durham stock was exhibited by Mr. O. Sheridan, as well as some very superior animals of mixed blood and native breed, by Messrs. Rodgers, H. Johnson, M. Daly, and S. Martin.

Three pair of young working oxen were exhibited by I. W. Roberts, Henry Dull, and Wm. W. Roberts.

The committee would have been much gratified, had the Society allowed them to extend the premiums to more of the enterprising and spirited farmers, and others that have contributed so liberally, to the present large and interesting display of cattle.

THOMAS S. WOODWARD,  
DAVID LYONS,  
BENJAMIN SERRILL,  
DAVID GEORGE,  
THOMAS S. SMITH,

*Committee.*

## CATTLE UNDER TWO YEARS OLD.

The committee on neat cattle, under two years old, report that after having examined the animals submitted to them, they award premiums as follows:

For the best Durham bull between one and two years old, to Dennis Kelly, for his bull "Valentine," the premium of \$6.

For the next best do., to Dr. Barton, for his bull "Bruce," \$3.

For the best Alderney bull, to Robert T. Potts, for his bull "Orange Boy," \$4.

For the next best do., to John R. Supplee, for his bull "Alexander," \$2.

For the best Durham heifer, to Dr. Barton, for "Kitty Clover," \$6.

For the best heifer of mixed breed, to Isaac W. Roberts, for "Blossom," \$4.

For the next best do., to John Jeffry, for his "Regolette," \$2.

For the best heifer of native breed, to Samuel Cooper, for "Rachel," \$4.

For the next best do., to Elizabeth Serrill, for "Lily," \$2.

The committee take pleasure in mentioning that there were a large number of fine cattle exhibited, for which no premium could be awarded, among which were a very fine young steer of native breed, the property of Mr. Joshua Malony, and two very handsome Kyloe heifers, one the property of Samuel Martin, the other of Jacob Valentine.

JOSEPH CRAWFORD,  
AARON JOHNSON,  
JOSEPH GEORGE,  
CHARLES GARRETT,  
JOHN JOHNSON,

*Committee.*

Mr. Dennis Kelly exhibited, also, about twenty head of very superior young cattle, of Durham blood, of his own raising, many of which are strongly marked with the fine points and good qualities of their sire, "Prince of Wales," who made his appearance in his usual fine condition, and having already obtained the highest honours, could not be offered for premium again.

## SHEEP AND SWINE.

The committee on sheep and swine, respectfully beg leave to make the following report:

For the best four Leicester ewes, to Robert Harmer, the premium of \$4.

For the second best do., to Aaron Clement, \$2.

For the best buck of mixed breed, to Isaac Newton, \$4.

For the best broad-tailed buck, to Isaac Newton, \$4.

For the best five Southdown ewes, to Aaron Clement, \$4.

For the next best do., to John Johnson, \$2.

For the best four Southdown lambs, to Aaron Clement, \$4.

For the best four Leicester lambs, to Aaron Clement, \$2.

For the best Leicester buck over two years old, to Aaron Clement, \$4.

For the second best do. do., to Aaron Clement, \$2.

For the best Southdown buck, to Aaron Clement, \$4.

For the best Southdown buck under one year old, to Aaron Clement, \$2.

For the next best do., to Aaron Clement, \$1.

Mr. Isaac Newton also exhibited six remarkably fine wethers, intended for the shambles, for which the committee awarded him the premium of \$2.

For the best litter of pigs, not less than six in number, to Joel Shuttlewood, \$4.

For the next best do., to Samuel Martin, \$2.

For the best Berkshire boar, to Richard Cartwright, \$4.

For the next best do., to Pennsylvania Hospital, \$2.

For the best boar of other breed, to James Ezray, for his boar "Joe," of Chester county breed, \$4.

For the next best do., to Philip Garrett, for his boar "Billy," \$2.

For the best Berkshire sow, to Richard Cartwright, \$4.

For the next best do., Pennsylvania Hospital, \$2.

To Benjamin Hickman, a complimentary premium for four extraordinary fine shoats, not coming under a distinct breed on the list of premiums, \$2.

To Philip Garrett, a complimentary premium for a pair of very handsome pigs, of Chester county breed, \$1.

To Lewis Hoopes, a complimentary premium for six very fine pigs six weeks old, \$2.

To Benjamin Hickman, for six pigs Chester county breed, seven weeks old, a complimentary premium of \$1.

To George Martin, a complimentary premium for eight pigs seven weeks old, \$2.

The committee were gratified to observe the increased excellence of the display of sheep and swine, over that of any previous

year. The evidence of careful breeding was remarkably observable.

ISAAC NEWTON,  
DAVID WHITALL,  
JOHN JAMES,  
JOHN LARDNER,  
WILLIAM W. ROBERTS,  
*Committee.*

#### BUTTER AND POULTRY.

The committee have examined the several specimens of butter offered for premiums, and they award the first premium of a silver butter knife, of the value of \$5, to Philip Physick, for five pounds of the best fresh butter.

They award the second premium for five pounds of the second best fresh butter, to John Johnson.

The committee were unanimous in awarding the first premium, to the butter contributed by Philip Physick. Butter of a very superior quality was presented by Isaac Newton, Morton Albertson, and John Ruthwin. The committee regret there were no specimens of firkin or preserved butter presented, as they consider an improvement in this branch of the dairy very desirable.

For the best pair of improved breed of fowls, the first premium of \$2 was awarded to Anthony T. Newbold. To the same gentleman was awarded the premium of \$2 for the best pair of capons.

Three very fine specimens of the Jersey Blue fowls were presented by John Worth and David Hoopes, and the committee award the second premium of \$1 to each.

SAMUEL C. FORD,  
CORNELIUS S. SMITH,  
ASHER MOORE,  
GEORGE BLIGHT,  
*Committee.*

#### AGRICULTURAL IMPLEMENTS AND PRODUCE.

The Judges of Agricultural Implements and Produce, in executing the duties of their appointment, have endeavoured to discriminate with correctness and impartiality, and to ascertain with as much precision as possible, the comparative excellence of the various articles presented to their notice. Practical tests of the implements were resorted to, wherever means of so doing were attainable. The great number and variety of articles exhibited appertaining to the cultivation and productions of farms, show a rapidly increasing interest in the profession of agriculture, and has rendered the duty of the Judges much more arduous than heretofore.

The printed list not having provided for many articles which in their estimate merited distinction, the committee have ventured to give them small premiums, in the confidence that their decisions will be confirmed.

For the best Drill Machine, (horse power) to John Grounsell, of Chester, Delaware county, \$4.

For the next best, Batchelor's Hand Drill, to D. O. Prouty, of Philadelphia, \$2.

For the best Hay and Straw Cutter, (Miller's Patent horse power) to George Lay, of York, Pa., \$4.

For the next best Straw Cutter, (horse power) to Jesse Urmy, of Wilmington, Del., \$2.

Both these instruments are capable of cutting and grinding cornstalks, and their use must add greatly to the economy of large farms.

For Harvey's Straw and Stalk Cutter, to D. O. Prouty, \$2.

For the best display of Agricultural Implements, to D. O. Prouty, \$8.

For the best Fan Mill, to Isaac Grant, of New York, for his Chaffing and Screening Mill, \$4.

For the next best do., to J. Bamborough, of Lancaster, Pa., \$2.

For a Cheese Press, to James Edwards, Delaware county, Pa., \$2.

For an improved Cultivator, to Joseph Dickinson, Chesnut-Hill, \$2.

For a Horse Power and Threshing Machine, to Jacob Heston, Chester county, \$2.

For an Endless Chain Horse Power, with improvements, to Jesse Urmy, \$2.

A large number of beautiful ploughs were on the ground, and give promise of good work to-morrow. The plough of S. I. Roberts, was admired for superior workmanship, and one from Howard & Delano, of New York, attracted much notice.

Beside the implements above specified, were Fan Mills, Corn Shellers, Straw Cutters, Churns, Harrows, Cultivators, etc., from Mr. Prouty. Straw Cutters from Mr. M. S. Powell, and a neat Fan Mill and Screener from Watkins & Lee, of Virginia.

For Agricultural produce the committee award the following premiums:

For the best wheat to James J. Taylor, of Bucks county, Pa., \$3.

For the next best do., the Judges were unable to determine between two beautiful specimens, and therefore award to Richard Paxson, of Bucks county, for his White wheat, \$1.

And to Robert T. Potts, of Montgomery

county, for his "O. K." or Swedeland wheat, \$1.

For the best Indian corn, to C. Stockton, Montgomery county, \$2.

For the next best do., to Isaac Newton, Delaware county, \$1.

For the best display of Agricultural produce, to S. Williams, of Philadelphia county, \$4.

For the next best do. do., to the Pennsylvania Hospital, \$2.

A sample of California rye was presented to Dr. Mease, President of the Society, by W. Morris Cooper, of New Jersey, which, in lightness of colour and size of grain, was unsurpassed. There was also a good display of sugar beets from I. W. Roberts and Owen Sheridan. Indian corn from Jacob Albertson and W. Crispin, N. J. Mediterranean wheat, turnips, &c., from Isaac Newton. Very fine apples from C. Stockton and W. M. Cooper. Mercer potatoes from C. H. White. A mammoth pumpkin from Brinton Jones, and a neat and tasteful collection of produce from G. Blight, to whom a premium of \$2 is awarded.

The committee have to express regret that so few productions of the soil in this eminently agricultural district are brought to our Exhibition, and recommend the Society to offer greater inducements in future.

ALGERNON S. ROBERTS,  
SAMUEL WILLIAMS,  
ROBERT T. POTTS,  
JOHN S. HARRIS,  
JOHN GEORGE,

Committee.

**ADDENDA.**—Since closing the report there have been brought forward exceedingly good specimens of Indian corn, Mercer potatoes, turnips and celery, from John Ruthwin and T. J. Snyder, of Montgomery county, and Dennis Kelly; also a South Sea Squash from B. Roberts, and a very neat Bee-hive, with an ingenious protector from moths or insects, from Israel Lamborn, Chester county. The committee regret that the articles were too late for competition.

To Robert Henry, the gardener of Mr. Blight, the committee recommend an honorary premium of \$2 for an ornamental or fancy plough in flowers, placed over the orator's stand.

At the Ploughing Match eleven entered the list, and an animated time it was. The committee made the following report:

The first premium to the Prouty Plough, No. 5½—No. 8 on the list.

The second premium to J. B. Moore's Plough, of Wilmington, Del., No. 11 on the list. Plough No. 8, letter A.

The committee award the first premium for the best ploughman, to Joseph C. Biddle, of Montgomery county, and

The second best premium to David Yetter, of Lower Merion.

The committee recommend a complimentary premium of \$3 to the lad George Jackson, whose work was very creditable. The committee refer with pleasure to the work performed by all the competitors. The ploughs of Joseph Dickinson, Chesnut-Hill—of S. I. Roberts, of Montgomery county—of Mr. Conard, of Montgomery county, and two iron ploughs, merit especial attention.

The admirable order observed by the numerous spectators, is entitled to the highest commendation.

All of which is respectfully submitted.

ISAAC W. ROBERTS,  
SAMUEL WILLIAMS,  
JOHN LARDNER,  
OWEN SHERIDAN,  
*Committee.*

Mount Airy, Philadelphia, Nov. 3rd, 1845.

To the Editor of the Farmers' Cabinet:

DEAR SIR,—When the proceedings of the late Annual Exhibition of "The Philadelphia Society for promoting Agriculture" shall be read by your numerous subscribers, it may create surprise that I, who hitherto have taken so active a part in the transactions of the Society, and competed so successfully for premiums, should on this occasion be found inactive, and that my cattle were in the vocative.

To prevent inferences as to the probability of my having become tired or relaxed in the good cause, I beg leave to inform my agricultural friends at a distance, that it was owing solely to severe indisposition, which confined me to the house, that I did not occupy at the late Exhibition, the same prominent position I had the honour of enjoying for years on similar occasions. I had intended to show some splendid cows, heifers, and calves, but a severe attack of a complaint that has annoyed me for some time back, rendered my personal attention wholly out of the question, and being short in competent help at the time, led to the withholding so valuable a herd, fearing some accident might befall them. My agricultural friends may rest satisfied that I am abated nothing in zeal in the pursuits of agriculture—that I appreciate most highly Agricultural Societies and Agricultural Exhibitions—that I shall as heretofore promote them to the best of my influences and abilities, and that as to cattle, I never at any former period was bet-

ter prepared for a display than I am at this present time; as many enlightened gentlemen from a distance who lately visited me can fully corroborate.

Very respectfully,

Your obedient servant,

JAMES GOWEN.

### Report on Philadelphia Agricultural Exhibition.

AFTER the remarks and premiums, &c., on page 127, were in type, the following was handed for publication.—Ed.

To the Philadelphia Society for promoting Agriculture:—

The Committee of Arrangement appointed for the Exhibition held at the Lamb Tavern on the 22nd, 23rd, and 24th of October last, beg leave to report, that in pursuance of notice to that effect, the Exhibition was held at the time and on the grounds appropriated for that purpose, at the place above mentioned. It was in most respects highly creditable to the breeders and contributors to the Exhibition, and the large number of visitors who must have amounted to several thousand, appeared to be much gratified with the display. Every thing passed off in the most satisfactory manner. Although there was a spirited competition for the various prizes, yet it appeared that all were satisfied with, and cheerfully submitted to the decision of the several committees who distributed them. The display of horses, the committee regret to say, was not so good as they had expected, nor were they so numerous as they should have been, when the number of valuable horses in this vicinity is considered. Some of those exhibited, however, were superior animals and attracted much attention. There were very few brood mares shown, and the horse colts between one and two years old, were pronounced by the Judges not to be worthy of notice.

Of cattle there was quite a creditable display; there were upon the ground several of the valuable animals that had previously taken the highest premiums, and were therefore disqualified as competitors for the prizes. This the committee was much gratified to see, as these fine animals add greatly to the interest of the Exhibition, as objects of attraction and curiosity. The committee regret to have to notice the absence of many superior animals belonging to members of the Society, which have added much to the interest of former exhibitions.

Of sheep and swine, there were very superior specimens; the Judges in their

report, express themselves gratified to observe the increased excellence of the display in this respect over any previous year.

The butter presented on the occasion was of a superior quality. The remarks of the Judges in reference to firkin or preserved butter, are worthy of the consideration of the Society. The capons and the fowls were very creditable to their breeders.

Of agricultural implements there was quite a variety, and the display was highly creditable, showing a steady improvement in the varied machinery designed for agricultural purposes, and that much attention is being directed by our mechanics, towards the perfection of the various machines required in farm labour.

Of produce there was not a large display, but what was exhibited attracted much attention, and was of a superior quality.

Of ploughs there were presented perhaps more than the usual number, and the ploughing match, at which their various merits were tested, was not only quite a spirited contest, but was attended by a very large concourse of spectators, who appeared to take a lively interest in the scene. Ten competitors entered for the prizes. The work was admirably done throughout, and the several ploughs had every opportunity afforded them to have their merits fully and fairly tested.

The committee beg leave to refer to the annexed statement of the premiums awarded and the reports of the several committees of Judges. The Society have every reason to be encouraged to prosecute their labours and to continue their Annual Exhibition. The specimens exhibited being the offerings of the farmers of this vicinity, presented without solicitation, and the large concourse of visitors who attended the Show, are convincing proofs that the community, and the farmers more particularly, feel a deep interest in these exhibitions, and no exertion should be spared by the members to make them hereafter, in all respects, worthy of the Society.

Upon the second day of the Exhibition an able Address was delivered by Dr. McClellan, which was attended by a large concourse of persons, mostly farmers. His subject was Chemistry as applicable to Agriculture; and his remarks were listened to with lively interest.

After the Address the company sat down to a capital dinner prepared by Mr. Thompson, at which were present several distinguished invited guests. Some spirited toasts were drunk, and excellent speeches delivered in reply, and the Exhibition closed without the

occurrence of a single circumstance to mar the pleasure enjoyed upon the occasion.

All of which is respectfully submitted.

K. SMITH, *Chairman,*

AARON CLEMENT, *Rec. Secretary.*

Philadelphia, Nov. 5th, 1845.

#### Dr. Brinckle's Strawberries sent to the Queen.

WE called, by invitation, on Colonel Howard Vyse, to lunch at two o'clock; this gentleman has employed his large fortune, and made himself eminent by extensive explorations of the Egyptian Pyramids; his quarto volumes on the subject have reached you; they were much quoted from by Mr. Gliddon, the lecturer on Egypt. Colonel Vyse occupies a large, ancient family-mansion, where comfort, rather than show, presides; he is an enthusiastic gardener; keeps in his employ thirteen educated horticulturists, and has altogether one of the most successful fruit gardens on the island: pine-apples, grapes, huge strawberries, cherries, apricots, &c., seem to grow spontaneously, and in the greatest abundance. His walls for fruits are very extensive. We found the Colonel in his comfortable study, where he explained his extensive plans, views of the pyramids, and his operations, at instructive length. Colonel Vyse has experienced a slight paralytic attack; he is also still suffering from family bereavements, the loss of his wife, and the drowning of a little son in his own beautiful lake. A promenade around his grounds and great extent of walls for fruit, brought us to the pinery, where pine-apples in surprising numbers were successfully cultivated. This fruit will be found on the tables of most gentlemen of a certain fortune, along with melons, and a variety of forced productions, especially grapes; the latter are decidedly better for being raised under glass. I procured here some fine cones of the Cedar of Lebanon, for your Philadelphia gardeners.

After lunch, we went to visit the Queen's new kitchen-garden, near Frogmore; Mr. Jesse's station admitted us where strangers cannot otherwise penetrate. *One hundred and sixty thousand dollars* have lately been expended on this new garden for royalty; the forcing-houses are extensive; the glasses move by machinery like watch or clock-work. We paced the superb graperies, pineries, peach and nectarine forcing-houses, and tasted fine specimens of the Queen's fruits; the Chasselas grapes and Prince Albert strawberries, were certainly never exceeded for excellence.

On my observing that Dr. Brinckle, of

Philadelphia, had solved that difficult problem in which European gardeners had failed, of hybridising the Alpine strawberry with the larger cultivated kinds, and thus producing a perpetual bearer, the head-gardener, Mr. Ingram, expressed the strongest interest; said he had not succeeded in his various attempts, and *begged* that I would endeavour to forward him a few plants, in order that he might serve the *royal table* with this delicious fruit, at unseasonable periods. I have promised for my friend, Dr. B., that the Queen shall be gratified; she has already eaten canvass-back ducks from America with gusto, from a parcel sent over to the late Granville Penn, who forwarded a portion to his neighbour at Windsor. I little thought, when going to England, that I could suggest any novelty for the Queen's table! By the frequency with which the subject was mentioned, I was impressed with its importance, and have written to Dr. Brincklé to induce him to fulfil my promise made in his name. You shall be carried in my next to Windsor interior, and see the gold!—*Smith's Weekly Volumè.*

#### Officers of New Castle Agricultural Society.

At the annual meeting of this Society, held in Wilmington on the 25th ult., Dr. THOMSON, who has been its efficient president for these eight years past, designing hereafter to give his time more exclusively to his profession, declined a re-election, and the following officers were chosen for the ensuing year:

*President*—JAMES CANBY.

*Vice Presidents*—George Maxwell, Jos. Lloyd, Eli Wilson, C. P. Holcomb, Jesse Gregg, Wm. Rothwell, C. J. Du Pont, John R. Latimer, Edward Tatnall, John Jones.

*Corresponding Secretary*—C. P. Holcomb.

*Recording Secretary*—James Webb.

*Treasurer*—Edward Tatnall.

*Counsellor*—Edward W. Gilpin.

*Directors*—John C. Clark, Samuel Canby, Joseph Lloyd, M. B. Ocheltree, John W. Andrews, Bryan Jackson, Jos. Carr, Henry Latimer, James N. Cleland, Henry Du Pont, Wm. Robinson, J. S. H. Boies, James J. Brindley, Philip Reybold, William Tatnall, Wm. S. Boulden, John Richardson, John Higgins.

*Directors of the Horticultural Department*—John R. Latimer, Samuel Canby, Jas. Webb, Wm. Tatnall, James V. Emlen, Ziba Ferris.

#### Fifteenth Meeting of the British Association for the advancement of Science.

*Germination of Seeds.*—"On the Influence of Galvanic Electricity on the Germination of Seeds," by Prof. E. Solly. In a series of experiments, in which the seeds of barley, wheat, rye, turnips, and radish, were exposed to the influence of a feeble current of electricity, the plants came up sooner and were healthier than others that had not been electrified. On the other hand, a number of experiments on other seeds had given opposite results—proving, either that the germination of some seeds was retarded, whilst that of others was facilitated by electricity, or that the effects observed in both cases were accidental. Out of a series of 55 experiments on different seeds, 21 appeared in favour of electricity, 10 against it, and 25 showed no effect whatever; and in carefully counting the whole number of seeds in the entire series, there were found 1,250 of the electrified, and 1,253 of the non-electrified. In conclusion, Prof. Solly stated that he felt doubtful whether the effects observed were really due to the influence of electricity.

*Queen Bees.*—Mr. Westwood made some remarks on Entomology. After shortly noticing the general economy of the hive bee as to the production of queens and the swarming of casts, he contended, from the analogy between the circumstances connected with the latter event and those which accompany the swarming of ants, gnats, white ants, mayflies, &c. 1st, That the swarming of insects has for its principal object the union of the sexes; 2nd, That, from analogy with other insects subject to swarming, it is to be inferred that that species does not differ in this respect from other swarming species; and, 3rd, That it is the newly hatched, and not the old queen which leads off the swarm.—*Living Age.*

#### THE FARMERS' CABINET,

AND

#### AMERICAN HERD-BOOK.

PHILADELPHIA, ELEVENTH MONTH, 1845.

THE Annual Meeting of the Bucks County Agricultural Society, was held at Newtown on the 16th ult., and was largely attended by the farmers and others of the vicinity.

The stock exhibited, consisting of horses, cattle, sheep and hogs, manifested great attention to its im-

provement, and showed that the good farmers of Bucks county were well aware that a raw-boned and unthrifty beast will eat at least as much as a full-blooded and deep milker, without being either so profitable to the pocket, or so sightly to the eye. The very great advantages of superior stock over that which barely pays for its keep, are certainly more wisely and generally appreciated than they used to be, twenty years ago. This rich and well farmed county, will, we apprehend, do its duty in remedying what is wrong in these things, and in stimulating even her best farmers to aim at a doubling of their crops, and a continual improvement of their stock. We observe that a full-blooded colt one year old, was on the ground, from Edward Harris's powerful Norman horse, DILIGENCE. There was at the Exhibition a spirited competition, which can hardly fail to be productive of good results. The Address was delivered by Joshua Dungan, a practical man, we believe, and it was listened to with a great deal of interest.

The late arrivals from England have brought unfavourable reports of the grain harvest. Continued wet weather had so affected the crops, that great and serious deficiencies were anticipated. In addition to this, is a calamitous failure of the potatoe crop, not only in Ireland, but also in England and on many parts of the Continent. The ravages of what we here designate as the *potatoe rot*, are spoken of among the Irish people as the *plague*, the *murrain*, the *cholera*, in that most valuable of esculents. This great staff of life to six or eight millions of people, seems, in many instances, to be turned into a poison, and the consequences are looked to with fearful apprehensions. Potatoes are worth sixty cents—double what they many seasons will command—in our own market in Philadelphia; the crop being greatly shortened by the late frosts in the spring, and the pinching drought of the summer. Great activity has been manifested in the grain market within the last fortnight. Wheat flour has gone up to \$5 50 and \$6. Wheat is worth \$1 20 to \$1 30—rye 70 to 75 cents,—old corn 60 to 65 cents, while new Southern will bring about 50 cents. Good Timothy hay is worth \$18 to \$20.

A SHIPMENT of upwards of 400 bales of domestic wool was made a fortnight ago, from this city to Liverpool. The almost unlimited capacity of the West for the rearing of sheep, will enable us to supply any demand which may be made for their fleeces. Let the West increase her flocks; the demand, we believe, will keep up with the increase.

THOMAS M. CLARK, whose farm lies near the Germantown road, left at this office a few days ago, some fine ears of yellow corn and a couple of royal sized flat turnips, the seed of which came from Coates', and one of which weighed four and three-quarter pounds. He says they are chargeable to the *Poudrette*. James Gowen has also left some turnips of the same kind, and about as large as the above.

THE disease which has this year so widely injured the potatoe crop, has made its appearance in Switzerland.

A LETTER from Hamptonville, in Surry county, N. C., dated the 18th ult., speaks of the corn crop, which was then being gathered, as short of an average—it was selling at forty cents a bushel, from the heap in the field. Heavy biting frosts were felt about that time, and the week before they had floods of rain which were greatly needed, particularly in the counties lower down, to enable their mills to grind. The past summer was, in that district, pronounced "the driest of the dry, by the oldest inhabitant."

It is said several horses have latterly died in the neighbourhood of Princeton, N. J., from eating musty oats.

DURING the late Exhibition at the Lamb Tavern, we understood that a number of fine animals, of different kinds, were sold at good prices: thus affording farmers encouragement to bring such stock on the ground on these occasions.

IT will be remembered that in the 11th and 12th Nos. of our last volume, Paschall Morris offered his Chester County farm for sale. In the present number, it will be perceived that the Chester and Delaware County Agricultural Society has awarded him the premium for an average crop on a field of ten acres, of one hundred and one bushels and three pecks of corn to the acre. This, we think, is a pretty good recommendation of the farm.

It is with pleasure that we lay before our readers a letter lately addressed by James Gowen, of Mount Airy, to Gen. Richardson, of Richmond, Va. A corrected copy has been kindly furnished by the writer. Sound, practical matter-of-fact views will be found running all through it. It was written last summer at the Virginia Springs, solely for the purpose of being useful, while the writer was labouring under a severe attack of indisposition. As he journeyed through a part of that State, he "could not but feel," says he, "a deep sympathy for her condition." Impressed with this feeling, he wrote the letter, and it strongly marks the untiring interest and energy of purpose which he everywhere carries into his favourite pursuit of agriculture.

WE learn from Dr. Brinckle, that the ever-bearing Strawberries alluded to on page 132, together with the *Clara Victoria* and the *President* described on page 121, were, as requested, sent out to the Queen in the Cunard steamer, which left Boston some time last month.

THE Lieutenant Governor has issued a circular to the magistrates in Nova Scotia, directing them to ascertain the state of the potatoe crop:—what proportion will be saved for seed or consumption, &c.

THE fires in the West Jersey pines, during the severe drought of last summer, were in some neighbourhoods very destructive. We have understood that many acres covered with the Cranberry bush, were entirely run over, and this elegant fruit destroyed.

**D. O. PROUTY,**

*Manufacturer of Agricultural Implements, and dealer in Garden and Grass Seeds,*

No. 194<sup>1</sup>/<sub>2</sub> MARKET ST., PHILADELPHIA:

Offers for sale the following articles now in season, viz: Grant's Patent Fan Mill, for chaffing and screening wheat and seeds at one operation. This mill carried off the first premium at the State Fair in New York, Sept., 1845, and the first premium at the Philadelphia Agricultural Exhibition in October, 1845. Corn Shellers in great variety, and warranted to work well. Price from \$2 to \$30, each.

Straw, Hay, and Corn-stalk Cutters of different patterns, among which is Hovey's Patent, an excellent article, at a low price.

Mott's Agricultural Furnace and Cauldron, an article which every farmer should have. Grindstones on friction rollers, of various sizes.

D. O. PROUTY.

**Poudrette.**

A valuable manure—of the best quality, prepared in Philadelphia, for sale at the office of the FARMERS' CABINET, No. 50, North Fourth Street, or at the manufactory, near the Penitentiary on Coates' street. Present price, \$1 75 per barrel, containing four bushels—\$5 for three barrels—\$15 for ten barrels, or thirty cents a bushel. Orders from a distance, enclosing the cash, with cost of portage, will be promptly attended to, by carefully delivering the barrels on board of such conveyance as may be designated. The results on corn and wheat have been generally very satisfactory. Farmers to the south and in the interior, both of this State and of New Jersey, are invited to try it. It is now seasonable for wheat, &c.

JOSIAH TATUM.

**Agency for the Purchase & Sale of IMPROVED BREEDS OF CATTLE & SHEEP.**

THE subscriber takes this method of informing his friends and the public, that he will attend to the purchase and sale of the improved breeds of cattle, sheep, &c., for a reasonable commission. All letters post paid, addressed to him at Philadelphia, will be attended to without delay.

AARON CLEMENT.

March 15th, 1845.

**FRUIT AND ORNAMENTAL TREES, EVER-GREENS, SHRUBBERY, &c.,**

In great variety, for sale as heretofore, by the subscriber, at his Nursery, near Haddington, four miles west of Philadelphia. Orders sent by mail, or left at the office of the Farmers' Cabinet—where catalogues may be obtained—will be attended to, and the trees well packed when ordered to distant places. City gardeners supplied with trees suitable for the streets, at a liberal discount.

SAMUEL RHOADS.

Tenth mo. 15th, 1845.

The publisher A. D. Phelps, of Boston, will accept thanks for a copy of TESCHEMACHER'S valuable *Essay on Guano*.

**LECTURES ON AGRICULTURAL CHEMISTRY:**

*By Alfred L. Kennedy, a member of the Philadelphia Agricultural Society.*

A course of familiar Lectures, illustrated by experiments, specimens and diagrams, on those portions of Chemistry, Botany and Geology, which are applicable to agriculture, will be commenced early in November next, and continue semi-weekly until the latter part of February. The subjects treated, will be those most interesting and valuable to the practical agriculturist; and to those who are now learning, or about to learn the practice of the farm:—the economy of animal, mineral and vegetable manures, their action on siliceous, argillaceous and calcareous soils, analyses of soils, structure of plants, drainage, irrigation, &c.

Circulars containing a synopsis of the course, time of delivery, terms, &c., may be obtained at this office.

Philada. October 15th, 1845.

2t.

**GUANO.**

TWENTY-FIVE tons first quality Ichaboe Guano, in bags or barrels, for sale in lots to suit purchasers, by

S. & J. J. ALLEN & CO.,

No. 7 South Wharves, 2nd Oil Store below Market street, Philadelphia.

October 15th, 1845.

6t.

THE quantity of rain which fell during the Tenth month, 1845, was a little more than two inches and a half. . . . . 2.53 inches.

*Penn. Hospital, 11th mo. 1st.*

DR. REED, of Washington county, in this State, with a view to the improvement of the breed of sheep in that great wool growing district, has recently purchased in Connecticut, some very fine pure blooded Saxony bucks, and also a superior Cotswold, from New York. His object is to obtain, by crossing with the native stock, a long wool, fine enough for combing.

THE fourth No. of the *American Quarterly Journal of Agriculture and Science*, and the fifth No. of the *Farmers' Library*, have just been received. We have had barely time to look into them, as our matter is already made up for the number. We have, however, observed the tables of contents, and are satisfied of their well sustained and high character. We would earnestly commend them to all who would add a large amount of valuable agricultural matter to their monthly reading. The library has a beautiful likeness of the late Judge Peters. Drs. Emmons and Prime, of the *Journal*, and J. S. Skinner, of the *Library*, are all well known through the country, and their names are good guarantees for the solid character of their respective publications.

**SHORT ADVERTISEMENTS, &c.**

The subject matter of which, may correspond with the agricultural character of this paper, will be inserted at the rate of one dollar for each insertion of ten lines or less; and so in proportion for each additional line. Payment in advance.

We keep on hand at this office, and will supply our friends with Agricultural works generally. Among which are

THE FARMER'S ENCYCLOPEDIA, full-bound in leather;—Price	\$3 50
YOUATT ON THE HORSE, with J. S. Skinner's very valuable Additions;	2 00
BRIDGEMAN'S GARDENER'S ASSISTANT;	2 00
THE AMERICAN POULTRY BOOK;	37½
THE FARMER'S LAND MEASURER;	37½
DANA'S MUCK MANUAL;	50
Complete sets of the FARMERS' CABINET, half-bound, 9 vols.	7 50
DOWNING'S Landscape Gardening,	3 50
Downing's Fruits and Fruit Trees of America,	1 75
SKINNER'S Every Man his own Farrier,	50
AMERICAN Poulterer's Companion,	1 25
BOUSSINGAULT'S RURAL ECONOMY,	1 50
FARMERS' & EMIGRANTS' HANDBOOK,	1 00
MORRELL'S AMERICAN SHEPHERD,	1 00
BEVAN on the HONEY BEE,	31½
BUIST'S ROSE MANUAL,	75
SKINNER'S CATTLE & SHEEP DOCTOR,	50
AMERICAN FARRIER,	50
THE FARMER'S MINE,	75
HANNAM'S Economy of Waste Manures,	25
LIEBIG'S AGRICULTURAL CHEMISTRY,	25
“ ANIMAL CHEMISTRY,	25
“ FAMILIAR LETTERS,	12½

As well as his larger works on Chemistry and Agriculture.

Subscriptions received for Colman's Agricultural Tour—or single numbers sold.

☞ We are prepared to bind books to order.

### Seed Store,

No. 23 Market Street Philadelphia.

The subscriber keeps constantly a supply of White and Red clover, and other grass seeds. Field seeds, consisting of Spring and Winter Wheats, Potatoes, Oats, Barley, and choice varieties of Seed-corn. Also in season, Fruit and Shade Trees. Garden and Bird seeds generally. Guano in parcels to suit purchasers.

M. S. POWELL.  
tf.

Philad., March 15th.

## COATES' SEED STORE,

OF MORE THAN FORTY YEARS STANDING,

Where may constantly be had

Clover, Timothy, Orchard, Herd,

AND OTHER

GRASS SEEDS,

TOGETHER WITH A COMPLETE ASSORTMENT OF

GARDEN SEEDS,

Of the finest Quality and best Varieties,

JOS. P. H. COATES,

No. 49, Market st., Philad'a.

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## THE FARMERS' CABINET,

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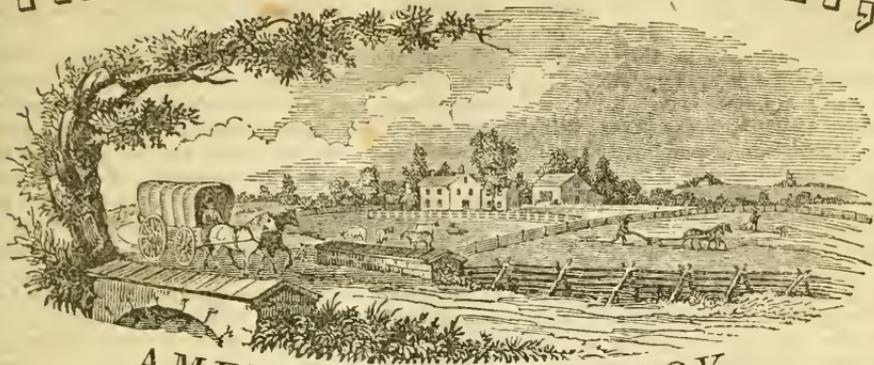
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# THE FARMERS' CABINET, AND



## AMERICAN HERD-BOOK.

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

Perfect Agriculture is the true foundation of all trade and industry.—LIEBIG.

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For the Farmers' Cabinet.

### Thaer's Principles of Agriculture--Vegetable Manures.

THESE may be ranked under the head of negative manures—they do not stimulate, but quietly return to the soil what it has lost by previous exhaustion. They are in no way as active as animal manures, but by acting on the principle of slow, but sure—gradually, but durably, restore all that a soil has lost by bad cultivation, or from being overworked; their decomposition may be hastened by lime, an alkali, or by animal manures. The loss of humus, or mould, is hence certainly,—though it may be more slowly—retrieved by vegetable manures, on letting the land remain in a state of repose, than by any other form of fertilizing. Those scourges of agriculture—weeds—in this way become most excellent fertilizers. If cut before they go to seed, or when in flower, and allowed to decompose, they restore, instead of removing, a portion of fertility—

CAB.—VOL. X.—No. 5.

nature thus contrives to compensate the farmer for the injury she menaced, in spreading over his fields those marked indications of his indolence and inefficiency. The ploughing in of green crops has, on the same principle, been found a most valuable mode of returning a soil to a fertile condition, and it is singular that a plan so manifestly correct, has not been more generally adopted. A few farmers in the county of Chester, either from the example of others or the suggestion of their own judgments, have gone back to the principle so long acted on in England, that one grain crop should not follow another, and have undertaken to follow oats with clover, instead of wheat; the clover being ploughed in, renews the strength of the land, and gives back to it some portion of that which was removed by the preceding crops. This system of ploughing in, or pasturing plants, intended as a manure, is very ancient. It was used by the Romans, and is kept up by the Italians. The practice of sowing the lupin, which one may find commended by Columella, and turning it into the ground, is still employed in Italy. In this country we have oats, Indian corn, and clover, for the same purpose. One of the most beautiful examples of the enriching effects of vegetable decomposition may be seen on an old sod, which has not perhaps been touched by a plough for thirty or forty years. The effect is very different from that usually wrought by time; it looks greener with age, as the

soil becomes more fertile with the decomposition of its own products.

The use of many of the vegetable manures so common in Europe, prevails to a very small extent in this country. The sweepings of the kitchen, soot, chips, rotten saw-dust, tanners' spent bark, and other matters that necessity forces the heavily taxed European to employ, are as a general rule, contemptuously thrown aside by the extravagant American. The facility of getting something to eat, renders him in comparison with the European cultivator, profuse and neglectful of nice cultivation. With the exception of our market gardeners in the immediate neighbourhood of large towns, there is very little economy in the use of manures or the management of land. They, however, or the best and more intelligent among them, make use of every thing that can increase their crops. Competition is too sharp among them to admit of apathy; the periodical returns of rent day, will make them look to their carrots and cabbages. And from some inquiries that we made a few years ago, among the more considerable of them, we found that they did make use of every manure that could be had. The refuse from breweries, sugar refineries, and starch factories, night soil, charcoal, coal dust, street sweepings, tan, and other things, were all applied to the great end of upholding the vegetable character of Philadelphia. Farmers despise this form of cultivating the earth, and of course neglect the means by which it is effected. They seem to prefer much complaining and small profits, to condescending to be nice, and particular, and economical in the management of their estates. Farming is no doubt what may be called a poor business, but it is not wise to make it worse than it ought to be, by a neglect of what may seem, taken singly, as trifles, but which in the aggregate and in their results, are of very great importance. Luck may make more money for a man in one day, than the whole amount of the profits of his farm during a life time. A speculator in stocks or real estate, may realize in one day, more than two hundred years of hard work will give the most honest and most laborious farmer; the president or cashier of a banking institution may plunder the property, with whose care he is entrusted, beggar his thousands, break more hearts, and desolate more firesides, than any conqueror that ever scourged the earth, then review the wretchedness he has made by his villainy, and live in luxury on the spoils. But these are exceptions in the usual course of affairs. Farmers have no reason to desire to imitate or to envy these instances of

accidental good fortune or rich rascality. With this slight deviation into the domain of morals, we will return to that of manures. Among the many other substances that lie at the farmer's hand, and which are employed in Europe, are the haulm of peas, beans, and potatoes, mixed when in a green state, with dung, and sea weeds, and pond weeds. Of the first, we know of no separate use, in this country. Of sea weeds, we have known one instance where land, on which we could feel, to its full, the curse of Adam, and on which no one but the most audacious and energetic Yankee could have made a potatoe grow, was brought to a degree of very considerable fertility. Of course, this land was near the sea-shore, and like much of the soil on the iron-bound shores of New England, where our pilgrim fathers very unwisely landed, was composed principally of stones and pine trees. The mud from the bottom of rivers, ponds, and places where stagnant water has remained for any length of time, and the scourings of old ditches, are matters, according to Mr. Thaer, which should be included among vegetable manures. The value of this mud as a manure, he rates very high, but it must not be applied unless perfectly dry, and where it contains much vegetable matter, it should be thrown into heaps until this is decomposed—the process of decomposition may be hastened by lime or fresh horse dung mixed with the mud. Where there is acidity this must be neutralized by animal manures, alkalies, or alkaline substances. In Dana's Muck Manual may be found statements commending the use of this material, and some experiments that bear out these statements, showing its strong action and the high degree of fertility it is capable of producing, even on the thin sandy soils of New England. A. L. E.

**A LARGE APPLE TREE.**—The York Republican says, "Our friend, Hugh O'Hail, Esq., of Carroll township, has furnished us with the following dimensions of an apple tree which stands on his land, and which has been much admired for its extraordinary size and fine bearing. About eighteen inches from the ground it measures twelve feet six inches in circumference—about five feet above the surface, eleven feet eight inches. At the height of seven or eight feet it divides or separates into six branches, one of which extends from the central trunk thirty-five feet—two, thirty-three feet, and the others nearly as far. Its greatest height is about fifty-seven and a half feet, and it has frequently borne from sixty to eighty bushels of apples a season by computation.

## Smithfield, London.

The great market for cattle, in England, perhaps the greatest in the world, is at Smithfield, in London. This market is principally for fat cattle and sheep, and for cows. It is held weekly, in the centre, and in one of the most crowded parts of this great metropolis. Monday is the day of general sale for fat cattle and sheep; Tuesday for hay and straw; Thursday is again a day of sale for hay and straw; and Friday for cattle, sheep, swine, and particularly for the sale of milch cows, and at 2 o'clock for scrub horses and asses. This day is not so large a market as Monday, and embraces the cattle that were left over on the Monday's market.

The market opens at daylight, at all seasons of the year, and closes at 3 o'clock in the afternoon, at which time every thing, sold or unsold, must be removed. The sheep and swine are enclosed in pens, railed in with wood, and containing seldom more than fifteen sheep in a pen. The cattle, as far as the accommodations will admit, are tied by the horns or neck, to long railings, which extend on the outside of the market-place, and likewise down the centre of the area. Between the rows of animals tied to these rails and facing each other, there is a passage-way; and there are, likewise, open spaces behind them and between them, so as to enable the purchasers to see the stock. In respect to the supernumerary animals, or those for which, for want of room, no tying-place is to be had, they are often driven into small circles, and, by a great deal of severity and cruelty, they are made, after being dreadfully beaten over the head and eyes, to stand with their heads turned in towards the centre of the circle. The poor animals, finding themselves in so novel a situation, stunned with a din and noise which no language can describe, and exhausted by fatigue and terror, are often glad to be let alone, and to remain quiet in situations into which they may be forced, which would otherwise be scarcely endurable. Man is almost sure to be a tyrant, when possessed with absolute power; and there is good reason to believe that he will have a heavy account to settle hereafter with the brute animals which he has most cruelly abused.\*

It is obvious that it would be difficult to make any exact assortment, or classification, of the animals in the case, according to their different breeds. The sheep are placed in one part of the market. The cattle occupy another. The cows, and calves, and swine, occupy other separate positions. But no classification of the beasts into the different breeds of Short-horns, Herefords, Devons, or West Highlanders, or Scots, is attempted, although, from the fact that individual farmers generally limit themselves to one species of stock, the contributions of different individuals, standing by themselves, present a sort of classification; and so give a better opportunity to an intelligent observer to compare the different breeds with each other.

*Forms of business in Smithfield.*—It is not here, as it is with us, that a drover goes through the country collecting, on his route, cattle from the different farmers, as he may chance to find them; but usually the farmer himself sends them to Smithfield, where they are put for sale into the hands of an accredited agent, whose commission for sale is established and understood. This commission is not a percentage upon the amount of sale, but so much per head. These, of course, are persons well known, and whose shrewdness and skill are undoubted. In the most extensive transactions of buying and selling, no paper is passed; but the price of the stock on sale being inquired, if the bargain is struck, the buyer and seller merely touch each other's hand, and there is no retraction. It is highly creditable to the commercial character of the country, and to the general integrity which prevails among the persons concerned in this great market, that, as I am informed by an individual familiar for years with the most extensive transactions in this place, a failure to fulfil these engagements, though no paper is passed between the parties, is of very rare occurrence.

In the sale of sheep and cattle, the business is always transacted through an accredited and established salesman, who has his regular commissions upon every animal sold. The sales are always for cash, unless the salesman himself chooses to assume the responsibility of giving credit, and there are

\* It is said that much of the cruelty which was formerly practised in these cases, is now prevented by the influence of the Animal's Friend Society, an Association quite numerous, whose exclusive object is to prevent cruelty to dumb beasts, and thus to protect those who are unable to protect themselves. They have numerous agents, and prosecute, without fear or

favour, every case of inhumanity—for it is a great misnomer to call such cases brutality—which comes under their notice, deserving censure or punishment. It is, undoubtedly, greatly owing to their exertions, that the odious practices of cock-fighting and dog-fighting are now not practised; or, if practised, conducted in the most secret manner.

always banking houses in the vicinity to render the usual facilities for business.

The customary commission for the sale of an ox of any value is four shillings, or about ninety-six cents; of a sheep eight pence or sixteen cents. The city receives a toll upon every beast exposed to sale in Smithfield, of one penny per head, and upon sheep at the rate of one shilling or twenty-four cents per score.

The value of the services of an intelligent, experienced, and honest salesman, is very great to the farmer, and much beyond the compensation ordinarily demanded. He is familiar with the state of the market, with the supply to be expected, with the prices generally taken, and with the characters of the persons with whom he has to deal, who know him as well. The farmer, going into the market to sell his cattle for himself, is liable to various impositions, of the extraordinary ingenuity and coolness of which, many experiments will not be necessary to convince him. It might happen, that, instead of returning home with bank notes and sovereigns in his pocket, he might, like Moses in the Vicar of Wakefield, bring back only a quantity of green spectacles.

The state of the market, the current demand, the supply to be expected, together with the state of the dead-meat market, and what supplies of meat already killed are to be expected, are all matters to be taken into calculation. These are all inquired into, and well known to a thoroughly intelligent and experienced salesman, but are very imperfectly understood by any other persons than those who make it their constant business to become acquainted with them. The division of labour is carried to a great extent in all the business pursuits of this great country, and, while it seems unfriendly to that general tact with which persons among us apply themselves to a great variety and diversity of pursuits, must obviously contribute to a high degree of skill or improvement in the particular art or profession where it is applied.

*Weights and Measures.*—Animals in Smithfield are almost always sold on the hoof; yet an estimate is formed of their weight, and the price given is calculated upon the number of pounds the animal is computed to yield after being slaughtered. The gross hundred weight of one hundred and twelve pounds is still used in England; but the calculations are generally made in stones of eight pounds. By an act of Parliament, the stone of fourteen pounds is required to be adopted in the reckoning in the market; but custom in this, as in many other cases, defies the authority of the go-

vernment, and eight pounds continue to be reckoned as the Smithfield stone.

The different measures and weights used in different parts of the kingdom are extremely inconvenient, and sadly perplexing to a stranger. The English, the Scotch, and the Irish acre are each different from each other. Grain is, in different places, sold by the bushel, by the quarter, by the comb, by the boll, and by the load; and a load is in some places four, in others three bushels. A Scotch pint is two English quarts. In Covent Garden market, two pottles of strawberries, containing little more than a pint each, are called a gallon. Potatoes are sometimes sold by weight, and sometimes by the barrel; in some places by the stone of fourteen pounds, in some by the stone of sixteen pounds. A dozen of eggs is in some places fifteen. I may perhaps be asked, if this is not in Ireland; but I shall not say, excepting to add, as far as my experience goes, fifteen to a dozen would be a very proper index of Irish hospitality and kindness. In one market, in Yorkshire, a pound of butter is twenty ounces avoirdupois; in Staffordshire, eighteen ounces. In Norwich, butter is sold by the pint; in Cambridge, it is literally sold by the yard, being made into rolls of a certain size, and measured off in feet and inches. In one of our hot days in July, with the glass at 95°, our market-men, at this rate, would have little difficulty in giving full measure. I have already alluded to the force of custom. It has many advantages, but why should it stand in the way of improvement? The prevalence of an unmeaning or a useless custom has nothing to recommend it. Yet I believe I shall be doing no injustice to the English—the last thing certainly which I should wish to do to a people whom I so highly respect and love—if I were to say, many of them greatly prefer antiquity to utility, and will hold on to an ancient custom with the pertinacity of a drowning man, though its meaning has entirely ceased, and its observance is on every account inconvenient and burdensome. With such persons, all argument on the subject of improvement is idle; the conception has never yet dawned upon them.

Such a varying standard of weight, or measure, or value, renders many statements quite unintelligible to a stranger or one ignorant of local customs, and comparisons and calculations all but impossible.

*Weight of Animals, mode of ascertaining.*—The weight of an animal in Smithfield is reckoned by the weight of the four quarters. The hide, rough tallow, and offal, are not taken into the account. There are rules given by which to determine the

weight of animals, when slaughtered, by external measurement of them when alive. The salesmen in Smithfield do not rely upon these rules, but estimate the weight of cattle by the eye; and mere judgment, founded upon long practice, evinces most extraordinary approaches to exactness, seldom varying but few pounds. The rules, however, to which I refer, have a value to persons who are not accustomed to estimate by the eye; and a series of tables have been constructed upon these rules, which, if they could be relied upon, would be of considerable use in private practice. The girth of the ox—for it does not apply to cows as well as to oxen, as their shape is much less regular—is to be taken directly behind the shoulder, and the length is to be measured from the front of the shoulder-bone to the end of the bone on the rump, where a line dropping down at right angles with the line on the back, would just clear the thigh or buttock. Then, according to a rule given me by Lord Spencer, "Reduce the feet into inches; multiply the girth by the length, and that product by the fraction .001944, which will give the weight in pounds;" or, in another form, as the rule is quoted by Mr. Hillyard, "Estimating the weight of a cubic inch of meat at 171 grains, then girth 7 feet 6 inches, and length 5 feet 4 inches, gives 41,235.84 cubic inches, which, multiplied by 171, gives 7,051,328 grains, equal to 125 stones, 7 lbs., of 8 lbs. to the stone." Another mode of estimating the weight of cattle, is to ascertain their live weight upon a platform balance, common enough in the United States. Then, according to some authorities, every

112 lbs. live weight will produce 72 pounds of beef; but a coarse, large-boned ox, will not produce so much. Another way is to deduct one-third of the live weight, which is commonly deemed a fair allowance; and also if the beast is not quite fat, from  $2\frac{1}{2}$  to 5 per cent. in addition. Another able authority states, "that the proportion which the dead weight bears to the live weight of animals was reckoned at one half the live weight; but subsequent experiments in the more improved breed of animals show that this is much too small a proportion, it being more correctly represented by the fractional quantity .605, the weight of the animal being assumed as 1. This would be about three-fifths for the dead weight. The gross weight of the animal being then multiplied by .605, will give the result in the same denomination in which the gross weight is given." It is obvious, however, that such rules can be little more than an approximation to exactness, since the circumstances under which the animal is weighed, whether upon a full or an empty stomach, must essentially affect the result. It will be interesting, I am persuaded, to many of my readers, if I give an account of the weights of some of the most remarkable animals which, within a few years past, have been exhibited at the show of the Smithfield Club, which takes place annually in December; and the account, besides giving the weight of the animals, will show, at the same time, how nearly the weight calculated by rule, and the weight estimated by the judgment of experienced men, corresponded with the actual weight, ascertained upon the animals' being slaughtered.

	YEAR.	GIRTH.		LENGTH.		STONE OF EIGHT POUNDS.		
		FT.	IN.	FT.	IN.	Computed Weight.	Estimated Weight.	Butcher's Weight.
Lord Spencer's Durham ox, . . . .	1828	9.	2	6.	0	211	210	210
The Scotch heifer, . . . . .	1830	7.	8	5.	7	138	140	138
Mr. Townsend's Durham heifer, . . . .	1833	8.	3	5.	9	164	175	176 $\frac{1}{2}$
Mr. Baker's Durham ox, . . . . .	1833	8.	9 $\frac{1}{2}$	6.	0	195	205	206 $\frac{1}{2}$
Mr. Buckley's Hereford ox, . . . .	1833	7.	11	5.	5	143	150	144
Lord Spencer's Durham ox, . . . .	1834	9.	7	6.	1	236	240	236
Lord Oxford's Hereford ox, . . . .	1834	9.	4	5.	10	214	222	236
Mr. Hillyard's do. heifer, . . . .	1834	8.	7	5.	7	175	184	192
Lord Brownlow's do. do. . . .	1834	8.	0	5.	9	155	164	
Marquis of Exeter's do. do. . . .	1835	7.	11	5.	0	134	138	142 $\frac{1}{2}$
Lord Spencer's do. do. . . .	1835	7.	8	5.	3	130	138	
Lord Spencer's Durham ox, . . . .	1835	9.	2	6.	0	211	218	210
Lord Spencer's do. do. . . .	1836	9.	2	6.	1	215	222	218
Marquis of Tavistock's do. do. . . .	1836	8.	10	5.	8	187	196	
Lord Leicester's Devon ox, . . . .	1837	8.	1	5.	2	142	145	152
Mr. Giblet's one year old Devon, . . . .	1837	8.	4	5.	5	158	162	166.4
Mr. Baker's heifer, . . . . .	1837	7.	11	5.	6	148	152	152.3
Mr. Hillyard's Devon ox, . . . .	1838	8.	1	5.	2	142	142	139.6
Marquis of Exeter's Durham ox, . . . .	1841	8.	9	5.	9	185	185	185
Duke of Bedford's Hereford ox, . . . .	1841	8.	9	5.	9	185	185	180

The practice at Brighton, Massachusetts, is to sell the animal at a certain rate per pound, or per hundred pounds. The animal is then slaughtered, and the return of his weight made to the owner or drover. The owner or drover does not see his animal killed or weighed. The market takes place on Monday, but he is commonly detained until Thursday, before the weight of the animal is ascertained, and he receives his pay. This, besides its expense, is on every account a serious evil. It cannot be denied, likewise, that the temptations to a fraudulent return of the weight are very strong, and that much dissatisfaction, very often without question, groundless, frequently arises. It is surprising how near to exactness the judgment of an intelligent and experienced man approaches; but as this method is liable to the objection of a man's being judge in his own case, it would seem very desirable that some less exceptionable method should be adopted. I can think of no one more eligible than that of ascertaining the live weight on a platform balance, and then adopting some general rule as to the allowance to be made for the difference between the live and the dead weight. A rate of discount or allowance, founded upon repeated and exact experiments, would be equally fair for both parties. The adoption of such a rule would be of the greatest service in enabling the drover or owner to close his business in one day, and would, in general, be much more satisfactory to the farmer, who sends his cattle to market, and is not always without his suspicions of an imperfect return. I offer these suggestions with great diffidence, especially when I read, in a letter addressed to me by a practical man, "that there is no mathematical rule upon which he places any reliance; that he has often been invited to test the correctness of measuring beasts, and also to determine their dead, from ascertaining their live weight, but has found that no confidence can be placed upon such rules." He adds, "that after handling beasts to ascertain their fatness, the mind, by practice, is intuitively impressed with about the weight of the four quarters, exclusive of any offal; and that experienced men can tell the weight of beasts, on an average, within three stone of eight pounds, and of sheep within two pounds." I believe all this; and it presents a beautiful example of what the mind is capable of, and of what it may be brought to under careful training and long practice. We certainly know that the mind is a very good clock, and measures the time with wonderful exactness, both sleeping and waking. I have been often struck with the extraordinary precision with which the poor

blind horses, which move the ferry-boat between Troy and the Albany side of the river, measure the distance which they have come, and after making a pause just before they touch the opposite shore, seem to know exactly how many more strokes or turns to give to the paddles, in order to reach it. I hope I shall not offend the pride of any of my readers, by this comparison of the brute with the human mind. Man is very apt to think himself the only knowing animal upon the earth; and I have no doubt that some of the lower animals have the same self-conceit. It is interesting to see reason and moral sentiment, the noblest gift of Heaven, any where diffused, and even in the most humble forms. Such indications strengthen the claims which all sentient beings have upon our kindness and respect; and several of the lower animals—if any being is to be considered inferior who accomplishes the true purposes of his creation—read many striking moral lessons to mankind.

The character of a salesman in Smithfield market, for judgment and integrity, is of immense importance to him. He is forbidden by law to purchase on his own account; and it is clearly most important that his private interest should not conflict with that of his employer. But it is easy to see the futility of all laws to make men honest, where evasions in a variety of forms are so practicable. Personal character, and a healthful state of public opinion, form, in such cases, the great security.

*Amount of business.*—The amount of business transacted in Smithfield is enormous. It is estimated at not less than £100,000, or half a million of dollars, every week. The Smithfield market is certainly one of the great sights of London. The returns of the market on the Christmas week of 1844, when I was present, gave 5000 beasts and 47,000 sheep. This was considered the largest market ever remembered; and the extraordinary quantity of stock was doubtless, in some measure, to be attributed to the severe drought of the preceding summer, and the consequent scarcity of fodder, which compelled the farmers to lessen their stock. The largest return of stock ascertained for any year, between the years 1821 and 1842, was in the year 1838, and was,

Of cattle,	183,362
Of sheep,	1,403,400

In the year 1830, there were sold in Smithfield,

Beasts,	159,907
Sheep,	1,287,071
Pigs,	254,672
Calves,	22,500

In the year 1842,

Of cattle,	175,317
Of sheep,	1,468,960

The supplies since that have not diminished. But this by no means comprehends the whole supply of provision to London, as immense amounts of slaughtered meat are brought constantly to the dead market, from distant parts of the kingdom, by the innumerable steam conveyances, which have so much increased the facilities of access to the metropolis. We need scarcely be surprised at any distance from which it may be brought, since I have seen Leicester or Southdown mutton, killed and dressed in England, for sale in the market at Boston. In spite of the doctrines of restricted or free trade, the benevolent mind cannot help rejoicing in a facility of intercourse, which renders the mutual interchange of the respective advantages and blessings of different countries and climates so convenient, and thus does away forever with all that fear of want or famine which, in former times, so often followed any extraordinary contingency of the seasons. The quantity of meat, and that principally mutton, brought from six different ports in Scotland to London, was ascertained in one case, to be about 2364 tons in six months; besides a very large amount of live stock. It has probably greatly increased with the opening of every new means of conveyance.

The friend to whom I am indebted for much of the above information in regard to Smithfield, states the average weekly sale of beasts in Smithfield at about 3000, and of sheep, about 30,000; of calves, about 300; of pigs, about 500. At the dead market, about 3000 sheep are sold weekly. Of the live stock, the beasts average from £15 to £18 per head, and sheep 30 shillings. A pound in this case may be most conveniently reckoned at five dollars, and a shilling, therefore, at a quarter of a dollar. The average age of beasts sold in Smithfield is from two to three years, and of sheep from fifteen months to two years. It is not to be supposed that these returns by any means embrace all the beasts slaughtered, or the meat consumed in the metropolis and its vicinity; for great numbers are sold before they reach the market, and are therefore not reported. Vast amounts, likewise, are imported from Ireland; and the cotters of this fertile but wretched country, where a large portion of the inhabitants are, for a considerable part of the year, upon the borders of starvation, are obliged to see their only pig—the companion and pet of their children—and their

only calf or steer, sent off to other markets to fill other mouths. Smithfield, though much the largest, is only one of the markets of the country; but the immense supplies which are here furnished must give some idea of the improvement and degree of perfection of the agriculture of a country from which they are drawn.

The poultry markets, and the markets for game, are also most extensive. The fish markets in London seem to me unsurpassed for their excellence, and certainly embrace a great variety of the very best kinds. These, of course, furnish their full proportion of the supplies of London.

#### Mr. Morris's Corn Crop.

MR. CABINET.—That is a thundering crop of corn of Mr. Morris's—see page 115, of your last No. If it were not for the respectability of the names attached, I should be inclined to suspect its correctness I must confess, without, however, meaning to call in question any one's veracity. It may also be suggested, that the mode of measurement is not precisely what might be wished; nevertheless when all is said, there remains proof sufficient to speak volumes in praise of the land, its management, and the plough, which I am pleased to find the owner has the "magnanimity" to permit to come in for a share of the merit. I had expected to find that the land had been turned in the autumn, and am inclined to believe if it had, the average of the field would have equalled its greatest yield "in some parts;" so strong an advocate am I for fall or autumnal ploughing, when properly executed. But this can never be done by the cutting or the Concave ploughs, which lay their furrows too close and flat for winter fallow; for as the rains cannot penetrate the earth, but must therefore pass off by the surface, washing and carrying away its finer particles at every flood, and leaving the soil flat and hard in the spring, quite unfit for seeding without another ploughing, which is sure to let up the weeds by tens of thousands, to cope with the crop from the time of its germinating, the most ruinous effects are sure to follow, and are the cause of the very general disuse of fall ploughing. Not so, however, after the Centre-draught plough has pulverized the furrow-slice to the depth it is turned, and thrown it up high and dry, filling the furrow with broken earth, upon which the next furrow-slice is deposited and kept from falling flat on the bottom of the furrow, there to stick, and operate on the principle of capillary attraction, by drawing and retaining moisture from the subsoil

all winter, to the drowning out of the spring crops.

I remember the time when I considered the *dirty furrow* left by the Prouty plough, with the rough and undermined edge it cuts in passing, unpardonable defects! but an extra dozen bushels of corn per acre the present year, have convinced me that they are its chief recommendations; after which comes the substantial fact, that to this looseness of the soil is attributable, in the after-working of the crop, a saving of one half the labour, and the destruction of weeds innumerable. We see in the case of Mr. Morris, that "the whole field being remarkably clean and free from weeds, and the soil in a mellow and friable condition," is noticed by the committee on examination, and made matter of commendation; while Mr. Morris observes: "This field, when the *ploughing* was finished, owing to the open and pulverized appearance of the sod, and the interstices between the furrows being all filled up, allowing no grass or weeds to be seen, resembled one already *harrowed*, and continued mellow through the season"—precisely the characteristics of the working of the Centre-draught plough, and discernible to every practiced eye, even from a distance.

But to those who have witnessed the ploughing done the present autumn on the farms of Mr. Isaac Roberts, of Spring Mill, and his near neighbour, Mr. Cresson, to add another word in praise of the Prouty & Mears' plough, or the perfection of fall ploughing, will appear quite superfluous. It is only to watch the results of such admirable management and *premium ploughing*, when conviction of its importance will follow, as naturally as the effect follows the cause.

D. W.

Conshehocken, Nov. 26th, 1845.

### Extracts from J. Dungan's Address,

*Before the Bucks County Agricultural Society, Tenth month 16th, 1845.*

ACCORDING to some recent experiments, a crop of potatoes extracts from the soil twenty times as much potash, seven times as much soda, fourteen times as much lime, and nearly three times as much phosphoric acid, as a crop of wheat. Turnips a much larger proportion than potatoes; clover hay, fourteen times as much potash, twenty-four times as much lime, ten times as much sulphuric acid, and nearly three times as much phosphoric acid. If the results of those experiments are correct, potatoes and turnips should never be cultivated in a soil, the inorganic basis of which is deficient; and contrary to

the common impression, clover, notwithstanding its fertilizing qualities in some respects, is an impoverisher of the land, if not consumed on the farm, or even if consumed and the manure left in a condition for the alkalies, phosphates and other salts to be leached out of it by the rains. Clover meliorates and supplies the soil with a large amount of vegetable matter, hence it is a cheap and an efficient fertilizer, when there is a good inorganic basis; but when there is a deficiency of potash, lime, sulphuric and phosphoric acid, it must in the long run, if removed from the soil, have an impoverishing tendency.

The soil in this country, is evidently exhausted, to a great degree, of some of the elements requisite to a luxuriant growth of clover. It flourished some years since much better than it does now, notwithstanding our superior care in cultivating and manuring the soil. Lime and plaster we are in the habit of supplying. The heavy crops which follow the application of those manures have exhausted the soil to a very great extent, of other indispensable inorganic constituents. As an evidence of this fact, we have seen clover which had been sown on oats, after corn, which had been ashed in the hill, flourishing on the hills from the effects of the ashes, whilst between the hills the land was entirely bare. The combustion of vegetables dissipates all their organic constituents: but ashes contain all the inorganic elements which have entered into their growth: hence the striking effect of its application to some soils, proves conclusively that those soils are very deficient in some of those elements.

Many farms in this county have been seriously injured by deep ploughing, the practice having been adopted in consideration of its favourable effects on soils differently constituted. There is still a difference of sentiment among us in relation to this matter, notwithstanding all the experiments known to me, tend to establish the fact, that deep ploughing impoverishes nearly all the veins of land in this district of country.

In support of this, we have the evidence of many of the best and most successful farmers in this county. One of the vice-presidents of this Society, whose large and well managed farm is perhaps unrivalled in fertility, testifies that his land cannot be beneficially ploughed more than four inches deep. Our agricultural periodicals, so extensively useful, have done some injury by their indiscriminate and unqualified advocacy of deep ploughing. I am so well assured of the correctness of the view I have presented in relation to this matter, that I can commend it, with entire confidence in

its good practical results, to the consideration and adoption of the farming community.

The prejudice against the use of lime and plaster has been overcome with difficulty, notwithstanding the striking effects of their early application. The objection to those mineral manures, that they would stimulate the soil to a fruitfulness which would soon exhaust it, is not altogether unfounded, provided care is not taken to keep up a supply of other minerals, which are indispensable elements in the basis of the vegetable kingdom. Lime and plaster do not only enter into the composition of plants, but they have an agency in evolving other mineral elements, as well as securing to the soil the aerial constituents, carbonic acid and ammonia. Quick lime, however, we should remark, expels ammonia, and should not, therefore be mixed with manure, either in compost beds or in the soil. Wheat crops have been frequently injured in consequence of the dissipation of ammonia by the application of quick lime with manure. Plaster has the opposite effect. Most of the plaster used on our farms would be first well employed as an agent in fixing the fertilizing gases in the manure. I have known rich loams—soils containing an abundance of soluble vegetable matter, much injured by the use of fresh lime. But the fertility of fresh lands, or soils which from any cause, contain a large amount of partially decomposed vegetable and animal matter would be increased and preserved by the use of plaster. It facilitates decomposition and at the same time fixes the ammonia in the soil. To escape any injury from the use of lime as a manure, and to insure its best effects, the safest general rule is to spread it on grass lands and leave it a considerable length of time exposed to the atmosphere.

#### Taste around our Farm Buildings.

A COPY of an ADDRESS delivered at Rome, N. Y., on the 9th of Ninth month last, before the Oneida County Agricultural Society, by *Elon Constock*, its President, has been forwarded. The following extracts are made from it, with an apprehension that they may possibly serve as valuable hints to some of our readers.—Ed.

THERE is great need of improvement in every thing pertaining to the arrangements of our buildings and grounds, including the general plan of the farm, for strange as it may sound to some, there is as much propriety in laying out a farm in just proportions, and in fields of suitable shape and size, and with direct reference to the convenience of approaching the buildings, &c., as there is in bestowing upon the streets and

public grounds of the village or city, like attention. It costs no more, and not unfrequently much less expenditure, to do these properly, and so as to give the whole farm an attractive and pleasing appearance, than to lay it out in such a manner as to render it repulsive to the man of taste and refinement.

The same remarks will apply with equal force to the erection of dwellings, and the laying out of the garden and grounds in their vicinity. In the country, where land is cheap, the farmer can well afford an acre of ground to devote to the convenience and pleasure of his family, and especially when this same acre may be made to produce grass equal to any other part of the farm, besides affording room for the trees and shrubbery which should be planted in the vicinity of every farm house. An acre of ground is none too much to devote to these purposes, and in making arrangements for building, the farmer should in my judgment, appropriate at least that amount, exclusive of that needed for the garden and other useful purposes. An acre of ground on most farms will not exceed in value fifty dollars, and to ornament it with trees and shrubbery, may perhaps cost nearly as much more, but when we take into account the produce which may be obtained from it if properly managed, there is really very little loss to the farmer in a pecuniary view.

GRAPES.—As there appears an increasing disposition to grow the finer kinds of grapes under glass, allow me to call attention to a very simple method I have seen practiced with success. Your vines being established in some eligible place, dig a pit to the depth of five feet; about the first of March fill it within two feet of the surface with fresh horse manure—introduce your vines and shut the sashes close till the heat arises; after the vines begin to break, regulate the heat by admission of air—be careful to cover the glass at night until all danger of frost is past—the moist heat from the manure is far preferable to fire heat—and if the manure is well incorporated with oak leaves, the heat will be more moderate and last longer; by the time the heat from the manure is exhausted, there will be sufficient of *sun* in this fine climate to perfect the crop. Constant attention, and a knowledge of the culture of the vine under glass is of course necessary, ten minutes neglect would ruin the whole.—*Farmer and Mechanic.*

EVERY farm should own a good farmer.

**Fall Ploughing—Dorking Fowls.**

We give the following extract of a letter from Beaufort, with a hope that it may draw forth the information called for.—ED.

*To the Editor of the Farmers' Cabinet:*

SIR,—I see October or fall ploughing highly recommended as a preventive of the wire worm, which I believe is the same as what is known among us as the heart worm, from its piercing the young corn to the heart below ground, and causing the centre leaves to die; after which the plant never comes to any thing. I have found that soaking my seed in a saturated solution of saltpetre from twelve to thirty-six hours, a certain preventive of every worm except the cut, or brown worm, which does no perceptible, if any harm, even when it cuts off the corn above ground. It also acts as a manure in the early stage of its growth, thereby shortening the time it is exposed to the depredation of birds. One year that I had no saltpetre, an excellent stand of early corn was ruined by the heart worm, which will show you that I have them in abundance.

I have a breed of fowls which are about the size of the Malay, with yellow plumage and legs also, but their legs are short, and they are not liable to the gout, as the Malays are. They are bad layers, laying but few eggs, and those small in proportion to their size; inveterate setters, but poor mothers, as they kill most of their chickens from their weight, and the chickens are long in coming to maturity. Are these the Bucks county fowls? Are the Ostrich or Booby fowls to be procured in or about Philadelphia? and at what price? Information on these subjects would much oblige me and probably others. I have for two years tried a few black Poland hens, with a golden Poland cock, but have found them rather smaller than our common dunghill fowl, not better layers, and much more delicate and hard to raise. Though pretty, I find them unprofitable, and mean to abandon them. I am afraid of the Dorking, as their legs are short and white. Short legs are a disadvantage, as chickens are more easily injured by the dew in the morning, and *green* legs indicate firmness and fineness of grain, and juiciness of meat, while the Dorkings have white. I wish to raise for my own eating only, therefore wish only good ones. If there is any dealer in fancy poultry in Philadelphia, you may put this part of my letter into his hands, and let him answer me direct, if you do not wish to insert the information in your columns.

Yours respectfully, R. C.

Beaufort, S. C., Nov. 1st, 1845.

**Green Crops for Stock.**

WE are quite of the opinion that our farmers give too little attention to the sowing of corn, oats, &c., broadcast, to cut and feed to their cattle in a green state. It is a pretty well established fact, that there is great economy in it; and why should we not avail ourselves of a practice that enables us to economise in our land and in its valuable products? If the sowing system, where only the ordinary, natural or artificial grasses are used, is to the advantage of the farmer who manages rich land, how abundantly advantageous must be the reliance, to a certain extent, upon corn, &c., to him who manages poor land? more stock may be kept in summer, and more may be kept in winter, because more grass land is afforded for the scythe—to say nothing about the increased quantity of manure that is thus secured. It is true this is not the season of the year to practice what we are recommending—but another year will come, and then let farmers bear it in mind. The article below, taken from the Massachusetts Ploughman, well deserves a thought.—ED.

CAPTAIN RANDALL, of New Bedford, has recently published in the *N. E. Farmer* an account of the weight of his corn sown broadcast on a couple of acres and some rods. He says 35 tons of manure were spread upon each acre. Ten bushels of white, flat, Maryland corn were sown on two acres and thirty-two rods. The whole was well ploughed and repeatedly harrowed, and a heavy roller was applied. Three separate rods of this corn were cut and weighed, and the average weight per rod, was 388 lbs. This gives between 31 and 32 tons per acre, sown broadcast, very highly manured and land well prepared.

We think 40 tons per acre may be grown by sowing in drills, but the labour would be more, though the seed would not cost one quarter as much. Captain Randall says he fed out this corn from two acres and thirty rods to twenty cows, three other cattle, and five calves, and it kept them seven weeks and five days with what they could pick in a dry pasture. And he is fully satisfied that this corn was equal to 15 tons of the very best of English hay.

But we think Captain R. puts a wrong estimate on this fodder from his corn-field. Fifteen tons of hay would keep his stock through half the winter without any aid from the pasture ground, yet with all his stock could bite, bushes and all, his corn kept his stock but one-third of the time that cattle are fed in winter.

Cattle will find something in the driest pasture, and will partially fill themselves there, even though you feed out the richest products of the farm.

Again, the two acres and thirty-two rods of ground, with this high manuring, would

have produced this season 160 bushels of shelled corn, besides all the stalks and husks. This corn beat out in meal would make an allowance of  $6\frac{2}{3}$  bushels to each of the 24 cattle for seven weeks and five days—or 213 quarts of meal to each. That is, about three quarts of meal per day for each animal, besides the husks and stalks. Should we not think it costly feeding to give out so much in addition to what could be obtained in the pasture?

We wish to see more experiments made on feeding out green corn, and we therefore make these remarks on the experiment of Captain Randall.

### The Wheat and Indian Corn Crop of 1845.

THE aggregate crops throughout the U. States form a subject of congratulation for every lover of his country. The wheat crop alone for the present year, is estimated at 125,000,000 of bushels. The wheat crop of 1842, which was the largest ever previously raised in this country, was 103,000,000 bushels. The increase of 22,000,000 shows not less the large additional amount of land brought under cultivation, than the genial character of the last summer.

The crop of Michigan is comparatively larger than that of any other State in the Union. With a population of not over 400,000, she raises this year at least 7,000,000 bushels of wheat. The quality is also of the very best. The Wolverines are glorying in their abundance, and they say they can furnish Europe with all the bread she may need. The Central rail-road now brings down to Detroit 10,000 bushels of wheat daily, but the supply is so very heavy at Marshall and the other depots at this busy season, that the motive power cannot take it off as fast as the forwarders require. This will give some idea of the production of Michigan. The recent advance in prices will most fortunately afford a fair profit to the producer, and thus with an immense crop he reaps a high price—which fortunate combination is all that is wanted to ensure a sound and enviable prosperity.

In 1844, the amount of Indian corn raised, according to the best calculations, was about 425,000,000 of bushels. Commenting upon this subject, the Albany Argus says:—

“The half-starved operatives of Europe may well look at the returns with glistening eyes, for it affords 22 bushels of corn alone for every man, woman and child in this country. Indian corn will rarely bear exportation, and therefore but little is carried abroad. It is nearly all consumed at home.

Our cattle enjoy an abundance of that food which would be deemed a luxury in Europe. Such is the prolific fertility of our soil and the extent of production under the competition of freemen.

Egypt was once called the granary of the world, but America in the extent of its wheat production, as well as the superiority of its quality, will throw into the shade even the fables of Herodotus.—*Bicknell's Reporter*.

MAKING AND SAVING MANURES.—Several interesting and useful volumes have been written on the management and application of farm-yard manure. I can say little more on this subject this time than give the opinion that we manage the whole affair in a most wasteful and unscientific manner generally. Instead of saving carefully every solid and liquid substance about our premises, and by combining them with bog muck, the sediment of bogs and ditches, parings from the road-side, loam from the woodlands, and decaying vegetables, making them leaven the whole lump, with the addition of ashes, soot, plaster, lime, salt, &c., we suffer thousands of loads to be exposed to sun and rains, which dissipate the most valuable portions, and impoverish our means of prosperity.

Every family who uses a barrel of soft soap in a year, may saturate two cords or four ox-cart loads of loam with suds and filth of the wash-room, which would be a good top-dressing to an acre of grass land, or half an acre of wheat. I could speak of other wastes which happen about almost every house, which if they were saved, and properly composted, would manure in the State of Maine, 100,000 acres of wheat. In China, almost no cattle are kept, and no dependence placed on barn-yard manure. Their sole resort is to compost, formed from the refuse matter about human dwellings, and the most of that land which sustains 300,000,000 human beings is a garden.—*Dr. Bates' Ad.*

CURIOUS FACTS IN GRAFTING.—I have just visited an orchard of Mr. Jeremiah Lambertson, Flushing, L. I., and was shown a small apple tree, into which in April, 1844, thirteen grafts of different kinds were inserted, all sweet, and all ripening about the same time, in the latter part of July. On one of the grafts of the strawberry variety, of about twenty inches growth, there had grown eight fine strawberry apples. The graft had two branches, on one of which six beautiful apples hung in one cluster, on the other there were two, each nearly as large as a hen's egg.—*American Agriculturist*.

### Visit to the Farm of Hon. Daniel Webster, Marshfield.

WE have been gratified by a visit to the farm of this distinguished statesman, and had the pleasure of holding converse with him as a farmer in his retirement, and who, by his urbane and friendly manner makes one almost forget that he is in the presence of one of the greatest intellects of the age. As a public man, he is well known, but not as a citizen and "the Farmer of Marshfield"—at home, on his farm, or among his neighbours. Here the mind is unbent—the stirring scenes of political life are apparently thrown aside and forgotten, and the farmer may approach him on equal ground, and however experienced he may be in the one pursuit of his life, he will find Mr. Webster at home on the subject of agriculture, with a disposition as ready to impart, as he is to receive information, on a business which appears to be more his pleasure than his profit. But if his farming does not result in pecuniary profit, he has the satisfaction—which, in a mind like his, is prized far higher than pecuniary gain—of countenancing and encouraging by his example, the great agricultural interests of the nation, as well as the influence he exerts on all suitable occasions to promote them.

His farm is extensive, and that we might have the best opportunity to see every part of it, his foreman with a carriage, was at our service, to take us over it, and explain the various operations and experiments that are in progress. Mr. Webster also devoted a portion of the time we remained on the farm, in pointing out to us the improvements he had already made, as well as those he had in contemplation, and related many interesting incidents in the history of the family of the original proprietors of his farm, and of events which transpired in the early history of this ancient town.

Mr. Webster's farm contains about *fifteen hundred acres*. This large area embraces a great variety of soil, about 300 acres of it salt marsh, the remainder very diverse: some portions of it may be considered of first quality, other sections medium, and some of it rather inferior; but none so poor that good crops cannot be produced with good manuring. The situation is a fine one for a stock farm—and if good prices for good beef and mutton could be obtained, it might be a profitable farm for that purpose. What adds much to the value of the place is, the facility with which sea manure can be obtained. It is said that there are seven miles of beach, reckoning all the indentures and various out-lines of the shore which skirts the farm.

Here large quantities of kelp are annually obtained, and in some seasons white fish to any extent are caught. With these natural resources so near at hand, the farm is rapidly increasing in value and productiveness. Wherever these fertilizing substances have been applied their beneficial effect is obvious. A large portion of the farm is devoted to pasturage, which feeds not only Mr. Webster's large stock of cattle, but many others of his neighbours, which are pastured by the week or by the season.

The mansion house of Mr. Webster makes quite an imposing appearance as it is seen from the road, having recently been fitted up and large additions made to the old part, which was originally a square house, two and a half stories high, with a wing extending back: a wing containing a suit of rooms, including a spacious library, has been added, making an extensive front, with a piazza the whole length, extending round the ends of the building and part of the rear. The old and new parts of the building harmonize very well. Comfort, convenience and neatness are more conspicuous in the arrangement than any effort at display. The mansion is situated thirty or forty rods from the public road, and is approached by a broad drive way, bordered by a hedge and belt of trees and shrubs. In front of the house is a fine lawn of five or six acres, dotted with trees in groups and single, and ornamented near the dwelling with fanciful beds of flowers, cut out in the smooth sward. But the most striking object which meets the eye at first sight, is a majestic elm tree, near the east corner of the house, which forms a complete bower. It stands on an oval grass plot, which makes a fine carpet for the bower. At a distance of eight or ten feet from the ground the branches extend in every direction horizontally, gently curving over till they rest upon the green sward, excepting on the side next to the house, where it has been necessary to cut out some of the lower limbs, that carriages may pass to the eastern door. The branches on this side nearly touch the house, and form a complete canopy to this entrance. The longest diameter of this tree bower is 94 feet—perhaps 70 the other way. Seats are arranged around the tree near the trunk, where is a most delightful retreat, especially in such a day as was that when we enjoyed its shade, the thermometer indicating the heat as near 90 degrees. The tree is said to have been planted eighty years ago.

The section of the farm on which the house stands, contains about 40 acres, and is bounded on three sides by a wide belt of young trees, through which there is a winding walk. In this area are included the

lawn in front; to the west, the orchard; in the rear, grass, and a large fish pond, ornamented with a boat moored upon its surface, which an apprentice boy, while engaged in painting the house, took a fancy to convert into a mimic man-of-war; to the east, an extensive fruit, vegetable, and flower garden, of three or four acres; and beyond this a conical hill, crowned with a summer house. When we visited this farm five years ago, this hill had the appearance of a miserable gravel-knoll, with a few stunted shrubs and trees. It was now covered by a luxuriant growth of young trees and shrubs, 10 to 12 feet high—among them many locust and other trees which had been raised from seed, and other species which had been transplanted. The belts had been formed in the same way. In rear of the garden, and at the foot of the hill, is an extensive poultry-yard, well stocked with every variety of domestic fowls, with a pond for the accommodation of the aquatic tribes. In the rear of the house, at the north-east angles, are carriage houses, stable and other outbuildings, and a little further back, a large and well constructed barn.

From the piazza of the house, beyond the belt of trees, and on rising ground, in a westerly direction, the eye rests upon extensive fields of grain, roots, &c.; southerly, a sheep pasture, in which we saw the Leicester sheep, and further to the east, woodland.

The house of the head farmer is seen to the east, as the visitor enters the avenue to the mansion, and back of it, extensive ranges of cattle yards, piggery and sheds, and another fine large barn, now in the process of building, and nearly finished. There is no cellar under the barn, but Mr. Webster has hit upon a method to save every drop of the liquid manure, and in the best possible way. The planks composing the floor of the cattle's quarters, or *byre*, as the Scotch call it, are laid with an opening between them of about one half inch, and so arranged as to be easily taken up. The idea is to place about two feet of loam or other earth, under the floor; this will absorb all the liquid part of the manure as it runs down through the openings, and in the spring will be converted into the finest manure, when it is to be removed and replaced by fresh mould. Instead of having the upper part of the barn tight, he has purposely had it finished with crevices between the boards above the byres, to admit the air; but the byres are made tight by battens nailed on the inside. Instead of losing all the room over the drive-way, as is the case in barns generally, there is a flooring over two-thirds the length, leaving room for a large load of

hay on the floor below, a door being provided for the oxen to go out at the end of the drive-way, while room is thus made for at least twenty tons of hay more than if the barn was finished in the usual way. Byres are arranged on each side of the drive-way, and yards are being made on each side of the barn, so that the stronger cattle may be kept by themselves, and prevented from injuring the weaker. The yards are so arranged as to receive the sun, and protected by sheds from cold winds. In addition to the two large barns we have mentioned, we noticed others at distant points from the mansion.

*Manures and Crops.*—We have already remarked that fish and other sea manures were extensively used on Mr. Webster's farm. Of the beneficial effects of fish and kelp on corn and grass, we were an eye witness. A field of corn of fifteen acres, had been divided into four sections, and manured as follows: 1st section with fish; 2nd, kelp; 3rd, stable manure; 4th, guano. On the three first sections, the manures were spread upon the sward and turned under; the section where the guano was applied, was turned over without manure, and the corn dressed with the guano soon after it had appeared above ground, and a second dressing given at the last hoeing, at the rate of 300 lbs. to the acre. Forty loads to the acre of stable manure, were applied to the section dressed with that substance: the quantity of kelp applied was indefinite, the ground having been well covered with it, without counting the loads. Fish were applied at the rate of ten loads, of thirteen barrels each, to the acre. Taking the field as a whole, it gave the appearance of a remarkably heavy crop. The section manured with kelp took the lead; that with fish, next; that with stable manure, next; and the section with guano, behind the whole. The quality of the soil of the different sections was nearly equal, excepting that which was guanoed, which had the appearance of inferiority. The corn on this section, we were informed by the foreman, looked very unpromising in the fore part of the season, but was now evidently gaining more rapidly than that on either of the other sections, and he said it was impossible to make a just comparison until after harvest.

On a mowing field, we saw the effects of fish, that had been applied since the grass was cut. The contrast between that portion of the field which had been "fished," and that which had not, was very striking, in the deep green luxuriant growth of the aftermath on the one, and the russet brown, dead-like appearance of the other. But

who can describe the *odor* which came from that field! All the old fish-oil stores on Long Wharf combined, would not produce the like, or any approach to it; and then the swarms of large green flies that covered the fences and trees! The plague of flies in Egypt, could hardly have exceeded them in numbers. The decaying fish furnished them a rich feast. Luckily, this section of the farm is remote from any human dwelling. But however unpleasant this vile smell from the rotting fish may be to a stranger, a person soon becomes accustomed to it, and as the unpleasant gases arising from the decomposition of the fish are said not to be injurious to health, and as this manure will double or treble his crops, the farmer should not be deterred from using it by the disagreeable character of the smell.

We noticed a small patch of corn in another place, that had been manured with guano in the hill, and afterwards received a fish to each hill as a top-dressing: the corn was of the deepest green, and of the most luxuriant growth.

We have often heard it asserted that fish manure, after exciting the land to produce one or two heavy crops, leaves it in an exhausted state. This opinion is at variance with what we witnessed on a pasture that had been "fished" four years since. We compared it with a pasture adjoining, both originally of the same quality of soil, or differing but little. The pasture that had been "fished," was thickly coated with fine grass, and notwithstanding the drought, still produced the best of feed. The neighbouring pasture was dried up, mossy, and apparently of little value. Another pasture was shown to us, which had been manured with fish nine or ten years since, and before the application was almost worthless; it has since produced excellent feed, and is now in good heart. These results would seem to show that fish manure is not so evanescent as it has been represented by writers and others.

Mr. Webster said he considered one load of fish was equal to three loads of stable manure, and afterwards appealed to his head farmer, for his opinion upon the subject, who thought a load of fish equal in value to five loads of stable manure.

Sea weed is used in the piggery and barn yards, and every means of increasing manure from these sources, appear to be made use of.

Leached ashes have been used to some extent, and prove a valuable manure on the light soils which compose a part of Mr. Webster's farm. On a ten acre lot of very light land, 3000 bushels of English turnips were raised last season, with no other manure

than leached ashes, and at an expense of only seventy-three dollars. About four acres of the same lot were sown down to clover, and the balance with oats, for the purpose of ploughing in when green, to enrich the soil. A very light dressing of guano was given these fields. The oats were so promising, that Mr. Webster altered his mind with regard to their disposition, and concluded to let them stand and mature; and on this very light soil, with no other manuring than leached ashes last year and a small quantity of guano this, we now beheld, ready for the cradle, a heavy crop of oats. The clover on the other part of the field covered the ground and was soon to be ploughed in, as was also the stubble of the oats, for seeding down to rye.

A tract of ten acres, of the same quality of soil, was covered with a vigorous growth of buckwheat, which the ploughmen were engaged in turning under, preparatory to rye. Another large strip was devoted to beans, and four or five acres to ruta baga, sown broadcast, and not sufficiently advanced in growth to enable us to form an opinion of the probable result of the harvest. A lot of three or four acres was devoted to mangold wurtzel and sugar beets. In some parts of the field the crop had been thinned by the worms, and causes attributed to the season or the seed—but the plants generally were thick enough to ensure a heavy yield. Another large section was devoted to English turnips, which, of course, had not yet begun to make much show.

Fifteen or twenty acres of the farm are devoted to roots, which are fed to the stock in winter. Last autumn and winter, a lot was fed off the ground by sheep, according to the English practice.

Spring wheat has generally succeeded well on this farm, but the present season has been rather unfavourable. Samples that we examined from the crop stored in the barn, did not indicate a very heavy yield; the grains did not look so plump as samples we have seen from this farm.

The yield of English hay this season has been estimated at about 200 tons. The salt hay is mostly let out to farmers back from the shore, to cut on shares. The marshes yield about the same quantity of hay as the uplands. The quality of the marsh hay varies; some of it is almost equal in value to good English grass, while some is fit only for bedding or manure.

The farm appears to be well stocked with apples, pears, peaches, plums, grapes, &c. Among the apples we noticed the High-top Sweeting, a variety that may be found on about every farm in Plymouth county, and

in some orchards there appeared to be an over stock of this ancient and highly esteemed apple; but we are sorry to say there is hardly a thrifty tree to be seen; the variety seems to be on the decay.

The stock on Mr. Webster's farm, taking it altogether, cannot be surpassed by any in the State. The last season he wintered ninety head. The cows are generally of the Ayrshire breed, either full blooded or mixed. They originated from a cow imported by the Massachusetts Agricultural Society, and a bull imported by Mr. Webster. This animal is finely proportioned, silky, short-haired, and equal to any creature of the kind we have ever seen. The cows are also beautiful, and give abundant evidence of their superiority in the quantity of milk they produce—having averaged, in the first of the season, 20 quarts each per day. He has eight milch cows of this breed. We saw in a pasture at some distance from the house, ten two-year old heifers of this blood, that could hardly be excelled in point of symmetry and general beauty, having the glossy hair and admirable mixture of colours peculiar to this breed.

For working oxen, Mr. Webster prefers the Devon breed, of which he had ten or twelve yoke, in excellent order, besides steers. He had sent a drove of fat oxen to the Brighton market a few days previous to our visit.

Of sheep, he has the celebrated South-down and Leicester breeds,—more esteemed for their excellent mutton than for their wool. Wethers are purchased at Brighton market, in autumn, and kept through the winter on turnips, hay, and a little grain, and when fattened in the spring, sold to the butcher. This has proved to be good husbandry, affording some profit, and increasing the manure heap.

The Mackay breed of hogs is now the only sort kept on the farm—the Berkshire having been tried and discarded.

We conclude this hastily penned and imperfect account of our most agreeable visit to this extensive and well-conducted farm, by remarking, that the interest taken in agriculture by such men as Mr. Webster, Mr. Clay, Mr. Van Buren, and Mr. Calhoun—all of whom are engaged, and are proud to be, in the culture of the earth—is a scathing rebuke to those weak minded or wrongly educated persons, who look, or affect to look, with contempt upon, and to consider as degrading, the noble occupation of the farmer. And truly gratifying is it to see men of such signal abilities and exalted repute, though differing in politics, united and ardently devoted in the great cause of agriculture—the

basis of national wealth and national prosperity—and whose followers constitute alike in peace and war the main bulwark of the country's welfare and security.—*New England Farmer.*

QUARRELS.—One of the most easy, the most common, most perfectly foolish things in the world, says an exchange paper, is to quarrel—no matter with whom—man, woman or child; or what pretence, provocation, or occasion whatever. There is no kind of necessity in it, no matter of use in it, and yet, strange as the fact may be, theologians, politicians, lawyers, doctors, and princes quarrel; nations, tribes, corporations, men, women, children, dogs and cats, birds and beasts, quarrel about all manner of things, and on all manner of occasions. If there is any thing in the world that will make a man feel bad, except pinching his fingers in the crack of a door, it is unquestionably a quarrel. No man ever fails to think less of himself than he did before one; it degrades him in his own eyes, and in the eyes of others, and what is worse, blunts his sensibility on the one hand, and increases the power of passionate irritability on the other. The truth is, the more quietly and peaceably we all get on, the better for our neighbours. In nine cases out of ten, the wisest course is, if a man cheats you, quit dealing with him; if he is abusive, quit his company; if he slanders you, take care to live so that nobody will believe him. No matter who he is or how he misuses you, the wisest way is generally just to let him alone, for there is nothing better than this calm, cool, quiet way of dealing with the wrongs we meet with.

AGRICULTURAL PREJUDICES.—At the Annual meeting of the Liverpool Agricultural Society last month, Lord Stanley, who presided on the occasion, in advocating the introduction of iron ploughs, to supersede the lumbering wood ploughs in common use, illustrated the prejudices cherished by some farmers, by an anecdote. He said a gentleman in the midland counties, who presented one of his farmers with a couple of iron ploughs, and having left the country for two years, returned, and was surprised to find not only that the number of iron ploughs was not increased, but no use was made of those he had given to the tenant. The answer he received on inquiring the cause of this was, "Why, you see we have a notion in this country, that *iron ploughs breed weeds!*"

**Robert Bryson's Model Farm.**

WITHIN a year or two, an Agricultural Society has been formed in Cumberland County, with its central point at Carlisle. We insert the following from the Report of the Committee on Farms, acknowledging that we have read it with much interest.—Ed.

It is with feelings of great pleasure that we cordially unite in the expression of the opinion that the farm of Mr. Robert Bryson, and the condition of it—its cultivation, and the principles of it—afford a most gratifying example of the rich product which is made by energy, industry and skill. The farm consists of two hundred and fifty-seven acres of land, most of which is cleared, leaving only trees enough for shade. As you approach the farm you are at once struck with the cleanliness of field and fence-row, which indicates that nothing grows there but what is planted. A large stone mansion exhibits the comforts of a profitable farm, and a no less capacious barn shows that there must be a place for grain, for there is much here to be stored away. A particular description of this barn may be useful to the Society; it is in size ninety-eight feet six inches, by fifty-four feet, which includes a seven feet overshot, and thirty-four feet high to the square. It is built in the side of a bank, and has two sets of barn floors, one above the other—the first having an elevation of about eight feet, and the second is used as a threshing floor, from which the grain as it is threshed passes down into the first floor, where it is cleansed; the stables are below the whole. There is an advantage gained by this arrangement, in this, that you can get out any quantity of grain without being hindered by the accumulation of it upon the floor; and there can be no better illustration of this advantage than the fact, that Mr. Bryson's whole crop was threshed, cleaned, and ready for market, on the 25th of July of this year. With the peculiar capacity and arrangement of his barn, this was effected without any waste of straw, or throwing more into the barn yard than would be readily converted into manure; it was all stowed away in his capacious barn, ready to be used during the succeeding winter, as occasion will require;—the quantity of wheat was nineteen hundred and ninety-five bushels, which grew upon eighty acres of land—equal to twenty-five bushels to the acre; five acres of barley were also threshed, and produced two hundred and fifty bushels; forty tons of hay were made, well cured and stored away; the produce of ten acres of oats, which your committee supposed would yield 270 bushels, were also here; the corn was yet upon the ground, and it was the subject of

particular examination, and the conclusion to which we came with regard to it was, that it would yield about fifty-five bushels to the acre;—notwithstanding this season has not been as favourable as usual, we have not seen in any year so large a crop of corn which was as good as this; thirty bushels of clover seed were also made. This is a limestone farm, and the manure used upon it is principally *lime*. The stock which we found here, were eighty head of steers, twenty milch cows and young cattle, one hundred hogs, fifteen sheep, six horses, and three yoke of oxen. The eighty head of steers were in a course of preparation for the market, and had been fed since the corn had passed the wasting ear state, by cutting it off and feeding it to them in the bulk—the cattle and hogs thus fed together, exhibited this system as a profitable one; scarcely two acres had yet been consumed, and the cattle were almost ready for the market. One would suppose that a farm like this would occupy all the attention of its owner, but not so with Mr. Bryson—on his farm three kilns were constantly employed burning lime, producing about 2000 bushels a week, hauled from the kiln as fast as it was burned to enrich the lands of the surrounding country. Mr. Bryson employs upon his farm about thirty hands, who are engaged in the tilling of the farm, and the burning and hauling of lime; the labour of these men is directed by Mr. Bryson in person, and with a system and economy of time which seem to be peculiar. At sunrise every man knows from the mouth of his employer what is his business for the day.

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**Stock imported by the Massachusetts Agricultural Society.**

WE learn from a late number of the *New England Farmer*, that the ship *Chaos* arrived at Boston in the early part of the Tenth month, in twenty-nine days from Liverpool, with the stock purchased for the State Agricultural Society, by Alexander Beckett, who was sent out to make a selection of the best animals that could be obtained, of the North Devon and Ayrshire breeds. "The passage," says the *Farmer*, "was rather rough, but every arrangement was made for the safety and comfort of the animals, that could be devised, and notwithstanding the unfavourable influences of a sea voyage, they came out in fine order, most of them fat enough for the shambles.

"They consist of four Ayrshire cows and one bull, and four North Devon cows and one bull, and a fine calf, which was dropped by one of the North Devon cows on the pas-

sage. Their stable was situated between decks, under the main hatchway—a location favourable for air, and to guard against injury from the rolling of the ship.

“The following ample daily allowance was provided for each animal for fifty days, viz: 10 lbs. of hay, 10 lbs. of oil cake, one quart of bran, one quart of crushed oats, and 10 gallons of water. The freight bill for the cattle, together with the expense of fitting up the stable, and for water casks, independent of the food, was £140 sterling, or about \$700; this, with the first cost of the cattle, and expenses of Mr. Beckett, will make the round sum of something like \$3000—a very generous outlay by the Society for the improvement of the stock of our State.

“The animals are very fine looking, and, we believe, gave perfect satisfaction to the President and other officers of the Society, who were present on the wharf to witness their landing. The cattle were driven out to Lexington, to the farm of E. Phinney, Esq., where they will remain for a short time, until the trustees of the Society determine where to locate them most advantageously for the public benefit.

“The North Devon cows were purchased of Lord Leicester, of Holkham, Norfolk county, England; the bull, from Mr. Bloomfield, Wanham, in the same county, of whose stock Mr. Colman has stated that he had seen none superior.

“The Ayrshires were also thorough bred, perfect in their kind, and the cows had the appearance of being fine milkers. Two were purchased from the stock of Mr. Andrew MacGregor, Damhead, near Kilmarnock, Scotland; one from Mr. John Young, of Kilmours Maine, near the same place; and one from Mr. Hamilton Capprainstone, Draghorn; the bull from Hugh Kilkwood, Highlongmair, near Kilmours, Scotland.”

### Subsoiling.

To the Editor of the Farmers' Cabinet:—

SIR,—Within the last few years agriculture has received, I am happy to believe, a new impulse. Each one seems struggling in the race of improvement to surpass his neighbour.

We find the practice of subsoiling gradually coming more and more into use, and wishing to avail myself of the greater experience of those who have followed the system longer than myself, I will take the liberty of proposing a few queries, in the hope of receiving satisfactory answers from some of your numerous subscribers:—When a piece of sward is subsoiled for corn, is it customary to use the subsoil plough again

previous to laying the land down to grass, or is one operation considered sufficient for a course? if the subsoiling is repeated, of course it should be done at right angles with the first. I observed with the Prouty plough at the late Exhibition, that all the ground was not equally broken, consequently a ridge was left in each furrow: is not this a disadvantage? Again, in manuring the sod where the subsoil plough follows, will not the manure be apt to sink—a portion at least—to the bottom of the newly stirred earth, and by so doing get out of our reach, unless we adopt a system of trench ploughing, and thus throw up the subsoil, which probably, in spite of the portion of manure absorbed by it, would prove injurious to the ingoing crop. I know that a great difference of opinion exists, as to whether manures sink or rise; both parties in my opinion are partly right. The gaseous portions of all manures have a tendency to rise, and spreading them on the surface, constantly subject to the alternations of sunshine and rain, would undoubtedly subject us to great loss, the mere passing by a slaughter house, would, I should suppose, prove this without further argument: but that nearly all the salts, and a portion also of the undecayed vegetable matter would, by the use of the subsoil plough, sink too deep into the earth to be easily recovered, I have my fears; and this would be a loss that few farmers can bear, as but few, if any, have more than they can use. This objection has caused me to hesitate about putting the manure on the corn crop, although fully aware of the many advantages attending it; among which, and not the least, I think is the saving of loss by washing and fermentation in the yard, and saving of time in hauling it out at so short notice as one must when wheat follows corn, as in my rotations it does.

Can any of your readers inform me of the productiveness of the Guernsey parsnip in this country? Low speaks very highly of its nutritious properties, and calls it the large Jersey parsnip. Some place it for productiveness as equal to the sugar beet. I have endeavoured in vain to obtain the seed, and should feel obliged for information where it could be procured.

A CONSTANT READER.

November 3rd, 1845.

The seed of the *Guernsey*, or *Jersey* parsnip—the *panais long* of the French—*panais coqueue* of Guernsey, spoken of by Low, and alluded to by our correspondent, will hardly be procured at any of our seed stores. It does not seem well adapted to this country; it grows too long, and is coarse and stringy. The *hollow crowned* parsnip—the *panais Lisbonaise*, of Guernsey, is well suited however to our wants, and the seed may be procured at Coates' in Market street. In his *General*

*System of Gardening and Botany*, Dox says the parsnip is much esteemed for fattening cattle and pigs. It is considered more hardy than the carrot, and its produce is said to be greater. In fattening cattle, it is found equal, if not superior, performing the business with as much expedition, and affording meat of exquisite flavor, and of a fine juicy quality. It is reckoned that thirty perches, when the crop is good, will be sufficient to prepare a steer three or four years old completely for the knife, when taken entirely lean, in the course of three months. When given to milch cows, the parsnip is found to give the butter a peculiarly fine flavor.—Ed.

**The Exports of Ohio for 1845.**

THE Cincinnati Chronicle says:—"We have before us the shipments from Cleveland, Ohio, and Cincinnati, for the year 1845, to the last week. As the season is nearly closed, we can give a tolerably accurate view of the exports of 1845, from this great agricultural State.

It must be remembered, that in estimating the exports of a year, commencing the first of January, we do not get precisely one season's production, but only one season's *transportation*. The production belongs to both the last and the present season.

The shipments of the surplus of flour this year will be very nearly as follows, reducing the wheat to its equivalent in flour:

Cleveland,	450,000 barrels.
Cincinnati,	160,000 "
Toledo,	100,000 "
Milan, Sandusky, &c.	150,000 "
Marietta, &c.	40,000 "
Portsmouth, &c.	30,000 "
<b>Total,</b>	<b>930,000 barrels.</b>

The other articles we estimate in money, thus:

Flour, in all 930,000 barrels,	\$4,000,000
Pork, in all,	3,500,000
Cattle and Beef,	500,000
Wool, (2,000,000 lbs.)	500,000
Cheese, (5,000,000 lbs.)	300,000
Manufactures,	3,000,000
<b>Total,</b>	<b>\$11,800,000</b>

We think these results are under-estimated, and that there are miscellaneous articles enough to make the net surplus in value twelve millions of dollars. The flour product is two millions of dollars less than it would have been had the two last harvests of wheat been good ones."

GIVE us large crops which leave the land better than they found it, making both the farmer and the farm rich at once.

**Philadelphia Hay Market.**

We take the following from the *Enquirer* of this city. Twenty thousand tons of hay brought annually to our market, is a far higher amount than one would, at first glance, have supposed probable. The growing wants, however, of Philadelphia, hold out inducements on every hand for the farmer to *persuade* his lands into productiveness, with a pretty certain hope of realizing full compensation for his good management. The crop of hay in this vicinity, and on our good farms, is a profitable one, and with articles of a perishable nature, such as the fruits of the garden in every variety; of the orchard, and products of the dairy, must more and more engage the attention of the market-man.—Ed.

We are indebted to Mr. Hugh Whitton, of the Farmers' Hay and Straw Market, for the annexed statement of the receipts of hay in Philadelphia, during the year ending 30th September, 1845, inclusive.

	<i>Loads.</i>
1844—October,	1080
November,	1075
December,	1215
1845—January,	1170
February,	1135
March,	1185
April,	1305
May,	1075
June,	815
July,	885
August,	820
September,	980

	Total loads,	12,740
Equal in tons to	11,461	
Received (pressed, &c.) from		
all other places,	9,100	
<b>Total tons,</b>		<b>20,561</b>

The crop of 1844-45, was a fair one, and the prices ranged throughout the season at 80 to 90 cents per 112 lbs. for Timothy. But the present crop, owing to the drought of the preceding summer, proved very short throughout the State; farmers in many places not getting under cover a quantity sufficient to supply their own stocks. Prices in consequence range high, Timothy selling readily at \$1 to \$1 10, and Clover and Timothy mixed at 85 cents to \$1 per cwt., as in quality.

GRAPES designed for preservation till winter, should be gathered by cutting off the stems with scissors, and the cut end covered with sealing wax. If any of the berries have recently fallen off, the stem part should be served in the same manner. The wax prevents the grape from shrinking.

## Raising Wheat and Cattle.

To the Editor of the Farmers' Cabinet:

SIR,—Mr. Gowen in his letter to General Richardson,—published in your last Number—advances the opinion, that, when land is worth fifty dollars an acre, wheat at one dollar a bushel will not pay expenses—advising to raise cattle in preference. This is leading the General, as I think, from the frying-pan into the fire.

A gentleman who has acquired wealth in mercantile pursuits, and subsequently devotes his time to agriculture, promotes an art which is the most important to human society, and renders himself a valuable citizen: he shows a very good example to some of his brother merchants, who spend their acquired wealth by aping in miniature the English nobility. Mr. Gowen richly deserves the esteem of his fellow citizens, but does he not show himself from home in advising a Virginia farmer? his opinion referred to above should be refuted.

One dollar per bushel for wheat, has been the average price for many years, and will probably remain so for years to come. If it is a losing concern, what will become of our farmers of Chester, Lancaster, Berks, and many other counties, who have paid fifty dollars per acre, and more for their land? If, according to Mr. Gowen's opinion, we can not compete with the Western farmer in raising wheat, still less can we compete in raising cattle. If Mr. Gowen will mount his horse and take a trip with a Pennsylvania drover to the Western counties of New York, and Upper and Lower Sandusky, in Ohio, he will find thousands of acres of land where hundreds of thousands of cattle are grazing, as well built as any Durham cattle. It appears as if those counties had been chains of lakes, intersected by ridges of high land: by some process of nature the water has been absorbed from them, leaving a crust of the richest alluvial soil, producing a grass that cannot be equalled by any manuring, on the lands in Pennsylvania, and less still in Virginia, where the climate is hotter and dryer, and less fit for pasture. We never must pretend to compete with those regions in raising cattle.

Mr. Gowen has been successful in selling at high prices his Durham breed of cattle, and could therefore bestow extraordinary care in their nursing. I have said on a former occasion, that our New York and Sandusky cattle are as good, if properly taken care of, as the imported breeds. Let any dairyman or practical farmer refute my assertion or confirm it. The degeneration of the breed of our cattle is owing to the

negligence of farmers, and if they continue this negligence, in a few years the Durhams will also degenerate into scrubs. If Mr. Gowen will step over to his neighbours, the intelligent farmers of Chester county, he will find what I have asserted; they carry out his plan in part, leaving three-fourths of the arable land in grass for four or five years, refreshing it now and then with a top dressing of compost; the other fourth is rendered rich by copious manuring, and gives such a rich crop of wheat, that they are satisfied to receive one dollar per bushel. They fatten cattle for the market, but have not the folly to raise their own stock, except some amateurs among them, who have a well filled purse besides their farms, and wish to have something different from their neighbours. The judicious farmer, who looks for profits, buys his stock for fattening of New York and Ohio drovers, at less than half the price at which he could afford to raise it himself; and handsomer cattle are not brought to the Philadelphia market than these. I must confess Chester county is now in advance in agricultural improvement of old Berks.

H. S.

Bethel, Berks co., Nov. 28th. 1845.

AMERICAN APPLES IN ENGLAND.—We learn from the N. Y. True Sun a circumstance showing the results of careful culture as applied to fruit as well for home consumption as for fame abroad. Robert L. Pell, Esq., of Pelham, Westchester county, has an orchard of twenty thousand apple trees, all bearing Newton pippins. By trimming and the application of the best manures, he has brought the fruit to unusual size and excellence. The apples are picked and packed in barrels, without being rolled or jolted in carts, and so arrive in the very best order for shipment. Last year they were sold in London at \$21 a barrel, and the merchant to whom they were consigned, wrote that the nobility and other people of great wealth had actually bought them at a guinea a dozen, which is some forty-five cents an apple. Mr. Pell has from three to four thousand barrels of the apples this year, which are sold as fast as they arrive at market, at \$6 a barrel, and are all shipped to England. It is quite a business for one of our commission merchants to dispose of the produce of this noble plantation.—*Maine Farmer.*

THE best fertilizer of any soil is a spirit of industry, enterprise and intelligence—without this, lime and gypsum, bones and green manure, marl and guano, will be of little use.

### Rural Manners in England.

THE true English gentleman, living remote from the din of cities, and abstracted from the turmoil of political life, upon his own acres; managing his own estate; seeking the best means for its improvement, and superintending, under his own personal inspection, their application; doing what good he can to all around him; making those dependent upon him comfortable and contented; giving labour, counsel, encouragement, and all needful aid, to his poor neighbours, and causing them, and their wives, and their children, to look up to him as a friend and a parent, to whose kindness their good conduct is always a certain claim; whom when the eye sees, it sparkles with grateful joy, and when the ear hears his footsteps, the sounds go like melody to the heart; who is in his neighbourhood the avowed and unostentatious supporter of good morals, temperance, education, peace, and religion; and in whose house you find an open-hearted hospitality, and abundant resources for innocent gratification, and for the improvement of the mind, with a perfect gentleness of manners, and unaffected piety presiding over the whole;—I say, such a man—and it has been my happiness to find many examples—need envy no one save the possessor of more power and a wider sphere of doing good; and need not covet the brightest triumphs of political ambition, nor the splendors and luxuries of royal courts.

Whatever contributes, then, in any way, to elevate the agricultural profession, to raise it, from a mere servile or mercenary labour, to the dignity of a liberal profession, and to commend it not merely for its profit and usefulness, but as a delightful resource and recreation for a cultivated mind, will certainly find favour with those who form rational views of life, who wish well to the cause of good morals, and would multiply and strengthen the safeguards of human virtue.

The class of individuals whom I have described—and I assure my readers I have drawn from real life, and deal in no fictions—find often their own efforts seconded and aided by those whose encouragement and sympathy always give new life and vigor to their exertions, and new pleasure to their pleasures,—I mean their own wives and children; and the farming operations, in all their history and details, and all their expediency and fitness, are as much matter of familiar and interested discussion at the fireside, as, in many other circles, the most recent novel, the change in fashion, or the latest triumph of party. Indeed, I have

seen, in many cases, the wives and the daughters—and these, too, often persons of the highest rank and refinement—as well acquainted with every field and crop, their management and their yield, and with every implement and animal on the place, as the farmer himself; and I always put it down to the credit of their good sense.—*Colman's Tour, No. 3.*

From the Indiana Farmer and Gardener.

### Profitable Farming.

DEAR SIR,—Knowing you to be a friend of agriculture, and that you were pleased to manifest an interest in my farming operations when here, and perhaps thought as some of my neighbours did, that I was going to spend what I had made at other pursuits, in experimental farming, I give you the result of my operation.

I commenced on a very small scale in 1810, and was engaged much in other business until the fall of 1842. From that to the present season, I have devoted all my time to the farm.

I had on hand, and purchased in 1840,	
stock and teams worth	\$530
1841, purchased stock to the amount of	100
1842, paid for stock and grain,	300
1843, “ “ “	650
1844, “ “ “	1,720
	<hr/>
	\$3,300
Expenses of putting up produce and sending to market,	1,500
	<hr/>
	\$4,800

### Account of Sales.

1841, sold pork and beef for	\$242 00
1842, “ “ grain,	1,735 62
1843, “ “ “	1,602 92
1844, “ “ horses,	6,398 92
Stock on hand, worth	1,020 54
	<hr/>
	\$11,000
	<hr/>
	\$7,200

The stock on hand is worth more than the sum put down. I have placed that estimate in order to make an even sum. I do not keep a correct estimate of the expense for labour, &c., but I presume the whole cost of farm labour did not exceed \$1000. From which I made a number of small improvements and repairs of fencing, &c. You will no doubt be surprised at the small amount of expense for labour; the reason for which I will endeavour to explain. I had a nephew 16 years old, and a son thirteen; when I commenced in 1840, I hired two boys at seven dollars per month each.

They worked eight months each, making \$112. The extra hire for harvesting, &c., did not make the sum total exceed \$200. The next year the same boys worked to the amount of \$100, all other hire did not exceed \$100. The next spring, 1842, I hired a family consisting of four women and three boys, found their provision, furnished their flax, wool, &c., and gave them \$100 per annum. Extra work did not exceed \$100. Next year 1843, the same; 1844 had one hand at \$108 per year; extra labour, by day and month, did not exceed \$100. So you will perceive that I have over estimated the aggregate for labour.

You will perceive from this, that my operations were very limited, for the amount of profit. I had but a small farm and no pasture when I commenced; I have since enlarged the freehold to some 2000 acres, with 12 to 1500 enclosed, and over 500 in grass and clover.

I cultivated the three last years about 100 acres in corn, and about the same in other grain, and raised cattle, hogs, and horses. I have the Berkshire and Grazier mix—a very fine breed of hogs. My horses are common.

I have shipped my pork, wheat, &c., to New Orleans the last three years, and not having a load, have purchased for debts, corn and other produce, to make up the load which is estimated above, on which I have lost money. I purchased pork to the amount of \$1000, and corn \$700 last year, and made some money on the pork, and lost some on the corn.

R. W. Thompson brought from the patent office some Mediterranean wheat, and gave me a small paper, not exceeding one pint, from which I had this year 200 bushels, the third crop. Taking the product of the three years it has doubled the average crop of the common wheat.

I am cultivating the artichokes for hogs. I planted less than a peck last year, from which I dug 28 bushels; planted them all this spring on four acres, and find them too thick. I intend turning the stock hogs upon them this fall, and I think they will tear up the ground so effectually, that the roots left will seed it, and produce a good crop without cultivation.

You will perceive from my little operations in the farming line, that the man who has the land, or the means to purchase, can not do better than to engage in farming. There is no other pursuit so pleasant and free from care, perplexity, and risk, and none so independent. The only difficulty in this country is the uncertainty of labour of the right kind, and at the proper time. You will perceive from my account of pur-

chase and sales, that I did not expend anything except to start, until I realized from the products of the farm. W. M.

Sept. 4th, 1845.

### Poisonous Honey.

THE venom of the wasp, bee, and hornet, is a most irritable poison; but it is quickly neutralized by the application of sweet oil to the punctured part. Here we may notice that the honey of the bee is sometimes poisonous. Xenophon records that, during the celebrated retreat of the ten thousand Greeks from Persia, the soldiers, when they came to a place near Trebizond, found many bee hives, the combs of which they sucked; but soon afterwards they became as though intoxicated, and were attacked with a virulent cholera morbus. The famous botanist, Tournefort, when at Trebizond, made some researches relative to this occurrence, and learned that it arose from the bees collecting their honey partly from a plant which is very abundant there, and the very blossoms of which, exhale a sweet but intoxicating perfume. This plant was most likely either the rose-laurel, (*Rhododendron ponticum*), or the yellow azalea, (*Azalea pontice*); for Father Lamberti found both of these poisonous plants, together with poisonous honey, in Mingrelia. Colonel Rottiers, in 1816, observed the rose-laurel growing on all the mountains of Trebizond; and the inhabitants asserted, that "the strong honey" which the bees extract from its flowers is a kind of poison, causing stupor in a greater or less degree, according to the season of the year. M. Dupre, the French consul, assured Colonel Rottiers that he had experienced this effect himself. In the autumn and winter of 1790, there was an extensive mortality among the people of Philadelphia, who had eaten honey that had been collected near that city. The American government having instituted a minute inquiry into the cause of the honey proving fatal, it was satisfactorily ascertained that it had been chiefly extracted from the flowers of the *Kalmia latifolia*. Plants of the genus *Andromeda*, also yield a poisonous honey. In the "American Philosophical Transactions" Dr. Barton states, that the dwarf-laurel, great-laurel, broad-leaved moor-wort, Pennsylvania mountain-laurel, wild honey-suckle, and the stramonium or Jamestown weed, yield a poisonous syrup, and that the honey which the bees make therefrom, has been fatal to man. These facts ought to induce the keepers of bees to be careful how they venture to cultivate plants of noxious qualities near their hives. The Greeks

and Romans were careful to eradicate all bitter tasting herbs from the vicinity of their apiaries, lest they should impart a bad quality to the honey. According to De Lille, the bee-keepers of Languedoc also pay great attention to this point. Even wild species of honey-bees will resort to noxious plants quite as readily as the domestic species—

"Like to those bees of Trebizond  
Which, from the sunniest flowers that glad  
With their pure smile the gardens round,  
Draw venona forth which drives men mad."

An intoxicating and poisonous honey is extracted from the flowers of the monkshood, or aconite, by the choura, or wild rock bee of Gurwhal (*Apis irritabilis*.)

These facts make it not improbable that many more persons die from eating poisonous animal food than is generally supposed, and without the cause of death ever being suspected.—*Chambers' Journal*.

### Mr. Wilmot's Fruit Garden.

Isleworth, Sept. 25th, 1844.

PROBABLY no such extensive establishments for the cultivation of fruit as those of Messrs. Wilmot, Keens, and others around London, are to be found. Their names are familiar to most of our readers, from their well known seedling strawberries, for a long time the only large kinds worthy of cultivation. Mr. Wilmot's grounds are only six or seven miles from the city, but they contain, in the different lots, upwards of 100 acres of land wholly occupied with fruit. Immense quantities of fruit are forced, and we think Mr. Wilmot informed us that his crop of grapes alone was several *tons*. Pine apples are also cultivated to a great extent, and we saw large quantities now just swelling off their fruit.

The principal forcing houses are situated in a walled enclosure of about half an acre, and seven ranges of glass 90 feet each are heated from one large boiler, measuring eight feet long; a main flow and return pipe leads from this along one end of the houses, and from it branch off six smaller pipes into each. They may all be heated at once, or only a single one; by means of stop-cocks at the junction of the branches with the main pipes, the water can be turned off or on at pleasure. Mr. Wilmot thinks this by far the most economical mode that can be adopted for heating such an extent of glass.

The grapes are forced early, and they were now all cut, the wood fully ripe, and the earliest houses would soon be set in operation again. Mr. Wilmot pointed out to

us a new mode of planting vines for very early forcing. The usual mode is to plant them at the front wall, either inside or outside; the objections to this are, that the roots are exposed to a temperature many degrees lower than the branches, and, consequently, the grapes are inferior flavoured, and often do not colour well. Mr. Wilmot's plan is to plant them in the middle of the house, one vine under the middle of each *sash*, and not under the rafter; a main stem is taken up to the glass, where it is allowed to branch off in all directions. In this way, the roots receive the benefit of the heat imparted to the soil by the flues, and the vines receive all the light, which, in this climate, is more important than with us. For very early forcing, we think the plan worthy of imitation. One house was devoted wholly to *Muscats*, and we found here the Muscat of Alexandria; the Tottenham Park Muscat, which, Mr. Wilmot says, is quite distinct; the Portugal Muscat, similar to the Muscat of Alexandria, but a free bearer, and sets unusually well: the Cannon Hall Muscat, very fine; and the Cannon Hall Muscat Seedling, raised by Mr. Wilmot, new and fine.

In one of the other houses, we found a single bunch of that splendid grape, Wilmot's new Black Hamburg, which has been stated by some to be the same as the old Black Hamburg; it is, however, quite distinct. Having vines ourselves, we were not only anxious to settle this question, though we had perceived the leaves were quite different, but were desirous of testing its quality; this we were enabled to do by the kindness of Mr. Wilmot, and we can recommend it as one of the largest and most splendid varieties, and also of first-rate flavor. It has a firmer flesh than the old Black Hamburg; the berries are perfectly round, and very large, but the bunch does not attain a large size. At the time we now write, we have this new kind in bearing; it was raised ten years ago. Mr. Wilmot recommended another seedling variety of the Hamburg, which he also cultivates very largely. The Chasselas Musqué is another variety which sells well in the London market. Another quite new grape is the Prince Albert, which is said to be superior to the Black Hamburg; Mr. Wilmot had only one vine of this. West's St. Peter's is a fine late grape distinct from the old St. Peter's.

On the walled enclosure, are trained pears, and among them, we saw the Van Mons Leon Le Clerc in bearing. In the orchard, the trees were bending beneath the weight of the fruit, and the Beurré Diels, as stand-

ards, were producing very large specimens. In the fruit room, were bushels of the Louise Bonne de Jersey, laid on shelves to ripen off; this variety succeeds well in this way, and it may be kept in eating from September to December. It is, without exception, one of the finest fall pears which has yet been introduced.

Mr. Wilmot still continues to bring forward his pines by dung heat, and the men were now lining the succession fruiting pits. Where manure is not expensive, it is probably a more economical way than fire heat.

It was a source of surprise to see the immense quantities of fruit which are daily sent to market by the proprietor. With the exception of rhubarb, he does not cultivate any thing but fruit: of the former vegetable, he grows a great quantity every year.—*Hovey's Magazine of Horticulture.*

### The Potatoe Rot.

UPON this subject, so interesting to our agricultural readers, we publish the following extracts from late English papers. We can but remark in introduction, how much more terrible is the calamity to the overdone population of Europe than to us, as is evidenced in the efforts recommended by the correspondent of the Bristol paper to make a portion of the vegetable still available as food.—*Saturday Post.*

From the Gardeners' Chronicle.

A fatal malady has broken out among the potatoe crop. On all sides we hear of the destruction that has overtaken this valuable product, excepting in the North of England. In Belgium the fields are said to have been entirely desolated. There is hardly a sound sample in Covent-garden market. This disease consists in a gradual decay of the leaves and the stem, which become a putrid mass, and the tubers are affected by degrees in a similar way. The first obvious sign is the appearance on the edge of the leaf of a black spot, which gradually spreads; then gangrene attacks the haulm, and in a few days the latter is decayed, emitting a peculiar and rather offensive odor. When it is severe, the tubers also decay; in other cases they are comparatively uninjured.

The cause of this calamity is, we think, traceable to the season. During all the first weeks of August the temperature has been cold—from two to three degrees below the average; we have had incessant rain and no sunshine. It is hardly possible to conceive that such a continuation of circumstances should have produced any other result, all things considered. The potatoe absorbs a

very large quantity of water. Its whole construction is framed with a view to doing so; and its broad succulent leaves are provided to enable it to part with this water. But a low temperature is unfavourable to the motion of the fluids, or the action of the cells of the plant; and moreover, sunlight is required to enable the water sent into the leaves to be perspired. In feeble light the amount of perspiration from a plant is comparatively small; in bright sunshine it is copious; in fact the amount of perspiration is in exact proportion to the quantity of light that falls upon a leaf. At night, or in darkness, there is no appreciable action of this kind. During the present season all this important class of functions has been deranged. The potatoes have been compelled to absorb an unusual quantity of water; the lowness of temperature has prevented their digesting it, and the absence of sunlight has rendered it impossible for them to get rid of it by perspiration. Under these circumstances it is necessarily stagnated in the interior; and the inevitable result of that was rot, for a reason to be presently explained.

Although we first see the symptoms of the disease in the leaves and then in the haulm, we believe that it commences under ground, in the haulm which is just below the old set. There water collects the most, there the temperature is lowest, and there the old set itself, acting like a sponge, and itself decaying, feeds the live stem with semi-putrid matter.

The mischief, although very general, is not universal. It is, however, appearing in some of the gardens round London; and it has begun to attack a field near ourselves, on the London clay, which, as it offers what we think a good illustration of the way in which the potatoe crop is affected by such a season as this, we shall proceed to describe. The field is bounded on two sides by a deep ditch, newly cut, and on the others by a hard roadway. It was last year a pasture. During the autumn it was trenched three spit deep; but in such a way that the turf was turned down about a spit below the surface. It was planted partly in December, and partly in April. Here, on this cold soil, lying on a dead level, with scarcely any means of effectual drainage, the potatoe murrain might have been expected, and here it has made its appearance, but not to any great extent. Symptoms are discoverable here and there; but only in one place has the haulm actually decayed. That place was a low part of the field, and had been made of road sand and similar rubbish, very retentive of water. Elsewhere the

leaves are yellow, an invariable symptom of an over cold and damp land; in situations better drained, as, for example, all along the ditch, the foliage is green, vigorous, and healthy.

As to cure for this distemper—there is none. We are visited by a great calamity, which we must bear. At the same time, although it is not within human means to alter the course of the season, or to prevent the maladies attendant on them, prudence may perhaps suggest some alleviation of the evil. Should we have fine weather, the disease will probably disappear; should rain and cold continue it will spread. In the latter case, the only thing to be done will be to dig up the crop immediately. Much loss will be thus sustained, and the quality of late potatoes will be bad; but the loss will be less than to let the potatoes all rot in the cold ground, and we conceive that some of the crops will be eatable, though not what could be wished.

Although the potatoes taken up thus early will suffer in quality from their unripeness, even this evil may be partially remedied by putting them in heaps, consisting of alternate layers of dry earth and tubers. In such a situation it is probable that no farther decay will take place, and it is certain that the ripening process will continue to proceed, although less effectually than under natural circumstances. We may add, that such late potatoes as we have examined are much more advanced toward ripeness than might be supposed. They are already very full of starch, and their gummy matter is disappearing fast.

As to the fitness of decayed potatoes for food, we doubt extremely the prudence of using them, if the disease is more than skin deep, so that it may be pared away. Putrid matter of any kind, or even matter approaching putridity, is unfit for being introduced into the stomach, and has very often proved fatal. The Belgian police, acting upon this well known fact, have been destroying the decayed potatoes in the public markets of Antwerp, and they have acted wisely.

The following letter on this subject, by Mr. Herapath, appeared in the *Bristol Mercury* of the 6th of September:

“SIR,—My attention has been given to the disease which has shown itself so extensively among the growing potatoes. I find, in almost every instance, that the epidermis of the stalk, below the surface of the ground, is more or less in a state of decay, often disintegrated, and completely rotten; the leaves and branches accord with the state of that part of the stalk below the

ground. The tuber beneath the outer skin, is first spotted brown—like a bruised apple: these spots extend and penetrate toward the centre, quite changing the nature of the potatoe. Those near the surface are most injured; in some cases the lowest on the root are not at all affected, while the upper ones are useless. I should therefore expect that the longer the crop remains in the land the greater the injury will be. It seems from the microscopic appearance, that the starch escapes injury for a long time after the skin and cellular parts are gone; and as the whole of the nutritive powers of the potatoe reside in the starch, I should recommend that wherever the disease has shown itself to any extent, the crop should be dug, whether ripe or not, and the starch extracted by the following simple process:

“After washing the roots, let them be rasped fine, and thrown into a large tub or other vessel; pour a considerable quantity of water, and well agitate and rub the pulp with the hands; all the starch or fecula will, from its great weight, fall to the bottom; while the skin and fibrous matter will be carried away by the water; wash the starch with one or two more waters, allowing it to fall after each washing; spread it upon cloths in a warm room to dry. In this way about twenty or twenty-one pounds will be obtained from every one hundred pounds of potatoes, and it contains as much nourishment as the original roots; it will keep any length of time, and might be used with flour to make bread, pies, puddings, &c., as well as farinaceous spoon meat.

“This is much better than throwing away the diseased roots, and will furnish food for tens of thousands, who might otherwise want it.

WILLIAM HERAPATH.”

From a Correspondent.

Among the potatoes introduced into the London markets, a great proportion have proved to be affected by the prevalent disease. The roots so attacked give out no peculiar appearance to the eye by which the presence of disease may be indicated, but in boiling, it is at once perceptible, from the dark mass which they present in the interior. The dealers are aware of this, and in many of the poorer districts of the metropolis, potatoes were sold on Saturday at 4 lbs. and 6 lbs. for 2d. Whatever may have been the cause, it is certain that externally the disease indicates itself by a fungus or moss, producing a decomposition of the farinaceous interior. It therefore resembles, in many respects, the ergot attacking grain and grasses: which, it was proved at the last meeting of the British Association at Cam-

bridge, had greatly increased the last two or three years, probably owing to the great additional increase of animal manures. It may be remarked that in the Isle of Wight, where the disease has occurred in its most virulent form, we lately had the opportunity of observing, in many instances, that it was most prevalent in those crops which had been planted on wheat land, which had previously been manured with guano. The use of these diseased potatoes for domestic purposes cannot be too much condemned.—*Times.*

From the New England Farmer.

**Plaster of Paris.**

A FEW of the last days of July, the past summer, I spent, in company with several others, as one of the viewing committee of the Merrimack County Agricultural Society, on farms, &c. In rambling over the farm of A. Brown, Esq., Northfield, N. H., I noticed that the stones in his wall were nearly all pure granite. I observed to him that plaster of Paris would be a good manure for his soil, and said, have you ever tried it? Yes, he says, I have, and it is useful upon my soil, and when we come to my corn-field, I will show you its effects. No more was said upon the subject at that time; after looking at a field of wheat and some other crops, we came to the corn-field. There were four acres—a good soil—well manured, and free from weeds; the corn was very heavy; in passing through it, we came to four rows of very small corn, not more than half as heavy as the rest. Upon expressing our surprise, he informed us that those four rows had no plaster; the rest of the field had a tea-spoonful of plaster dropped in each hill at the time the corn was planted, and that was all that made the difference. But some of the committee expressed surprise that the corn on such good land and well manured, should not be any better, even if it did not have plaster. “Oh!” says Mr. B., “it is a great deal poorer for the others having plaster,—the plaster draws the nitre, or air, or something from the unplastered, and robs it.” The thought occurred to me that this was confirming what Prof. Sprengel says is the effect of marling alternate strips of land in Holstein: the unmarled strips are much less productive in consequence of marling the other strips. But one thing is a fact: one tea-spoonful of plaster on his corn, made about as much difference as three of guano did upon mine; and had not the whole field been any better than the unplastered rows were, he never would have entered it for a premium: that is another fact. A few days

since, I saw a son of Mr. Brown, and he informed me that there was about as much difference in the corn at harvest, as there was when I saw it the 30th of July. I cannot yet believe that a tea-spoonful of lime in the hill would have made the difference in his corn that the plaster did—but I will write to him to make experiments the coming season, and have no doubt that he will, and report the results.

The next day I was upon the farm of Captain S. Chadwick, in Boscawen. Here I observed a different kind of rock and stone prevailed. Many of them, in the walls and about the fields, had disintegrated, and others were in a state of rapid decomposition by the agency of oxygen and moisture. I observed to Captain C. that I thought plaster was of but little or no use upon his farm. “Well, it is not,” says he; “I have tried it, *out and out*: the money is thrown away in the purchase of it, and the labour is lost in applying it.”

LEVI BARTLETT.

For the Farmers' Cabinet.

**Sowing Corn for Winter Feed.**

To the Editor:

SIR,—As each one now engaged in agricultural pursuits is endeavouring to increase the amount of his fodder, either green or dry, I would, through your columns, make a few enquiries as to the best mode of converting Indian corn sown broadcast, into dry fodder. The light crops of hay this year, induced me the past summer, to plough down, after mowing, about two acres of sod, which I sowed with corn broadcast; it grew finely, and when in tassel, I had it cut down to be converted into winter feed. After leaving it lay for several days to wilt, the weather becoming threatening, I had it gathered and placed in small shocks, bound at the top to keep it up and the rain out; after being left sometime, as I hoped to cure, finding it beginning to heat and mould, I had it opened and leaned against the fence to dry; here it remained some time, double, at least, the time that grass would have required to cure, when rain again threatening, I had it removed into an open barrack; lest the sap which remained in the stalk, might cause it to heat, I had salt sprinkled on it, but all in vain, for in spite of all the care taken, the remaining sap caused such fermentation, that the whole mass has become utterly worthless. It may by some, I know, be said, it should not have been moved until entirely dry, but to those dependant, as farmers are, on the weather, a crop that will take so much time to cure—for this was at least three weeks—

cannot prove a desirable one, occupying so much of their busiest season; but perhaps others who have tried it, may know of some better mode of curing, and in this hope, I have trespassed on your time, for I think it a most desirable assistant of the farmer's winter stores, could any plan of preserving it be adopted, not involving too much labour. Of its great use as a green crop for soiling, no one I think can doubt, who will once try it, but from my experience, I am led to fear that its extreme succulence will prevent its being advantageously cultivated to dry. Can any of your subscribers speak experimentally of the comparative productiveness and nutritious qualities of the Sugar and Red beet—I have been informed by some persons accustomed to their culture, that the latter is to be preferred, as containing far more nourishment.

With respect, &c.,

A SUBSCRIBER.

Nov. 1st, 1845.

We should greatly doubt the expediency of placing much reliance upon the curing of corn for winter feed. It is so succulent, and requires so long a continuance of fair and drying weather, that the chance is against its getting nicely and sweetly cured. Should it however be attempted, we should cut it early, when the tassel had scarcely begun to make its appearance. It would need a great deal of drying to prevent fermentation, even though well salted. As a summer crop to be used in soiling, it is highly valuable—but for winter feed, we should apprehend millet to be far preferable.—ED.

### The Oaks Cow.

At the Greene County Fair, held at Catskill, a good common-sense, practical, agricultural Address was delivered by Zadock Pratt, member of Congress from that district. The following is an extract:—

"In the Agricultural Journals I have read an account of a middle-sized country cow; I refer to the celebrated Oaks Cow, bought out of a drove in Massachusetts, for a mere trifle. Her history illustrates two things worthy of note: First, what we can obtain from the best of our old breed; and, secondly, how much depends on good feeding; and just as it was with the Oaks Cow, so will every man find it with his farm. If he won't feed his farm, and that often and well, he need not expect it long to feed him. Always taking out of the meal-tub, and never putting in, will soon come to the bottom, as poor Richard says. But to return to the Oaks Cow that did so much honour to the name of Caleb Oaks; it is stated, on the most unquestionable authority, such as satisfied the Massachusetts Agricultural Society,

that in the first year, with ordinary keep, she made but 180 pounds of butter:—the next year she had twelve bushels of corn meal, and then gave 300 pounds of butter; the next, thirty-five bushels, and she gave more than 400 pounds; the next year she had a bushel of meal a week, and all her own milk skimmed, and then she gave, from the 5th of April to the 25th of September, the day of the Show, 484 pounds, besides suckling her calf for five weeks. She was exhibited, and deservedly took the premium on the last mentioned day; and will carry down her owner's name with credit to posterity, as long as Oaks grow.

"We cannot contradict nature, but can co-operate with her, and working in her methods, and in conformity to her laws, produce all the results that the Creator ever designed to put within our reach. A man passing a few years ago, by a field of ripe wheat on Long Island, was struck by the rich appearance of two or three heads that grew near the road, and hung down as if the grain was of great weight. He stopped and plucked those heads, and sowed them the next season in a place by themselves, and so cultivated them year after year, until they have increased to over a hundred bushels, that for colour, weight, and uniform plumpness of the kernels, are, perhaps, not surpassed in the country; at least they are expected to take the prize at the approaching fair of the American Institute. This shows what we should do if we wish to carry out nature's plans, and finish what she had begun. The very best specimens should be chosen from those that have been grown on our own, or on a neighbouring farm, instead of sending to a distance for such, as when we get them, will be forced, by the irreversible laws of soil and climate, to change their character and adapt themselves to their new locality."

THE POTATOE ROT IN NEW JERSEY.—We learn by the Burlington Gazette, that Nathan Stowell, of that place, has been directing his attention for four years past, to the subject of rot in the potatoe, in hopes of discovering the cause of a disease which begins to threaten very serious consequences. N. Stowell thinks the rot is owing to the sound seed having all run out, and that too little new seed has been produced. He has himself produced a fine crop of new potatoes from tubers of the Foxite variety, and out of nearly fifty bushels not a single potatoe is diseased. The vines were free from blight. A patch of Mercers, close by, were grievously afflicted with the rot.

Communicated for the Farmers' Cabinet.

### **Agricultural Society of Chester and Delaware Counties.**

At an adjourned meeting of this Society, held 15th ult., the following officers were elected:

*President*—ABRAHAM R. McILVAIN.

*Vice Presidents*—Paschall Worth, Joseph McClellan, Marshall Hickman, Townsend Jaines.

*Treasurer*—George Brinton, jr.

*Recording Secretary*—John Rutter.

*Assistant Recording Secretary*—William P. Townsend.

*Corresponding Secretary*—A. L. Elwyn.

*Directors*—E. T. Rivinus, John Worth, Lewis James, Chalkley Harvey, Joseph Jefferies, Benjamin Hickman, Lewis P. Hoopes, John S. Bowen, Marshall Hickman.

On motion, it was resolved that the constitution of the Society be so altered as to embrace within its leading objects, in addition to agriculture, the interests of horticulture, domestic manufactures, and the mechanic arts. Manufacturers, mechanics, and the lovers of horticulture, are invited to join the Agricultural Society, and contribute their joint efforts to its success, under its new organization, as it is intended that the annual exhibitions shall hereafter be enlivened by contributions and specimens from all these sources, which will be creditable to the intelligence and industry, and skill of the two counties. The Fairs of the American Institute, in New York, had but a very small beginning—smaller than can now be made by Chester county; and if the proper spirit can be brought out, there is no reason why, in course of time, our county exhibition should be inferior to it.

On motion, it was resolved that Dr. A. L. Elwyn and Joseph Jefferies be appointed a committee to prepare for the next stated meeting an essay on guano, stating the results of experiments which have been made in this county—if any; its action on particular crops, the mode of its application, and its desirableness to the farmers in this section of country, as regards cheapness and efficiency.

Dr. George Thomas and Richard I. Downing were appointed a committee to prepare for the next stated meeting a similar essay on Poudrette, with a like examination into its character and efficiency as a manure for the general or particular purposes of the farm.

Paschall Worth, Dr. Charles W. Parish, Joshua Embree and Paschall Morris, were appointed a committee to prepare for the next stated meeting an essay on Apples and

Apple Orchards, with an examination into the causes of the decline in quality and quantity of some of the best known varieties in this section, the proper remedy for it, and the most approved modes of managing and planting orchards, and bringing them forward to early productiveness and thrift.

George Brinton, jr., Paschall Worth and Paschall Morris, were appointed a committee to write, for the next stated meeting, an essay on the subject of barn-yard manures; the most advantageous mode of management in the yard, and application in the field, together with such facts and evidences as can be collected, to throw light on this important subject.

### **Soiling, or House-feeding Cattle.**

At a late meeting of the Farmers' Club in Scotland, Mr. Harkness read a communication from Mr. Skilling, of Glasnevin, from which we make the following extracts:

"How does it happen that the Belgians have kept up in the highest condition an indifferent soil, without any such extraneous manures as bones or guano, or any other importation of the kind? This they have done for hundreds of years, and yet their land is never poor or exhausted, but in the highest state of productiveness. The reason is obvious. There is no witchery in their management; and if the farmers of Scotland would only follow their example they would find themselves fully recompensed for their pains. If they would deepen their lands, keep more stock, and chiefly house-feed them, saving the manure—liquid and solid—raise an abundance of crop for soiling summer and winter food, they would make more from their cattle and their land.

"When I first adopted the house-feeding system, my neighbours laughed at me, and predicted that my cattle would die; others said the cows would give no milk; but their predictions were not verified. My cows had a good appearance, and when driven to water twice a day, [not enough—cows need drink four times a day, at least]—they were wild and full of spirit; and when others were dry, mine were giving milk.

"I have estimated correctly, that a cow fed in the house will make twenty-five tons of liquid manure, which will be sufficient for an acre of ground. I can, on an average, keep a cow on every two British acres. The cows also give much more milk.

"When my present farm was in pasture, only eighteen cows could be kept in summer. Now, by the soiling system, it feeds from twenty to twenty-two cows, three horses, and twenty to forty pigs, all the year

round, and I have as large a portion of grain crops as most other people have on farms of equal extent—52 acres.

“No doubt, the system, if ill-wrought, will fail. Some who try it, will bring their cows into the house; they are tied up and perhaps injudiciously confined—kept filthy—not regularly curried—a large quantity of some particular kind of food is put before them, and this repeated, cloyes the appetite, and the animals refuse their food. They are perhaps neglected in water—by-and-by they fail in milk—get out of condition—and the whole experiment is a failure, from being wrongly conducted. The house itself must be airy, well ventilated, and kept perfectly clean. The animals must be well curried and brushed at least twice a day. There ought to be one particular person to superintend and pay attention to the feeding; and one of the first and most important parts of his duty is, to ascertain the appetite of every beast. Cows, like other animals, will eat more or less; and they ought to be supplied accordingly as they require it, being kept rather with an appetite than otherwise. As soon as the animal has eaten its food, all refuse should be taken away, and nothing suffered to remain in the stall before it. Should it seem delicate or careless in eating, let the food be at once removed. The times of feeding are also of great importance, and ought to be strictly observed and regulated. The cattle will know the hour of feeding as correctly as the clock can tell it, and will be disappointed and fretted if neglected. This neglect is prejudicial both to milking and fattening. I give six feeds in the day, summer and winter—beginning at six o'clock in the morning, and ending at nine in the evening—viz: at 6, at 8, at 12, at 3, and at 9. They get water in their stalls at 10 in the morning, and at 5 in the afternoon. They are likewise turned out one hour from 10 to 11, where they exercise and drink if they choose.

“The kinds of food I use are chiefly the following: in summer, at 6, feed with perennial or Italian rye-grass and clover; at 8, with cabbages or leaves; at 12, with cut hay and straw, mixed—this feed is to prevent the action of too much green food on them—at 3, upon vetches; at 6, upon mangold wurzel, leaves, or refuse of the farm or garden; at 9, clover or grass; or this may be a dry feed, if the state of the bowels require it.

“In winter, at 5, feed with steamed food: at 8, with turnips, raw; at 12, cut hay and straw: at 3, with mangold wurzel, raw; at 6, with steamed food; at 8, with turnips, raw; at 6, with steamed food; at 9, with hay and straw. Water must be given or

offered, and plenty of salt used in the steamed food.”

With respect to ventilation of cattle houses, Mr. M'Culloch stated that he considered too little attention had been paid to this important matter, as nothing tended to promote the health of animals more than well ventilated houses. There should be a small aperture below and above in the wall, behind each animal, so that by the admission of fresh air beneath, the respired vitiated air—carbonic acid gas—which is very injurious to animal life, together with the pernicious effluvia from the skin, urine and dung, may be forced out by the upper aperture, and in this way have a constant renewal of air. Mr. M'C. was astonished to observe that even in the establishments of our most eminent agriculturists, this important subject was so much overlooked. You will often observe openings in the upper part of the hovel, or in the roof, for the escape of the contaminated air, but it seems to be forgotten that there must be an admission of fresh air *below*, to cause the effective expulsion of the contaminated atmosphere.—*American Farmer*.

**POTATOES.**—A curious fact has been stated to us by a person in the neighbourhood of Carriagline. It is, that having planted potatoes in alternate beds of sea-weed and farm manure, the potatoes in the latter are entirely destroyed by the prevalent disease, while those planted in the beds covered with sea-weed, have escaped untouched. The proportion which the infected bear to the healthy roots varies. In some places the destruction seems almost complete, and the progress of the disease is so rapid that in many others it threatens to become so. Even after brought home and housed, the potatoes are attacked. Several people who purchased in the market last week, and found them excellent for a few days, have since been obliged to throw the remainder out, so that it is impossible, from present appearances, even to guess at the quantity which may ultimately be secured for an acre or a field.—*Cork (Ireland) Advertiser, October 9th*.

**HEAVY FLEECE.**—Mr. Buel Warner, of Cornwall, Vermont, states that his sheep was yeaned the first week in April, 1844, and was sheared the 23rd of June last. The fleece weighed 9 lbs. 5 oz., well washed and in good condition. Accompanying this account was a sample of the wool. It is clean, and of remarkable quality for such weight.—*Cultivator*.

### Ice Houses.

A short time before I left England, you published in the *Gardeners' Chronicle* a number of letters and plans for the construction of ice-houses, but, as far as I can remember, nothing at all resembling the Chinese one, which I shall now describe to you. On the left bank of the Ningpo river, proceeding upwards from the town and forts of Chinghai, and in various other parts in the north of China, I have met with these ice-houses. When I inspected them for the first time, last winter (1843,) their construction and situation differed so much from what I had been accustomed to consider the essentials of an ice-house at home, that I had great doubt of their efficiency; but at the present time, which is the end of August, 1844, many of these houses are yet full of ice, and seem to answer the end most admirably. You are probably aware, from my former descriptions of the country, that the town of Ningpo is built in the midst of a level plain, from 20 to 30 miles across. These ice-houses stand on the river sides, in the centres of this plain, completely exposed to the sun—a sun, too, very different in its effect from what we experience in England,—clear, fierce, and burning—which would try the efficiency of our best English ice-houses, as well as it does the constitution of an Englishman in China.

The bottom of the ice-house is nearly on a level with the surrounding fields, and is generally about 20 yards long by 14 broad. The walls, which are built with mud and stone, are very thick, 12 feet in height, and are, in fact, a kind of embankment rather than walls, having a door through them on one side, and a kind of sloping terrace on the other, by which the ice can be thrown into the house. On the top of the walls or embankment a tall span roof is raised, constructed of bamboos thickly thatched with straw, giving the whole an appearance exactly resembling an English hay-stack. And this is the simple structure which keeps ice so well during the summer months, under the burning sun of China! The Chinaman, with his characteristic ingenuity, manages also to fill his ice-house in a most simple way, and at a very trifling expense. Around the house he has a small flat level field, which he takes care to overflow in winter before the cold weather comes. It then freezes, and furnishes the necessary supply at the door. Again, in spring the same fields are ploughed up, and planted with rice; and any water which comes from the bottom of the ice-house, is conveyed into them by a drain constructed for the purpose. Of course here, as in England, the ice is carefully co-

vered up with a thick coating of straw when the house is filled. Thus the Chinaman, with little expense in building his ice-house, and an economical mode of filling it, manages to secure an abundant supply for preserving his fish during the hot summer months. This, I believe, is the only, or at least the principal purpose to which it is applied in this country, and never for cooling wine, water, or making ices, as we do in Europe.

It is now, I think, a question whether we could not build ice-houses at less expense, and more efficient, upon the Chinese plan than upon the old under-ground system common in England.—*Gardeners' Chronicle*.

### The Corn Trade.

THE all engrossing topic continues to be the disease in the potatoe crop. The fine weather experienced during the past three or four weeks, has been favourable for digging up this root, and the greater proportion has now been raised; the time has therefore arrived at which something like an estimate of the extent of the failure may be formed. We have been at considerable pains to collect information on this important subject; and from the general tenor of our advices, we fear that the damage is quite as great as it has been represented. The most serious cause of apprehension is, however, the fact that a large proportion of the crop which, at the time of raising, appeared sound, has been found not to keep. That such is unfortunately the case, has been recently proved by the condition in which many of the cargoes from the north have reached the London market. It is to be presumed that at the time of shipment care was taken to select only such potatoes as were to appearance sound; for it can scarcely be supposed that parties making consignments would be so regardless of their own interest as to ship a quality unsuited for a sea voyage. We consequently take it for granted that every attention was bestowed in selecting the cargoes before the potatoes were put on ship-board; if right in this, the condition in which they have arrived certainly affords abundant grounds to fear that a small proportion only of that part of the crop secured in a seemingly healthy state will be preserved through the winter, unless extraordinary care be taken for their preservation. We have it from good authority that a large number of cargoes of potatoes have within the short space of a fortnight, arrived in the Thames in such a state as to be not only wholly unfit for food, but so completely rotten as not to be worth the freight.

The most obvious conclusion, in our opinion, is, that shippers in the Channel Islands, Yorkshire, &c., will, after the experience they have gained from their first shipments, prefer selling produce at home at a lower price, rather than run the risk of a total loss; and we must, therefore, expect an early and very material falling off in the arrivals of this useful article of food. Should we be correct in this supposition, the price of potatoes—already high—must shortly rise still higher; and we should certainly not be surprised to see the article more valuable, weight for weight, than some of the lower descriptions of grain, or even bread itself. Taking into consideration the amount of nutriment contained in the same quantity of wheat bread and potatoes, it may be even questioned which is the cheaper at present; and, under all circumstances, a very large consumption of flour must inevitably take place during the ensuing winter.—*Mark Lane Express.*

#### Growth of the West.

An ear of Indian corn was handed me last Saturday, as a specimen of the crop raised by *Major Wm. Irwin*, on his farm three miles out on the Lebanon road. He assures me that hundreds of ears as large, or nearly so, may be found in what have been gathered from the same field. It is of the large yellow grained sort, is thirteen inches long, and has fourteen rows, and eight hundred and ninety-six grains on the ear. I should like to send it to one of our Atlantic cities, that our friends at the east may have ocular evidence of the growth of the great west. If any gentleman on his way to the east, will be the bearer of it, he may be able to gratify the curiosity this statement is calculated to excite there. It is due to the Buckeye State to let our eastern brethren see some of our products. A sight of this ear of corn will illustrate and explain the *rapid growth of Ohio.*

THE Cincinnati Weekly Advertiser of the 5th ult. was handed us a few days ago by a friend from that city, containing the above statement. The ear of corn alluded to, was also handed us: it is a fine one, but if it is sample No. 1, that the "Great West" can produce, the Editor can assure his "Buck-eye" brother of the "Weekly Press," that he has himself grown, and husked with his own hands, many a finer one in New Jersey. They must be larger ears of corn that are there noticed as rarities.—ED.

OF all the serial grains and esculent roots, the potatoe is the only one whose history is known. Wheat, rye, barley, &c., date far back into the dark ages.

SOAP SUDS.—If the suds usually made in the farmer's family, were to be rigidly economized and applied to his tillage and grass lands, the addition to the crops would remunerate him amply for the labour and expense required in making the application, besides being an important and permanent advantage to the soil. By conducting it into a tank, or reservoir, properly constructed, it would furnish the means of adding to his manure heap in the ratio of at least a cart-load to every hoghead of suds; and this, for most purposes, would be equal to the best manure manufactured in his yard and styes. It is matter of surprise that farmers who are by no means remiss in the performance of obvious duties, connected with the management of their farms, do not take more pains to save this article. We have often alluded to its fertilizing properties, and we can assure our readers that we think it important.—*Maine Cultivator.*

AVERAGE RENT OF LAND IN ENGLAND AND WALES.—The average rent of land in England is said to be 18s. 10d., and that of Wales, 9s. 5d. The produce of wheat in England and Wales is probably under twenty-one bushels per acre.

### THE FARMERS' CABINET, AND AMERICAN HERD-BOOK.

PHILADELPHIA, TWELFTH MONTH, 1845.

ANOTHER extract from the fourth Number of *Colman's Tour* will be found on the 139th page, in relation to the great flesh market of Smithfield, London. These details are not only highly interesting to those among us who have no immediate connection with such matters, but important and instructive to our drovers, our butchers, and particularly our graziers. We know something of the risks and impositions to which the latter class are most unreasonably subjected, and are sure they ought to be remedied; and we are equally certain that the remedy is in their own hands. Let them apply it.

We do not supply as many of our subscribers and friends as we would like, with the above work. The fourth Number gives more particularly an account of the English markets—both cattle, grain and vegetable, and we know not where else so much valuable detail on these subjects may be found.

A COPY in neat pamphlet form of the Agricultural Society's Transactions of New Castle County, Delaware, has been received from Dr. Thomson, who will accept thanks for the kindness. We shall make some extracts from it for the next Number of the Cabinet.

The accounts from England seem to sustain the advanced prices of grain. Our own short crop of oats, and the great diminution from the usual yield of hay, together with the high price of potatoes, would probably of themselves, without any extraordinary demand from abroad, secure to the farmer a fair price for his produce this winter. Flour is worth from \$6 50, to \$7. Wheat, \$1 25 to \$1 35. Rye, 76 cents. Old corn, 75 to 80 cents, and new, 55 to 60 cents. Oats 45 cents. Good round potatoes are worth 65 cents; and first-rate Timothy hay will bring \$20 to \$22 a ton.

The Editor has perhaps more than once adverted to the increase of comfort that would be made to the farmer's family, by the introduction of a coal stove into his kitchen. There is scarcely any department in his domestic arrangements in which he should feel a livelier interest, or where increased accommodations would be more sensibly felt. When the coal fire is properly managed it need not go out at night, but keeps alive without much or any consumption of coal, and consequently in the morning the fire is lively at once—the room is warm—and if an early breakfast is needed for the early stirring teamster—our Jersey friends will understand this, who start by *day-break* for the *marl pit* or the *cedar swamp*—the tea kettle may be found boiling by the first one that is up. With respect to the question of economy, we apprehend that where merchantable wood is burned, and within easy reach of navigation, coal will be found as cheap as wood. But even if coal were a little more expensive, the additional comfort is worth paying something for. Our farming readers who have not already made this improvement, will give it a turn in their minds.

### Poudrette.

A valuable manure—of the best quality, prepared in Philadelphia, for sale at the office of the FARMERS' CABINET, No. 50, North Fourth Street, or at the manufactory, near the Penitentiary on Coates' street. Present price, \$1 75 per barrel, containing four bushels—\$5 for three barrels—\$15 for ten barrels, or thirty cents a bushel. Orders from a distance, enclosing the cash, with cost of portage, will be promptly attended to, by carefully delivering the barrels on board of such conveyance as may be designated. The results on corn and wheat have been generally very satisfactory. Farmers to the south and in the interior, both of this State and of New Jersey, are invited to try it.

JOSIAH TATUM.

### SHORT ADVERTISEMENTS.

The subject matter of which, may correspond with the agricultural character of this paper, will be inserted at the rate of one dollar for each insertion of ten lines or less; and so in proportion for each additional line. Payment in advance.

THE quantity of rain which fell in the Eleventh month, 1845, was two inches and a half. . . . . 2.5 in  
*Penn. Hospital, 12th mo. 1st.*

## COATES' SEED STORE,

OF MORE THAN FORTY YEARS STANDING,

Where may constantly be had

Clover, Timothy, Orchard, Herd,

AND OTHER

GRASS SEEDS,

TOGETHER WITH A COMPLETE ASSORTMENT OF

GARDEN SEEDS,

Of the finest Quality and best Varieties,

JOS. P. H. COATES,

No. 49, Market st., Philad<sup>a</sup>.

### PEACH TREES.

THE subscriber has for sale about 7,000 peach trees of good size, and of the following approved kinds, viz: Large Early York, Troth's Early Red, Old Mixon, Red Cheek Malacotan, Red Rare Ripe, Yellow Rare Ripe, Caliber's Pavia, Late Yellow Cling, Ward's Late Free and Late Heath.

The assortments may be depended upon.

GEORGE MICKLE,

Woodbury, N. J., 12th mo. 15th, 1845.

Enquiry may be made at this office.

### GUANO.

TWENTY-FIVE tons first quality Ichaboe Guano, in bags or barrels, for sale in lots to suit purchasers, by

S. & J. J. ALLEN & CO.,

No. 7 South Wharves, 2nd Oil Store below Market street, Philadelphia.

October 15th, 1845.

6t.

### D. O. PROUTY,

Manufacturer of Agricultural Implements, and dealer in Garden and Grass Seeds,

No. 194<sup>1</sup> MARKET ST., PHILADELPHIA:

Offers for sale the following articles now in season, viz: Grant's Patent Fan Mill, for chaffing and screening wheat and seeds at one operation. This mill carried off the first premium at the State Fair in New York, Sept., 1845, and the first premium at the Philadelphia Agricultural Exhibition in October, 1845. Corn Shellers in great variety, and warranted to work well. Price from \$2 to \$30, each.

Straw, Hay, and Corn-stalk Cutters of different patterns, among which is Hovey's Patent, an excellent article, at a low price.

Mott's Agricultural Furnace and Cauldron, an article which every farmer should have. Grindstones on friction rollers, of various sizes.

D. O. PROUTY.

We keep on hand at this office, and will supply our friends with Agricultural works generally. Among which are

THE FARMER'S ENCYCLOPEDIA, full-bound in leather;—Price	\$3 50
YOUATT ON THE HORSE, with J. S. Skinner's very valuable Additions;	2 00
BRIDGEMAN'S GARDENER'S ASSISTANT;	2 00
THE AMERICAN POULTRY BOOK;	37½
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DANA'S MUCK MANUAL;	50
Complete sets of the FARMERS' CABINET, half-bound, 9 vols.	7 50
DOWNING'S Landscape Gardening,	3 50
Downing's Fruits and Fruit Trees of America,	1 75
SKINNER'S Every Man his own Farrier,	50
AMERICAN Poulterer's Companion.	1 25
BOUSSINGAULT'S RURAL ECONOMY,	1 50
FARMERS' & EMIGRANTS' HAND-BOOK,	1 00
MORRELL'S AMERICAN SHEPHERD,	1 00
BEVAN on the HONEY BEE,	31¼
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SKINNER'S CATTLE & SHEEP DOCTOR,	50
AMERICAN FARRIER,	50
THE FARMER'S MINE,	75
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LIEBIG'S AGRICULTURAL CHEMISTRY,	25
“ ANIMAL CHEMISTRY,	25
“ FAMILIAR LETTERS,	12½

As well as his larger works on Chemistry and Agriculture.

Subscriptions received for Colman's Agricultural Tour—or single numbers sold.

☞ We are prepared to bind books to order.

### Seed Store,

No. 23 Market Street, Philadelphia.

The subscriber keeps constantly a supply of White and Red clover, and other grass seeds. Field seeds, consisting of Spring and Winter Wheats, Potatoe, Oats, Barley, and choice varieties of Seed-corn. Also in season, Fruit and Shade Trees. Garden and Bird seeds generally. Guano in parcels to suit purchasers.

M. S. POWELL.

Philad., March 15th.

## Agency for the Purchase & Sale of IMPROVED BREEDS OF CATTLE & SHEEP.

The subscriber takes this method of informing his friends and the public, that he will attend to the purchase and sale of the improved breeds of cattle, sheep, &c., for a reasonable commission. All letters post paid, addressed to him at Philadelphia, will be attended to without delay.

AARON CLEMENT.

March 15th, 1845.

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## THE FARMERS' CABINET,

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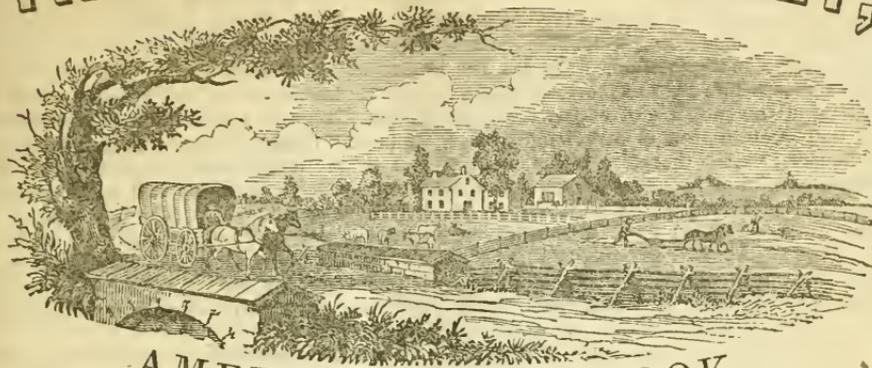
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# THE FARMERS' CABINET, AND



## AMERICAN HERD-BOOK.

DEVOTED TO  
AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

Perfect Agriculture is the true foundation of all trade and industry.—LIEBIG.

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No. 50 North Fourth Street,

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Price one dollar per year.—For conditions see last page

For the Farmers' Cabinet.

### Charcoal as a Fertilizer.

MR. EDITOR,—Did our farmers, particularly those who are obliged to clear their lands of timber before they can plant them, know what an immense and almost imperishable source of wealth they have at hand, it appears to me that our wooded lands would be seized upon with an avidity that could only be equalled by the progress of the use of steam.

Charcoal, as a fertilizer, is not surpassed by any thing yet known to chemists. It possesses powers which, if farmers would avail themselves of them, would save a vast deal of labour and expense. It possesses the power of condensing within its pores—and it is an extremely porous substance\*—both carbonic acid and ammonia;

\* For this purpose the charcoal of soft woods is, if any thing, preferable to that of hard woods, while the ashes of hard woods is preferable to that of soft woods.

two substances of the highest value to all agriculturists. No manure is useful to the farmer, unless it yields carbonic acid, and ammonia; it is for these that he uses manure; and there is no decaying vegetable that does not yield them; they are constantly floating about in the air in greater or less quantities, and every storm of rain or snow brings them to the surface of the earth. Every manure heap in the land gives forth volumes of these gases, unless it is prevented by some means employed for the purpose. Those farmers who place their manure in heaps in the field until it is well rotted, lose the greater part of these invaluable substances by such means. Manure in a state of decay, will gasify, every thing that can be done to the contrary, notwithstanding. Therefore if we have not something at hand to prevent these gases from flying off to the woods, swamps, marshes, or other fields, we must sustain the loss. Charcoal possesses the power, singular as it may seem, of *sucking in*, if I may be allowed the expression, these gases, and holding them until such time as a growing plant in contact with it, may want them. What a source of wealth is this! When every wind, every rain, every snow, manures the farmer's land, year after year, without any other trouble or expense on his part, than applying once and once only, finely pulverized charcoal in proper proportions, and furnishing lime and a comparatively small proportion of potash to all those plants that need a hard and strong

stalk, and potash with a small proportion of lime, to all other plants.

Upon the subject of charcoal possessing the power of condensing ammonia, permit me to give a few quotations from Dr. Liebig's great work on Agricultural Chemistry; speaking of the property of clayey soils and soils that contain iron, of absorbing ammonia, he says: "Soils therefore which contain oxides of iron and burned clay, must absorb ammonia, an action which is favoured by their porous condition; they further prevent the escape of the ammonia once absorbed by their chemical properties." "The ammonia absorbed by the clay or ferruginous oxides is separated by every shower of rain, and conveyed in solution to the soil. Powdered charcoal possesses a similar action, but surpasses all other substances in the power which it possesses of condensing ammonia within its pores, particularly when it has been previously heated to redness. Charcoal absorbs ninety times its volume of ammoniacal gas, which may be again separated by simply moistening it with water." *De Saussure*.

He is here speaking of ammonia alone; but when carbonic acid is present in the charcoal, the ammonia enters into chemical combination with it, and forms carbonate of ammonia; and as charcoal possesses the power of holding carbonic acid, even when moist, and as water does not destroy its chemical properties as long as the charcoal holds it, it also holds that which is in chemical combination with it.

In another place, while speaking of the source of carbon and nitrogen, he says, "It must not, however, be left unmentioned, that common wood charcoal, by virtue of its ordinary well known properties, can completely replace vegetable mould or *humus*." "Plants thrive in powdered charcoal, and may be brought to blossom and bear fruit, if exposed to the influence of the rain and the atmosphere." "Charcoal is the most indifferent and most unchangeable substance known; it may be kept for centuries without change, and is therefore not subject to decomposition. The only substances which it can yield to plants, are some salts which it contains, amongst which is silicate of potash. It is known, however, to possess the power of condensing gases within its pores, and particularly carbonic acid. And it is by virtue of this power that the roots of plants are supplied in charcoal exactly as in *humus*, with an atmosphere of carbonic acid and air, which is renewed as quickly as it is abstracted."

An important consideration here presents itself; this highly valuable substance—char-

coal—"may be kept for centuries without change, and is therefore not subject to decomposition." Soils, therefore, once well supplied with this article, will never again need an application, unless that supply has been removed from them by some unusual means. This is a gratifying circumstance, for though it may be somewhat expensive at first to get it and place it in the soil, we have reason to think we will never have it to do over again.

Liebig also says: "Charcoal in a state of powder, must be considered a powerful means of promoting the growth of plants on heavy soils, and particularly on such as consist of argillaceous earth."

It would appear from a quotation already made in this communication, that vegetable manures to a certain extent, may be dispensed with altogether—the plants depending for their carbonic acid and ammonia on the supplies given to the charcoal by the atmosphere and the rain and snow. This looks at the first glance, like supporting the theory that plants can grow without manures—a theory which, it appears to me, could have originated only in minds that were short of comprehension—but a little reflection will show that such is not the case. It must not be forgotten that I have used the expression *vegetable manures*, not saying anything about the alkalis. As most vegetables do not give sufficient alkalis to plants, but supply carbonic acid and ammonia, and as these substances under certain circumstances are supplied in sufficient quantities by the atmosphere, it will be seen that so far from the plants growing without the manure, they have a constant and proper supply of the substances yielded by manure when the soil in which they grow has a proper proportion of pulverized charcoal. All that plants need under such circumstances for their healthy and productive growth, is the right kind of alkalis and in right quantities.

Care should be taken that the charcoal be well pulverized, for it has been ascertained that during the process of burning the wood to get it, the openings of the pores become closed by a vitreous matter—probably caused by the fire melting the silicate of potash—and thus deprive it of the power of absorbing gases. By crushing it other openings are made, which unless the charcoal is again subjected to fire, will not become closed.

Charcoal possesses another property, which, in cold soils, is of great importance, namely, that of absorbing heat, and thus furnishing warmth to the soil—this it does by virtue of its *black colour*.

In consequence of charcoal possessing the power of absorbing carbonic acid, it is a

preventive of the *rot in potatoes*. This it does by absorbing the extra quantity of carbonic acid, which is highly infectious, and, unless its power is destroyed in some way, diseases the plants. Any person who so desires, can satisfy himself of the fact that charcoal possesses this power, by referring to the letter of R. L. Pell, of Pelham Farm, Ulster county, N. Y., to Hon. H. L. Ellsworth, dated December 18th, 1844, and published in the Report of the Commissioner of Patents, page 241.

It may as well be mentioned, that as charcoal possesses the power of condensing ammonia, it would be an excellent thing to use about stables, &c. By always keeping it dry, after it has absorbed all the ammonia it will absorb, until you wish to apply it—to the wheat plant for instance just after it has blossomed, a valuable end may be gained, as the wheat plant may then have the kind of manure it wants, just at the time it is most needed for the purpose of forming gluten.

To prove the position I have taken in the foregoing, that charcoal is highly useful to farmers, I select the following article from a newspaper which has recently come into my hands. It shows conclusively, that experience fully sustains the theory.

“*Value of Charcoal.*—From the following experiments in the use, this year, of charcoal on wheat lands, its value will be duly estimated. Field No. 1—20 acres, 50 bushels of coal per acre, 25 bushels of wheat per acre. No. 2—4 acres, no coal, 5 bushels per acre, and badly rusted. No. 3—15 acres, 50 bushels of coal, 25 bushels of wheat to the acre. No. 4—25 acres, 50 bushels of coal, 35 bushels of wheat to the acre. No. 5—15 acres, 25 bushels of coal, 25 bushels of wheat. No. 6—8 acres, no coal, 5 bushels of wheat. No. 7—6 acres, no coal, 3 bushels of wheat. The soil and culture were precisely alike, and the grain was sown in April and May. The soil abounds in lime and organic matter. The coal costs \$30 per 1000 bushels, ground in a common bark mill.”

#### CHEMICO.

Wilkesbarre, Nov. 1st, 1845.

From the Farmer and Mechanic.

#### The Plough in the Garden.

TEN years experience in this country has convinced me, that an entirely different system of gardening should be pursued to that of Europe. In England, those who employ good gardeners, have generally a noble estate, descended from their ancestors, and together with it, an abundant income, to keep the estate in first-rate order. Here, where fortunes have to be acquired, generally by

personal industry and perseverance, it is not to be supposed that proprietors under these circumstances will be so lavish of expenditure. It appears to me then a mistake to lay out grounds after the plan of English proprietors. The first expense may not be grudged, but the after expense of keeping the place in repair is *always so*. I believe brother gardeners will bear me out in the assertion, that in nine cases out of ten, there is an unwillingness to allow sufficient help, or means, to keep places in anything like order, either in England or here. The consequence is a disgust, rather than pleasure, on the part of both gardener and employer.

To obviate these difficulties, then, I would propose, that the vegetable garden, at any rate, should be without box-edgings and gravel-walks, and so situated as to be easily worked with a plough, cultivator, &c.—a square or oblong is always best in form—and instead of the old fashioned four-quarters and subdivisions into beds, and alleys, for each kind of vegetable, let there be a continuous row of each, the whole length or breadth of the garden, sown or planted, say two and a half feet apart, and worked with one horse and cultivator, or plough without mould-board—a garden so worked will be found profitable, the bulk of the work being done by a farm labourer, it gives the gardener a little more time and opportunity to attend to the multiplicity of other matters that must not be neglected, and which occupy an immense amount of time, care, and attention, seldom noticed by his employer.

The objection to the plough in the garden on account of want of depth, is happily done away with, now that we have the subsoil plough—a plough that ought to be much more general in use. I noticed some fine ones at the Fair.

I know that gardeners generally have a prejudice against the plough in the garden, and till within a few years, I was among the number—but I can tell them, from five years experience with the plough, that it is far the easiest, most expeditious, and quite effectual; I raised good crops, and spent by far the most pleasant five years service in my life—pleasant, because by means of the plough, I could get crops in season, and my work always *before me*. Very respectfully yours,

G. K.

Newark, October 14th, 1845.

PEACH WORM.—A sharp penknife, or a sharp wire is the best preventive for the worm. The insect insinuates itself under the *bark* of the tree, where ordinary poisonous applications will not reach it.

For the Farmers' Cabinet.

### Indian Corn Sown Broadcast.

THE cultivation of Indian corn sown broadcast, as a substitute for grass or hay, having been mentioned in the last number of the Farmers' Cabinet, I thought it might be useful to some of your readers, to refer them to two articles on the subject, in that useful miscellany, the American Museum, long since published by the late Mathew Carey.

The first is by Mr. St. John de Crevecoeur, Consul for Louis XVI., at New York, before the French revolution; see vol. 2nd, p. 449. The second is by the late A. C. Duplaine, vol. 9th, p. 253. This last gentleman was also French Consul in Philadelphia, but in the commencement of the French revolution, and made his experiment, as he told me, in a lot in Kensington, to his entire satisfaction, about the year 1790. He also informed me, that Samuel Powell, then President of "The Philadelphia Society for Promoting Agriculture," having heard of his experiment, paid him a visit in company with Timothy Pickering, then Secretary,—and the first one of the Society. J. M.

Philadelphia, Dec. 19th, 1845.

### Letter of John Jones of Gum Bush.

THE following letter from St. George's Hundred, New Castle county, Del., is taken from the Transactions just published, of the Agricultural Society of that county, and will be read with interest on account of its straight forward, matter-of-fact, business like character. The writer is well known in Delaware, and by the readers of the Cabinet, as one of our most enterprising farmers—and we cannot but wish that his success may equal his energy.—Ed.

To the Committee on Farms of the New Castle Co. Agricultural Society.

GENTLEMEN,—In competing for the valuable premium offered by the Society for the best farm, taking into consideration the former and present condition of said farm, I proceed to give as correct a statement as my memory and a few notes taken from time to time will permit.

On the 4th of March, 1834, I removed to Wheatland, which I had purchased of J. A. Bayard, on a credit of ten years, in 1832. This part of the farm, which contained about 360 acres, is situated on Bohemia Manor, partly in St. George's Hundred, New Castle county, and partly—about 30 acres—in Cecil county, Maryland. It was very poor at that time, having always been rented, from the first settlement of the country—which, by the grave-stone of the original proprietor, Augustine Herman, was in 1669—till the time of my purchase.

Wheatland, previous to my purchase, contained 524 acres, nearly all of which was tillable, there being no wood or other waste land upon the farm. It had always been worked upon the three-field system, one of which was planted with corn; wheat was then sown in the standing corn after the fodder had been gathered, then after the wheat came off the stubble was pastured one year, without having any clover or other grass seed sown; the next year it was again planted with corn, and so on, with that improving course; for which a fixed rent was demanded of 700 bushels of corn and 125 bushels of wheat—no oats were allowed to be sown. The 700 bushels of corn, at the present price of 40 cents per bushel, would amount to \$280; the 125 bushels of wheat, at the present price, 90 cents, would be \$112 50; together, \$392 50, and this for the farm before any was sold off; but reduce it to the ratio of the present size of the farm, say about one-third off, and you have a rent of \$260, out of which the repairs were to be paid. Such was the exhausted state of the land, that it scarcely paid six per cent.—after deducting for repairs—on \$4100, the amount of purchase money that I was charged with.

For several years I got but poor returns for my labour, not having the means or energy to improve, till 1837. In that year I concluded to run my face, and make an effort towards improvement with lime, and up to 1839, I had put on about 12,000 bushels, at a cost at the kilns of 20 to 22 cents per bushel. By 1840, I had seen and felt the good effects of the lime, and determined to complete the first dressing of all my arable lands, as well as my Cote Brilliant Farm—better known as Gum Bush—of 380 acres, which I had also purchased at a credit for less than \$8 per acre, and was situated near by, as Wheatland, my homestead. In that year—1840—I purchased 10,000 bushels of lime at a cost of 17 cents per bushel, delivered at the landing of the canal, distant about four miles from the farms. Here I again had to run my face, but this time I went to the lime burners on Schuylkill, where I would advise all honest Delawarians that have not limed, to go at once, for to this day honest Delaware faces are in good repute there. They are no repudiators. And while on the subject of lime, I will state that one lime burner, William Moguee, has sold in New Castle county, within the last six months, 145,000 bushels of lime, of which 90,000 bushels have been delivered.

Previous to 1840 I had sown clover and other grass seeds pretty freely, one year as much as 45 bushels, and the same year I

purchased 20 tons of plaster. At first I got but poor return even for my lime, I suppose for want of vegetable matter, but when my clover had grown so as to make a swarth or lay for turning under, my crops began to increase even beyond my expectation. The crops for the year 1844, which closed with my late wheat crop, were all got out and sold by the 25th of July, 1845, producing the following results:

Oat crop light—not many sown— crop sold for \$209—rental share	\$104 50
Corn tillage large—97 acres, including an orchard of 4 acres, not well tilled, produced 3,000 bushels—rental share, 1,500 bushels, at 40 cents,	600 00
The wheat crop amounted to 2,820 bushels, exclusive of brock or rakings—the rental share one half, or say 1,410 bushels, at 90 cents,	1269 00
	<hr/>
	1973 50
This was grown on two fields, one of which of 97 acres, a clover lay well turned under, produced 1872 bushels, exclusive of brock, which would have made this field amount to over 20 bushels to the acre.	
Add 64 bushels of brock, at 90 cts. per bushel,	57 60
	<hr/>
	\$2031 10

The other field of wheat contained about 60 acres. The product of this field was 948 bushels, exclusive of rakings; or had they been included, the yield would have exceeded sixteen bushels to the acre. This field had been hard cropped, for the wheat followed corn, which corn had followed wheat stubble of the year previous, without manure or clover. Indeed this field had produced nine crops in twelve years, with but little manure at any time, it being farthest from the farm-yard, and my plan is never to haul manure to the far side of the farm, whilst I have poor land near by. The principal help this field has had was 40 bushels of lime to the acre, put on in 1838, and two crops of clover turned under, and on a part of the field a crop of oats was turned under that had been injured by the hail storm of 1840.

The rental value of these three crops of oats, corn and wheat, may then be set down at \$2031 10, the usage of this part of the country being one half of the grain for rent. In the upper Hundreds, near the manufactories, an additional amount in money would

be obtained for the privileges of dairy, poultry, eggs, &c.

The rental value, as above set forth, you will perceive at a glance, now pays an interest of six per cent. on a capital of \$33,850. The original cost of the farm, or investment was, as you will also perceive, \$4,100; and that a credit. I will leave you, gentlemen, to calculate the yearly dividends on the investment.

The cost of the 40 bushels of lime having long since been reimbursed by the increased crops previous to this year, the amount of which has just been set forth, I have some profits or proceeds from this farm in the way of raising stock, dairy, &c., some of which is exhibited this day, and has been every year, but one or two since the existence of this Society, the value of some of which I find by turning to some memorandums. I will give you one entire leaf.

May 11th, 1844.—Mrs. Jones has this week made and printed 48 lbs. of butter. The trouble is the want of a near cash market. Our part of the country being strictly agricultural, there are but few others than producers to consume our butter, even in our little villages; consequently it will not command ten cents per pound cash, we being too remote from market—more than twenty-five miles from the manufacturing and consuming district of our county, where on the first of the month butter brought twenty-five cents cash in the market.

The stock from which this butter was made, consists of eight cows, all *natives of Delaware*, calved and raised by myself, on Wheatland. I give their ages and names, according to seniority:

No. 1, Black Maria, calved May 8th, 1833, —last calf, January 2nd, 1844.

No. 2, Yellow Flower, calved June 10th, 1836,—last calf, June 8th, 1843.

No. 3, Sun Flower, calved April 22nd, 1839,—last calf, March 16th, 1843.

No. 4, Cora, calved June 28th, 1839,—last calf, April 19th, 1842.

No. 5, Cauliflower, calved May 26th, 1840,—last calf, March 29th, 1843.

No. 6, May Flower, calved May 8th, 1841,—last calf, May 9th, 1843.

No. 7, Blossom, calved June 19th, 1841,—last calf, February 4th, 1844.

No. 8, Cherry, calved June 23rd, 1842,—last calf, April 17th, 1844.

Making 6 lbs. each per week, at an average of 44 weeks, four days each from calving. These cows had been well wintered and just turned out on a splendid field of clover.

I find one other memorandum that should have preceded the above; but here it is:

June 4th, 1840.—Commenced milking Yellow Flower three times a day, with the view of ascertaining the amount of milk and butter she would give per day, for one week, from the 4th to the 10th of June, inclusive.

Days.	Morn.	Noon.	Evening.	Quarts.
1	9	8½	9	26½
2	8½	8½	9	26
3	8	7	8	23
4	8	8	7	23
5	8	8	9	25
6	10	8	7	25
7	10	9	7½	26½

On Monday, the 7th, we churned the two first day's milkings, and the yield in butter was 4½ lbs., equal to 2¼ per day, or 15¾ per week. The weather being so warm—the thermometer standing at 93—we declined further trial at this time, believing, as we did, that it would not be doing justice to the cow to press the trial while it was so warm as to prevent the cow from feeding as she ought.

May 3rd, 1844.—This day, on my return home from the Baltimore Convention, accompanied by two neighbours, Joshua Clayton, Esq., and Dr. J. S. Naudain, we found Mrs. Jones preparing to weigh the butter of one day's milking of Yellow Flower. The result was 1 lb. 2 oz. and the weight of two cents. Upon our all taking a drink of the butter milk, Dr. Naudain declared there was butter enough in the milk to have made up the full quarter.

The milk of this cow was measured for several days together, with about the same results, yielding about 14 quarts per day; she was milked only twice each day in this trial—morning and evening; and as 14 qts. per day was the amount of milk from which this trial of butter was made, we did not think it worth while to incur the trouble of continuing the churning. I was led to this experiment by seeing a statement in the April No. of the Farmers' Cabinet, of the extraordinary cow of Mr. Frost, of England. She having made one and a half pounds of butter each day for four years. The Yellow Flower had then been giving milk about four years, or since the birth of her second calf, Cauliflower, and at the time of this trial was about eleven months from calving, having had her last calf 8th of June, 1843; consequently she may be supposed to be in her lowest stage of milking. She has always been an annual calver, and always milked well up to calving on two other occasions. I have seen Mrs. Jones milk and measure, and each time she gave 16 quarts per day.

Thus you see her lowest milking may be put down at 14 qts.  
 Her greatest milking when fresh, 26 "  
 Her greatest yield of butter, 2½ lbs.  
 Her lowest yield of butter, 1¼ "

Averaging 1 lb. 10 oz. per day. Consequently at the head of the list of any stock in this or any other country or nation.

She is still at the pail; but was much injured by driving up over twenty miles each way, with a full udder of milk, in less than half a day, to the last Exhibition, and will, I fear, never give as much again. The drive caused *prolapsis uteri*, with other injury.

I have brought in this memorandum about the stock, as a part and parcel of the products of the farm; or, as the butcher would say, a kind of fifth quarter, and if we were near the manufacturing districts of the Brandywine or the city of Wilmington, this branch of our mixed husbandry would be fully up to a fifth of the whole product, particularly when we take into calculation the calves, milk, butter, pigs, &c. Enough has been written to show that the rental proceeds of the farm, by good management, will now, at the present depressed prices of the products of the farmer—owing to the abundant crops—yield a rent equal to the interest of one hundred dollars per acre, and yet we are but in our infancy, just waking up from a Rip Van Winkle nap, in regard to agricultural improvements. Our crops of corn are less than 40 bushels per acre, our wheat less than 20, and other crops in proportion, whilst from some improved spots of land, of the same natural good quality, 100 bushels of corn have been produced, 50 bushels of wheat—hay, and every thing of the ground suited to the climate in the same proportion. These results have been attained at the cost of only ordinary good tillage, with a rotation of crops and a dressing of not exceeding 50 bushels of lime, which can be had now at this point at 13½ cents per bushel, and I presume on any landing on the tide water, on either side of the peninsula formed by the Chesapeake and Delaware Bays, for an average of three cents per bushel additional, and most, if not all the land of equal good quality with our own, in addition to which the average distance of all farms scarcely exceeds four miles from tide water. With all these advantages for the improvement of our land, and the market for our produce, from our proximity to the eastern manufacturing districts and our own home market, shall we stop our improvement here, or shall we—not only we of Delaware, but our friends of Maryland, too—go on shoulder to shoulder, as we did

on a former and more perilous occasion, improving our soil until we make our lands produce more than the virgin soil of the far West? and shall we not also lend our best efforts to create and continue a good and constant home market?

JOHN JONES.

For the Farmers' Cabinet.

### Composting.

MR. EDITOR,—In the Philadelphia Agricultural Society's Memoirs, an account is given of Judge Peters' experiment in the decomposition of tussocks, aquatic grasses, and weeds, which I consider interesting, and very well worthy the attention of my brother farmers, who ought to pay more regard to the composition of manures, and not depend so much on those that are purchased at such a distance from home, as would warrant a man in hiring help for the purpose, and save team labour. He says, "I composted the openings of the ditches of a water meadow, consisting of tussocks, aquatic grasses, and weeds, a heap amounting to sixty-two loads, beginning with a layer of tussocks, then a layer of hot muck from the stables, then leaves and wood-soil, until the heap was sufficiently high, strewing plaster on each layer, very little thicker than I should have done on a crop. This was done in autumn, and in the spring I turned it over and mixed with it a quantity of *slaked lime*, when in the next fall, it was in excellent order for top-dressing."

Now I would observe, here was a whole year consumed in the process of decomposing vegetable matter, that might, in my opinion, have been expedited so as to come into use early the spring following, and which, if spread at that season, would have made just the gain of a summer in the crop—a difference worth contending for.

I beg to say, I had once a rough piece of heavy land adjoining my farm, from which I pared off the surface about six inches deep and composted it, first turning with the plough the foundation for the heap, on which *hot lime from the kiln* was spread, and upon that sods were thrown to the thickness of about a foot, then lime and sods alternately, until the heap was five feet in height, finishing by carefully covering the top and sides of the heap with sods to prevent the escape of the heat. In a very little time the whole mass was smoking like a volcano, and it required pretty constant attendance to keep the cracks well covered with sods and beating them down; the heat being intense, and quite sufficient to destroy all animal, as well as vegetable life, at a blow—

the sods, and the bugs and their progeny. Here was a valuable mine, which was worked in about two months, by turning over and breaking the lumps, which however required but little labour, the caustic nature and heat of the lime having destroyed the *woody fibre*, according to the books; and in two months more, in February, it was carried abroad on the mowing land, principally a dressing for young clovers, as fine as ashes, and much in appearance and smell to soaper's waste.

Now I guess the difference between the Judge's cookery and mine, was this—I used caustic, or fresh-burnt lime, and he, that which had been slaked; the one expediting decomposition, the other, retarding it, which made just all the difference in the world, and gave me an extra ton of hay per acre, while the Judge's pie was cooking. And while in his case the lime may be considered to have operated upon chemical principles alone, I am satisfied that in mine the process of decomposition was accelerated in a very great and important degree by the *mechanical* action of the heat—as it might be termed—evolved during the slacking of the lime in the mass; after which it remained to afford all the benefit to be derived from its *chemical* character, as in his experiment. We all know the utility and advantage of hot water over cold, in preparing decoctions and infusions, and it is only to carry the idea into our compostings to perceive, I think, the reasonableness of the supposition. Z.

IRRIGATION.—The editor of the *American Agriculturist*, speaks of having visited last summer the Insane Hospital at Worcester, Mass., where he was informed by Dr. Woodward, the superintendent, that among his patients there was one who was ambitious to farm upon his own plans. "At length the Doctor good humouredly yielded to his importunities, and gave him possession of a field in rear of the hospital, on which to expend his eccentricities. The field was in grass, and the surface of it slightly descending from the rear of the buildings. Near the sides of these he constructed little ponds into which he drained the water from the roofs, and the urine from the water closets—let it stand and well amalgamate a few days, and then he conducted this liquid, quite evenly, by means of narrow, shallow ditches, over all his field. The result was, that it yielded six cuttings of grass, of about one ton per acre; making six tons per acre, during the first season! So much for a crazy man's farming."

It is said that a farmer can neither afford to keep poor cows, nor cows poor.

## Smithfield, London.

*Character and Quality of Stock.*—The quality of the cattle exhibited in Smithfield market, of sheep in particular, is extraordinary for its fatness. The show of the Smithfield Club, which is held in December, under the patronage of some of the first noblemen in the kingdom, may very properly be denominated a show of monstrosities, in the way of fatness. They are moving elephantine masses of flesh, and if, as according to modern chemical philosophy, all fat is the result of disease, they are far from being attractive to any but the grossest epicure. No advantage can come from rearing animals to such an inordinate degree of fatness, save in the matter of showing what the art of man can accomplish in respect to the animal economy, and also that of testing the nutritious and fattening qualities of different kinds of food.

In respect to the weight of the animals in Smithfield, an individual familiar with the subject, and in whom I have great confidence, states that the beasts from two to three years old, will average from 85 to 100 stone of 8 pounds, or from 680 to 800 pounds, when dressed—that is, the four quarters. Others place it not higher than 82 stone, or 656 pounds; of calves, 150 pounds; of pigs, 100 pounds; of sheep, 90 pounds. Calves are seldom sent to market under six or eight weeks old; and large hogs are never seen in the market. If we may rely upon ancient authorities, within a century past the weight of animals in Smithfield market has nearly doubled; perhaps more than doubled. It is said that, in 1710, the average weight of beasts was 370 pounds; of calves, 50 pounds; of sheep and lambs, 23 pounds. This increase of size is probably attributable in the main to two great causes, which deserve serious consideration. The first is, the improvement of the breeds of cattle. A person has only to go into Smithfield market to remark the perfection to which the art of breeding has been carried, and the distinctness of the lines by which the different breeds are separated from each other. Three great points seem to have been gained. The first is, great size and weight have been attained; the second is, the tendency to fatten, and to keep in fat condition, has been greatly cultivated; the third is, that the animal arrives early at maturity. All these are most important points; the last certainly not least; for if an animal can be brought to the same size and weight, without doubling the expense, at eighteen months old, that he could formerly be made to reach not

sooner than at three years of age, the quick returns, so essential in all commercial transactions, are secured, and as the expenses are lessened, the profits are greatly increased. Nothing strikes one with more surprise than to see what, in the improvement of the appearance and constitution of the stock, intelligence, skill, and perseverance can effect. I may here with propriety quote what my friend, before referred to, says in relation to the quality of the stock in Smithfield. "I fear many of our breeds of beasts and sheep are becoming worse than they were, from an excessive attention to neatness and symmetry of form, so that bulk and quantity of good flesh have been too much overlooked. Our Hereford beasts are much inferior to what they were; also other breeds of beasts; and particularly some breeds of sheep. Some persons are so very particular about purity of blood, that they often run into great error; their stock losing flesh, constitution, and size. This is particularly observable in Leicester sheep. So wedded are some persons to this breed, and to what they call purity of blood, that their sheep keep dwindling into very insignificant stock. I am satisfied that we cannot go on breeding in and in, without losing size, quality, and worth." I give these opinions of a very practical man, as familiar with the Smithfield market as any man in England, without endorsing them, and leave them to speak for themselves.

The second great cause of the improvement of the stock in Smithfield market is, the improvement of the husbandry of the country, particularly by the introduction of what is called the alternate husbandry, and the cultivation of green crops. The cultivation of turnips and swedes is comparatively modern; and perhaps no single circumstance has effected so great an improvement in the agricultural condition of the country. Formerly, cattle were fattened, if fattened at all, upon grass and hay, and these of inferior kinds; the store stock were wintered upon straw, and came to the spring in such a condition that the greater part of the summer was required, in order to recover what they had lost in the winter. Now, the introduction of the artificial grasses, clover, and rye-grass, the growing of vetches, rape, turnips, swedes, carrots, and mangel-wurzel, and the use of oil-cake, have multiplied in an extraordinary manner the resources of the farmer; and the practice of folding his sheep, and stall-feeding his fattening beasts, give him a command of feed, and, and, if I may so say, such a control over the season, that the results are most re-

markable in the supply of the market, at all times of the year, with animals of the finest description.

I may be inquired of, what I think of the English meats. The fatness of the beef and mutton is most remarkable. I have seen single beasts in the United States as fat as any I have seen here; but these are comparatively rare exceptions; and here the general character of the beasts and sheep is, in this respect, most striking. It would, however, I fear, be hopeless to attempt to persuade an Englishman of that which is my honest conviction—that our meats are sweeter to the taste than those which I have eaten here. Our poultry is incomparably better. An Englishman will be likely to set this down as mere prejudice, which possibly it may be, for who can escape such prejudices, or be fully conscious of them when they exist?—but I believe it is not prejudice, but Indian corn—the grain upon which our animals are fatted—which gives to their meat a peculiar sweetness, which is not produced by other feed. Our beef animals are not killed until five to seven years old, and our sheep seldom until three years old. Here sheep are killed at about fifteen months, and beasts at two years and upwards. The flesh of these young animals is wanting in that consistency which more age would give, though an extreme on the other side, and the hard-working of our oxen until eight and ten years old, are liable to give a toughness to the meat, which would not be found if fatted at an earlier, though not a very early, period. If price is to be taken as a correct index of quality, then it will be found that the beef of the small West Highland cattle, and the mutton of the Welsh sheep, are decidedly superior to any other, the prices which they command being always higher than others. The smaller size, and the better intermixture of lean and fat meat which they present, render them more convenient for family dishes, and more attractive than those immense rumps of beef, and saddles and legs of mutton, covered with an inordinate thickness of fat, which, by their grossness, repel any but the most inveterate epicure—the animal who seems to live only to eat.

My conviction is, that there is no agricultural improvement in England so great and striking as that which has been effected in their live stock: I refer particularly to its size, aptitude to fatten, early maturity, symmetry, and beauty. Of the milking and dairy properties of their stock, I shall speak hereafter. I must include, likewise, in my commendation, their horses—working, carriage, pleasure, and race-horses. It could

scarcely be expected to be otherwise. The highest degree of skill has been concentrated upon these objects; and this skill has been stimulated by premiums of the most honourable and liberal character, and by expenditures absolutely enormous. The splendid and magnificent premiums of gold and silver plate for successful competition, which one sees on the tables and side-boards of the fortunate winners all over the country, and which are exhibited with an honest pride, while they display the highest triumphs of artistical skill and taste, serve only to fan the flame which they enkindle, and to quicken an ambition which never can be quiet while a more distant point remains to be attained. How happy would it be for the world, if human ambition were always directed to objects so innocent and commendable; to purposes which benefit, instead of those which curse, the world; to the triumphs of genius, industry, and science, over the elements of nature, instead of the bloody conquests of power, avarice, and despotism, over human comfort, liberty, and life!

*Smithfield by night.*—Smithfield by night, and in a dark night, presents a most extraordinary scene, which, though I have witnessed it, it would be very difficult for me adequately to describe. A large proportion of the stock arrives in the neighbourhood of London either on Saturday or early on Sunday, where they are fed in the fields, or the extensive lairs prepared for their reception. These lairs, especially Laycock's, at Islington, are well worth a visit, being composed of open yards and most extensive sheds, covering fourteen acres of ground, furnished with watering troughs and mangers, and divided into different compartments. Here the farmer or drover is supplied with hay or straw for his stock, not by the day or night, but by the truss, the hay which is sold in London being always put up and tied in bundles of 56 pounds each—certainly an excellent arrangement, which, while it prevents all temptations to waste, requires a purchaser to pay only for that which he has. The cattle here get a little rest and refreshment in these stalls after their long journeys; and here they are visited by the salesmen preparatory to their appearance in the market on Monday. It would not be surprising, likewise, and not altogether unlike some occurrences on the other side of the water, if some purchasers, with an acquisitiveness not disturbed by religious scruples, should occasionally make their way there and anticipate the bargains of the ensuing day.\* About midnight the different detach-

\* I will say, however, by the way, and as an act of

ments, almost treading upon the heels of each other, begin to make their way to the place of rendezvous through the winding streets of this wilderness of houses, and enter the great market-place by different and opposite avenues, and, like hostile parties, often meet each other in the very centre. Then comes the conflict: the driving of so many thousands of sheep into their several pens; the assorting and tying up, or arranging, so many thousands of cattle, driven into a state of terror and frenzy by the men and dogs; the struggles of the different owners or drovers to keep their own, and prevent their intermingling with others; the occasional leaping the barriers, and the escape of some straggler, who is to be brought back by violence; the sounds of the heavy blows over the heads, and horns, and sides, of the poor crazed animals; the shrieks of the men; the yelling and barking of hundreds of dogs, who look after the sheep and cattle with a ferocity perfectly terrific, and a sagacity almost human; the bellowing of the cattle, and the bleating of the calves; forming, if the expression is allowable, a concert of discordant sounds utterly indescribable and hideous; and in the midst of all this confusion, the darting about of hundreds of torches, carried in the hand by men looking for their cattle and sheep, and seeking to identify their marks—all together present an exhibition for which it certainly would be difficult to find a parallel, and sufficiently gratifying to the lovers of the picturesque in human affairs. The calves and pigs enter the market in a more aristocratic style, in carriages and vans, with the regular attendance of out-riders and footmen; but in spite of this luxury, after the example of some of their betters, these indulgences do not appear to lessen or quiet all their complaints, and they add their portion to the general harmony. Their owners are quite wise to carry, instead of attempting to drive, them; for I think no human power would be sufficient to drive and assort a herd of pigs, coming into a scene of this description. When the day dawns, however, every thing is found in order; all the different parties at their respective posts; and the immense business is transacted with a despatch, an efficiency, and precision, which are quite remarkable.

*Attempted removal of the Market from the City.*—It certainly is not a little surprising that a market of this description should

simple justice, that London, as well as every other part of England which I have visited, is remarkable for its sober and decorous observance of the Lord's day.

be held in the midst of such a city as this. Its name implies that, in former times, it was held in the outskirts of the town; but that time must have long since passed away, and the "field," so called, is now surrounded with miles of houses in every direction, and in the very centre of a most densely-packed population. It would seem, at first sight, that the obvious and innumerable discomforts of such an arrangement, and the danger to human person and life from driving so many beasts through the crowded streets, were sufficient reasons for transferring the whole business to a more retired and convenient situation in the neighbourhood of London. A wealthy individual, by the name of Perkins, under the influence of the best of motives, made an attempt to do this, and erected an establishment for a market at Islington, about two miles from the centre of London, which is well worth looking at for the completeness and excellence of its arrangements. The cost of the establishment is said to have been £100,000, or half a million of dollars. It forms a hollow square, and embraces a space of more than twenty acres, completely enclosed by high brick walls, which form the backs of deep sheds, slated, and open in front, furnished with mangers, and with water troughs supplied from two very large tanks in the centre of the yard, which are kept constantly filled by machinery from wells sunk in the neighbourhood. The sheds are capable of accommodating 4000 beasts; and here they might remain from day to day until sold, without inconvenience. In the centre of this immense quadrangle are four extensive squares, all neatly paved with flat stones, and divided into several compartments, railed in with neat iron railings, and capable of accommodating 40,000 sheep. Other pens are constructed for calves, pigs, and other animals usually brought to market; and all are arranged in the most simple and convenient method, with ample passages furnishing easy access to every part of the enclosure. Besides these, there are convenient and ample offices for all the various clerks, salesmen, bankers, &c., connected with the business; and it was designed to erect commodious hotels for the accommodation of persons attending the market, and extensive slaughter-houses for the killing of the cattle, directly in the neighbourhood. The whole space is entered under a handsome archway; and for its particular purposes, it would be difficult to conceive of any thing more commodious or better arranged.

In spite of all these obvious advantages, the market could not be removed from Smithfield. The persons in the neighbour-

hood of the old market, whose business and profits were intimately connected with it, opposed its removal. There was fear of a rival market being got up on the other side of the city. The city would lose the tolls, which are now received at Smithfield, and which, in the course of the year, make up no inconsiderable revenue. The meat, if the animals were slaughtered out of the town, would, of necessity, have to be conveyed to the city in carts, whereas, now, much of it is killed directly in the neighbourhood of the market. These and many other reasons were urged, but, perhaps, would not have availed, excepting for the fact, that Smithfield was discovered to be a chartered market, for the sale of cattle; and the twelve judges of the high courts decided, upon consultation, that this charter could not be abrogated; and even in spite of an act of Parliament, which was obtained in the case, this great public nuisance must be continued.—*Colman's Ag. Tour, No. 4.*

**AGRICULTURE AND COMMERCE.**—Professor Wines, in a late lecture in New York, adverted to the prevailing false opinion, which estimates Commerce as comparatively more important than Agriculture. The principal cause of this he supposes to be, that the gains of Commerce, lying nearer the surface, are more open to the scrutiny of the mass of men, while the gains of Agriculture seldom obtrude themselves on the public attention. To prove this, he stated "that Great Britain is decidedly the most commercial nation on the globe. Her trade with the United States is nearly two-fold that which she carries on with any other country. And yet what think you the entire annual movement of this commerce both ways amounts to? About as much as the value of the annual crop of oats and beans in the former country. The whole foreign commerce of Great Britain, in pursuit of which she overshadows the ocean with her fleets, and plants her colonies in the most distant islands, is actually less in value than the annual grass crop in the British islands. The bread stuffs annually extracted from our soil, amount to more than 800,000,000 bushels, and their value is almost triple that of the aggregate exports and imports of the whole country. Our grass crop is worth \$150,000,000, which is just twice the value of all the exports to foreign countries. The annual Indian corn crop of Tennessee and Kentucky alone amounts to more than 100,000,000 bushels, and fully equals in worth our exports to Great Britain and France, which constitute the bulk of all we part with to foreign countries. And what

is not a little remarkable, the corn crop of these two states is equal in value to the entire cotton crop grown in all the States and Territories of the Union.—*Troy Advocate.*

From the Ohio Cultivator.

**Dairy of only one Cow.**

MR. EDITOR,—I think it very kind of you to appropriate a department in your paper for the use and benefit of the ladies; and for fear you may think they do not appreciate the privilege as they ought, from the fact that they contribute their mite so sparingly, I have presumed to indite a few lines, thinking they may be better than none, about my *Dairy*; for I keep a dairy, although I have but *one* cow—now I think I hear some one say, you had better stop, for you cannot have much to say about a dairy, with only one cow. Be patient friend, and you shall hear what I have to say, and I will promise not to exaggerate in the least.

I commenced making cheese the 3rd day of August. What! make cheese from one cow! Yes, and independent of any one—as I like to be. I had only the milk of one cow. I continued making till the 3rd of November. In that time—only three months—I made 207 lbs. of cheese. During the time, we used what milk we needed for the family; besides that, the calf was not weaned the first three weeks after I commenced.

Perhaps now you may think my cheeses are little hard things; well, they average over 10 lbs. each, and if you want to know whether they are hard or not, you must come and see. Since I have done making cheese, I have made 9 lbs. of butter a week, and it was not weighed with a "shirt on," either. My cow has not been fed on dainties, but has had a common pasturage, and fed a little whey—without any butter on it—and a few pumpkins. Now, Mr. Editor, if you think this worth a place in your valuable paper, its insertion may be the means of bringing you another communication from the

DAIRY MAID.

Waterford, Washington co., O., Nov. 1845.

**AMMONIACAL SALTS OF URINE.**—Plants watered with a simple solution of sulphate of ammonia,—an abundant salt in cows' urine,—are fifteen days earlier than those watered with pure water. Grass land watered with urine only, yields nearly double to that not so manured. In a garden, on land of very poor quality, near Glasgow, urine diluted with water, nearly doubled the grass. But upon wheat, sown upon clay land, it did no good; it injured barley—potatoes grew rank and watery—and on turnips the effects were only half as good as were unfermented dung.—*Farmers' Mine.*

For the Farmers' Cabinet.

### On Subsoiling.

MR. EDITOR,—I notice an article in your No. for December, page 153, inquiring for information on the subject of subsoiling. After directing your correspondent to the experience of one of the most successful and enlightened cultivators of this or any other country—Mr. Paxton, of Catawissa, Pa., I would observe, in my opinion, it is after the second operation that the benefits of subsoiling are often to be expected; having more than once had occasion to remark, that no advantage has accrued from a first and single stirring, even when the nature of the subsoil seemed much to require it; owing, I have reason to believe, to a portion of the richness of the surface soil having penetrated the loosened subsoil, which thus becomes fructified at its expense for a season; but I am prepared to believe, that this evil will remedy itself if the operation be repeated, nor should I hesitate to recommend that it be followed as often as opportunity serves. Yet I do not advocate subsoiling merely on the plea of adding depth to the soil; for being one of those who do not consider it necessary or essential to the growth of the plant, that it have a foot or more in depth of rich soil to luxuriate in, conceiving that the roots of all vegetables are divided into those, whose office it is to procure food from the surface soil, and those, whose province it is to draw water from beneath, I would not recommend even very deep subsoiling, except it be under peculiar circumstances, and with the view of its operating mechanically, rather than chemically, on the crop; although I know it has been proposed to drain the soil of superfluous moisture by these means, which would, however, be found quite ineffectual for the purpose. In England, where only the system is scientifically pursued, it is not found to succeed, if the land stands in need of artificial draining.

Not many months since, I saw turned up a piece of clover lay, resting on a very hard bed of gravel that had been carefully subsoiled three years ago, when I found the subsoil as hard as it had been before the operation, and could not but think that it required another stirring as much as at first, when, I have no doubt, very beneficial results would have followed, but the owner "fainted," and has, therefore, no reason to expect to "reap."

To a person who, like myself, believes in the system of top-dressing, the difficulties on that subject, suggested by your correspondent, are easily obviated. I have no idea

that the stench arising from a slaughter-house, is food appropriate for the immediate sustenance of plants, any more than I believe it to be lost on evaporation. I consider it, wending its way into the atmosphere to form new combinations—did your correspondent never observe how very different is the effluvia arising from a hot-bed, before and after the escape of the noxious gases, which would have been instant destruction to vegetable life? it has then the smell of mushrooms, and far enough removed from that of carrion. It is an egregious error to consider plants as *gross feeders*.

The Subsoil plough used at the late Philadelphia Exhibition, was of small size, intended to follow in a narrow furrow. If the wing of a Subsoil plough were to be made as wide as a large furrow, it could not be worked with less than four or six horses; but to obviate the objection pointed out by your correspondent, it is only to set the plough deeper, and the subsoil will then be broken as wide as the furrow; the degree of pulverization being in proportion to the depth penetrated. The plough abovementioned is large enough for two horses, and in the hands of a careful and practical man, will be found quite equal to the task of opening any subsoil through which a pair of horses are able to force it.

May I be permitted respectfully to inquire, how it has been ascertained, that the real Jersey parsnip is not well adapted to this country? Is it because it is long, coarse and stringy, in its nature? To a resident of that island this will be news indeed! But the seed has never, to my knowledge, been for sale in this country—at least, after repeated inquiry I have not been able to find it; and it may be well, therefore, to learn that Mr. Coates has the hollow-crowned variety, which is, however, as different as it well can be, from Low's favourite, of which Col. Le Couteur has given full accounts, both as to its mode of culture and enormous product after good tillage. C. R.

Montgomery co., Pa.

### Important Facts for Farmers.

*A Question of Bread.*—Men have been long investigating truths; and many important truths, as principles, are developed, without being connected with practical purposes, or bringing out facts by application.

Wheat is known to be the most nutritious of all grains, because it contains a larger quantity of gluten. But I do not know that it is generally understood, except by scientific agriculturists, that this quantity of gluten may be varied both by climate and the

character of manure. Yet such is, nevertheless, a well attested fact.

1. Wheat of warm climates has more gluten, is harder, and less easy to grind. The difference between the two, in climates not very distant, may be safely calculated thus:

Warm Climate.		Cold Climate.	
Starch,	56.5	Starch,	71.49
Gluten,	14.55	Gluten,	10.96
Sugar,	8.48	Sugar,	4.72
Gum,	4.90	Gum,	2.32
Bran,	2.30	Bran,	1.
Water,	12.30	Water,	10.00
	<hr/> 93.58		<hr/> 100.49

2. The gluten of wheat may be increased by the character of the manure used, thus:

Wheat, average crop,	Gluten	19.0
“ raised on soil manured with ox blood,	“	34.24
“ raised on soil manured with human feces,	“	33.94
“ raised on soil manured with human urine,	“	35.1
“ raised on soil manured with horse manure,	“	13.68
“ raised on soil manured with cow manure,	“	11.93

From so much of the above facts as show how far climate varies the quantity of gluten, it results that there is a great advantage in Alabama wheat over the Northern. Now what is this advantage as applied to practical purposes? I will explain.

Two pounds of Cincinnati flour were weighed out, and to it was added one quarter of a pound of yeast. Two pounds of McAlroy's (Alabama) flour weighed, and in like manner was added one quarter of a pound of yeast—both were accurately weighed in the same scales and at the same time, and both made into loaves and baked in the same oven. The result was as follows:—The Cincinnati flour yielded a loaf weighing 3 lbs.—gain 33 per cent. McAlroy's flour yielded a loaf weighing 3½ lbs.—gain 55 per cent.! *The gain in Alabama flour 22 per cent.!* Or, every five barrels of Alabama flour, is equal to six of Northern flour.

But, says one, the Northern flour must be the better, because look at the loaf; it is whiter and lighter. True, but let it be remembered, that this difference with respect to whiteness, is the difference in the preparation and grinding; and that of lightness, is chiefly in the absence of gluten. The quantity of the flour may be effected by the mode of preparation and grinding; but the quantity of the several principles composing

it, cannot. The same quantity of starch, gluten, &c., must be retained, whether the wheat be ground in a good or bad mill.—*Exchange Paper.*

### The Oaks Cow outdone.

THE famous Oaks cow; whose great product in butter and milk was mentioned in the last number of the Cabinet, appears to have been exceeded by two cows belonging to Dr. Samuel B. Woodward, of Wethersfield, and exhibited by him at the Cattle Show at Hartford, in the year 1830. The following statement was given by the owner, and which I took from a paper of the day.

In May, 110 lbs. 2 oz.; June, 109 lbs. 11 oz.; July, 73 lbs.; August, 80 lbs. 8 oz.; September, 101 lbs. 8 oz. to wit, 21 lbs., would make 597 lbs. 9 oz. in six months.

On the 1st of September another cow was added, which including what was made the last week in April, to wit, 21 lbs., would make 597 lbs. 9 oz. in six months.

Besides all this, milk and cream have been sold to the amount of \$3, and a family of 16 persons furnished with milk and cream, worth at least \$1 a week, at 4 cents a quart, and pork fed to the amount of at least \$1. Not a pound of butter was sold for less than one shilling per pound.

Butter,	\$100
Milk, &c. sold,	3
Milk used in the family,	26
Pork,	15
	<hr/> \$144

The cows were fed on grass only after the middle of May, before which time they had rowen hay and two quarts of meal a day. One cow is six years old, the other five years—one is half blood Devonshire, the other common stock.

The calves from the three cows sold in the spring for	\$15 75
	<hr/> 144 00

Whole product,	\$159 75
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Upon another occasion, date not preserved, in the account of the Agricultural Exhibition held at Andover, Mass., it was recorded that a cow of Mr. Noah, without any extra feed, other than that obtained from a common pasture, gave, from the 2nd of May to the 22nd of September, 6054½ lbs. of milk, measuring 526½ gallons, being an average produce of four gallons per day. The milk was of a superior quality. Mr. Osgood's cow gave in the month of June, 17 quarts a day; and there were made from the milk in one month, 50 lbs. of good butter.

*Product of cheese.*—The following statement I found in a newspaper, the year not recollected. "Israel Cole, of Berkshire, Mass., made this season, 16,000 lbs. of cheese from the milk of twenty-eight cows; being on an average 571 lbs. to each cow. He gives the whey to the cows mixed with meal—doubtless corn-meal."

J. M.

Philadelphia, Dec. 19th, 1845.

### Rotation of Crops.

*From Dr. Musc's Address before the New Castle County Agricultural Society, on the 18th of Ninth month last.*

A QUESTION has been started upon very eminent authority, of the truth of the doctrine of "Rotation," and of that of the "supposed necessity of a change of seed."

One of my predecessors, in this highly honourable station, which I now occupy, the Hon. James M. Garnett, has controverted the truth, or force of this doctrine, in a correspondence a few years past, with the "Albany Cultivator," which lately attracted my attention; and moreover, these sentiments are, to my knowledge, entertained by many intelligent farmers, and therefore become worthy of a serious notice.

Mr. Garnett adduced as evidence against that doctrine, the universal practice in Accomac and Northampton, Virginia; where, he says, "two white crops of grain, corn and oats, constantly follow each other every year, without perceptible deterioration, as the owners all assert; and without any return to the land, except the dead natural growth of the pea." He adds, "in several other parts of Virginia, he has known similar practice and results—and, indeed the growth of corn alone, without rest for twenty years—and the crops undiminished;" "also, of garden vegetables, the same seed, in the same squares, for eighteen years, unimpaired."

But for this able and highly distinguished authority, I would not hold this question worthy of discussion, before this assemblage of skill and science.

The facts stated, are no doubt correct, but circumstances unknown to him, may have existed, to occasion the *paradox*.

A brief view of this subject may conclude the question and remove the erroneous impression.

Different genera and species of plants notoriously contain different proximate principles, composed of different elementary materials, or different proportions of them—supplied by the soil—by *putrescent manures*, and by the *atmosphere*—a truth undeniably

established by chemical analysis, as well as obvious to all who enjoy the two natural senses of *taste* and *smell*.

The inorganic portion of the supplies is to be found in the *soil*; and the soil must contain them in quantity and variety suited to the wants of the peculiar species of plant, or the crop will perish: when other plants, wanting other elements of nutriment, may find an ample supply for their growth and maturity.

Though a different base may be substituted, as a vicarious and imperfect agent for the true one, which was absent, yet the plant in such case, will not flourish.

The organic elements are supplied by the putrescent manures and the atmosphere; and come within the scope of the same category, or class of conditions with the inorganic.

But, inasmuch as the *nutriment furnished* and *that appropriated* by the plant, must of necessity, be chemically identical, and different species contain different principles, it follows that one species continued in the same soil uninterruptedly, would consume and exhaust the peculiar elements of its food, sooner than a series of unlike species requiring different elements, or different proportions of them; and consequently, that a change, or alternation of species, is an essential point of economy in general culture, by which a "*quasi repose*," in the interval, is obtained for the recovery of the consumed materials of nutrition before the second series may have commenced: this was a truth known in the days of the Mantuan Farmer, "*sic quoque mutatis requiescunt seibus arva*."

For example—one groupe—the *leguminous*, as beans and peas require, according to Liebig, but a small portion of the alkalies; the culmiferous, as wheat and oats, require much of the alkalies and phosphates; tobacco consumes much alkali and no phosphates.

From these examples may be deduced a set of principles unquestionably sound, and in accordance with *rotation* and manifesting its necessity.

The climate too must be consulted in the selection of our crops: for instance, the beet is more profitable in a cold climate; this root requires much *nitrogen*; and as Liebig states—the secretion of sugar will be diminished as the supply of this element may be wanting; and, as the last product of animal decomposition is, in *cold* climates, ammonia, which is rapidly converted into nitric acid in the *warm*, the *alkali* of the plant, will engross the *acid*; and the supply of nitrogen will consequently be deficient, and the saccharine matter therefore not so abundant;

hence a cold is more suitable to the beet, than a warm climate; and as Chaptal has remarked, nitre in such cases, takes the place of sugar; which, he says, is experienced in the Southern and warmer parts of France.

Holding in view these *principles*, the cultivator may mark his course in safety and confidence—he will adapt his crops to the climate and to the chemical and geological constitution of his soil, and he will distribute the alternations in consistence with the established laws, which the God of nature has ordained and conferred on him, the faculty of reason to discover and to apply, for his comfort and convenience.

The subject of manures is too copious for an ordinary address—yet the extensive use of lime would seem to claim for it a passing remark.

Like others, I have used it in various modes and quantities; and I have been convinced that it may be *over-used*: by five hundred bushels to the acre twenty years ago, a plat of six acres of my field was rendered unprofitable for many years, until I had literally buried it with rich earthy and putrescent manures, and it is not now as good as these should have made it.

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For the Farmers' Cabinet.

#### Prouty Plough--Moore Plough.

I WAS not a little disappointed in perusing the last number of the Cabinet, that the committee on the ploughing match which came off at Westchester in the Tenth month last, had not vindicated themselves from the censure cast on them by *Observer*.—see page 106—for awarding the premium to the *Moore* plough. I have not the pleasure to be acquainted with any of the committee, but certainly they were selected for their experience and good judgment in ploughing. *Observer* palliates their sin, by saying they were unacquainted with the peculiar merits of the *Prouty* plough, and that they valued a good plough according as it made smooth and flat work:—here *Observer* forgets, that if the committee were unacquainted with the peculiar merits of the *Prouty* plough, they were equally unacquainted with the merits of the *Moore* plough, except the work before them, which was a little better than *Observer's ne plus ultra* of the *Prouty* plough; and such too was the decision of the committee on the ploughing match for New Castle county; said committee, in order that they should view the work with an impartial eye, left the ground during the match, and their decision was responded to by the spectators; and since that time, C. P. Holcomb,

one of the friends of the *Prouty* plough, has come over and ordered several of *Moore's* plough. It is not a little surprising that Paschall Morris should assign much of the merit of his great crop of corn to the *Prouty* plough, when he before had given us the true cause, viz: that the field was a twenty year old green grass sod; that it was limed seven years since, and from that time pastured;—now who could ask for a better seed bed? or who ever saw such a one with common cultivation, that was cloddy or weedy? Green grass will not grow twenty years on land that is of a nature to be cloddy; and as for weeds, they are not apt to grow from the first ploughing after so long a rest. *Observer* says that the soil is unrivalled, and yet we find that greater crops have been raised by men who had never seen a *Prouty* plough. P. M. and D. W. of Consheocken, are not like the English farmers that Lord Stanley told an anecdote of, for the latter had a notion that iron ploughs bred weeds, but the former rather think that *Prouty's* plough breeds corn.

Now for a few words on deep ploughing, alluded to by P. M.:—in that case it was of much more importance than what kind of plough was used, for his was a deep soil; but on many soils it would have been madness to plough seven inches deep. Major Cooch, who was one of the most practical farmers of New Castle county, used to say when he was ploughing eight inches deep with four horses, that deep ploughing made poor fathers, but rich sons; his lands not being of that kind that green grass would grow on for twenty years. It might appear from the above that I am unfriendly to *Prouty's* ploughs; but such is not the fact. I have until lately thought them second to none, and now only to one; but it is this writing up things above their true merits that I disapprove of, for by such methods people are apt to be greatly deceived. For instance, about Rohan potatoes, Sugar-beets, Dutton corn, Tree corn, Baden corn, Berkshire hogs, and Guano; all of which I have tried except the hogs and potatoes. Sometime last spring, one of the correspondents of the Cabinet stated, that lime and plaster put on potatoes before they were covered, would prevent the rot. I tried it on three rows, which yielded seventeen bushels, and I am afraid that they will all rot: one half have been taken out of the cellar rotten, and the remainder look very suspicious. The other parts that were not so treated, are perfectly sound, the seed being the same; yet I do not think that the treatment had any bad effect, but that it was caused by wet weather, that came on before they were dug,

the others being dug before the rains came. Hence I have been confirmed in an opinion before entertained, that the rot was produced by wet mucky weather. About the year 1827, I had a potatoe patch that ran into a spotty soil, and a path crossed it at the commencement of the wet ground, and I was told if the blossoms were picked off the potatoes, the crop would be increased; so I concluded to make a trial; and all the blossoms below the path were picked off as they appeared; the summer was rather dry; no difference appeared in the tops; about digging time it came on wet, and as soon as the ground would admit they were raised, and to my utter astonishment, where the blossoms were taken off there was not one potatoe, so I did not try that trick again; but since, I have found them several times rotten after wet weather. I intend next spring that our tenants shall give Prouty's Subsoil plough a trial; I think it a great invention, and am very sanguine of the happiest result from its use on either wet or dry soils.

S. M. STAPLER.

Newport, Del., Twelfth mo., 1845.

### Fowls.

To the Editor of the Farmers' Cabinet:—

A WRITER—R. C.—in your last paper, p. 146, who dates from Beaufort, South Carolina, complains of his fowls not being productive, or of fine quality for the table. From his description I judge they must be a mixture of the large India breed with some other here, also of large size. The Bucks county, and Booby fowls are very large, but do not lay many eggs, and I think their flesh rather coarse grained.

The best breed of fowls that I have seen, are those denominated by me the "Jersey Blues;" having obtained them from New Jersey some years ago. They are of large size, good form, great layers, and as good nurses as any that I have known. I have known pullets of five to six months old, produce eggs. They are the breed from which the large and fine capons are produced, that command such high prices in our markets in February and March, when well fattened; and weigh from 14 to 20 lbs. per pair. They are generally of a glossy black, or mixed a little with grey. Those most admired have their breast and under feathers of a dark stone or ash colour, with black necks and backs—all have dark legs. I have supplied numerous persons here and in other States, and all have been much gratified with them as far as I know.

Yours, &c., AARON CLEMENT.

Philadelphia, Jan. 2nd, 1846.

For the Farmers' Cabinet.

### Convenient Barns—Lime.

TO THE EDITOR:

SIR,—A full description of a convenient, large barn, with two floors, to drive over a bridge on the second above the stables, with room for threshing-machine and granaries; and the kind of wood for timbers, would be very desirable. I have never seen a thorough description of a convenient and large barn. To be attached a cattle yard and sheds, and the manner to be put up, and the manure to be preserved.

Lime.—A more elaborate and complete account of the qualities and uses of lime is desirable. Some writers state that its effects are enduring—others that it impoverishes the earth after a short time—and others that its beneficial effects are felt for many years.

It is stated by one, that *this* season is good for it, and by another, *that*; but a Chester county farmer winds up with saying it is good at any, and all seasons. The adverse statements are very great, owing in part to the partial commentaries.

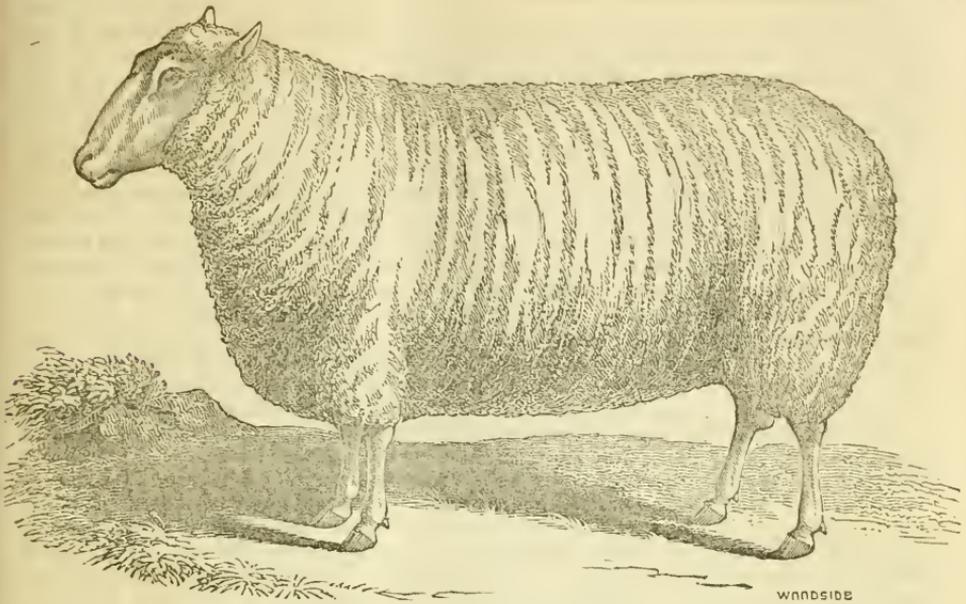
A NEW SUBSCRIBER.

Dec. 23rd, 1845.

We have no description or plate on hand of such a barn as is enquired for. The editor apprehends, if "A New Subscriber" wishes to build a good and convenient barn, he could hardly do better than take a ride with his carpenter among our best farmers and managers, and examine their barn accommodations. If, however, some one will furnish a description and block of a first-rate barn, &c., it will give pleasure to publish it.

It would seem as if our friend had not looked sufficiently into his back volumes of the Farmers' Cabinet, or he would have come across almost every thing, *pro* and *con*, that can be said about the use of lime in Pennsylvania. Any one who has more to say, shall be heard.—Ed.

TO GET A TIGHT RING OFF A FINGER.—The New York Spirit of the Times contains the following directions for accomplishing this sometimes difficult operation:—"Thread a needle flat in the eye, with a strong thread; pass the end of the needle with care under the ring, and pull through a few inches towards the hand; wrap the long end of the thread tightly round the finger, regularly, down to the nail, to reduce its size. Then lay hold of the short end of the thread and unwind it. The thread pressing against the ring, will gradually remove it from the finger. This method will remove the tightest ring without difficulty."



PORTRAIT OF THE LEICESTER BUCK, "LAMBERT,"

*The property of Aaron Clement, Esq., of Philadelphia.*

From the American Farmer.

LAMBERT was bred by Dr. Huddleson, of Delaware county, Pa.,—is three years old, and weighed in March last, when only in good keeping condition, 250 lbs. He produced at last shearing  $10\frac{1}{2}$  lbs. of wool of superior quality and length of staple. His grand sire was imported by Mr. James Hickman, of Delaware county, and his dam was from the celebrated flock of the late John Barney, of the State of Delaware, whose sheep were so highly celebrated for their fine mutton in the Philadelphia and Baltimore markets.

The writers on sheep, say that the *Leicester* should have a hornless head, long, small, tapering towards the muzzle; eyes prominent, with a quiet expression; ears thin, rather long, directed backwards; neck full and broad at its base, gradually tapering towards the head, particularly bare at the junction with the head; the neck seeming to project straight from the chest, so that there is, with the slightest possible deviation, one continued horizontal line from the rump to the pole. The breast broad and full; shoulders broad and round, no uneven or angular formation, no rising of the withers, no hollow behind the situation of these bones. The arm fleshy throughout, even down to the knee. The bones of the leg small, standing wide apart, no looseness of skin about them, and comparatively bare of wool. The chest and barrel deep and round; the ribs forming a considerable arch from the spine; the barrel ribbed well home; the carcass gradually diminishing in width towards the rump; the quarters long and full; the legs of a moderate length; the pelt moderately thin, soft and elastic, covered with a good quantity of white wool, not so long as in some breeds, but considerably finer. The principal recommendations of this breed are its beauty and its fulness of form; in the same apparent dimensions greater weight than any other sheep; an early maturity and a propensity to fatten, equalled by no other breed; a diminution in the proportion of offal, and the return of most money for the quantity of food consumed.

### The Natural History of Guano.

THE trade in guano, which has been lately opened to the coast of Africa, has not only raised high hopes as to its beneficial effects in improving agriculture, by affording an abundance of the richest manure, but on the commerce, and especially on the shipping interests of the country, it has already occasioned considerable improvement. Every thing relating to it, is therefore, a matter of importance, and even the natural history of the article is something more than a mere matter of curiosity. Its name, it would appear, is of Peruvian derivation, and had been called, in the language of the natives, *Huano*, signifying dung or manure; the Spaniards now name it *Guano* or *Guano*.

The aborigines on the coast of Peru seem to have used guano from time immemorial as manure; and at the time of the European discovery of the country, strict laws had been enacted by the Incas, to guard the islands in which it is found, and to punish with death even, those who killed the sea-fowls from which it was derived. Much doubt was entertained for some time after being brought to this country, with regard to the origin of guano; the Spaniards early questioned that which seemed to have been clear to the inhabitants of Peru; but chemical examination, and other evidence, leave it no longer undetermined, that the enormous accumulations of this matter on sea islands, in various localities, are nothing more than the droppings of the myriads of fowls which inhabit them for the purposes of rest and incubation.

Morrell has termed such associations of sea-fowl, "Rookeries," which is the common appellation given to them by the South Sea navigators. His description of one of the Falkland islands is very graphic, and as it is instructive, it is here, in substance, introduced. Those islands extend north and south from latitude  $50^{\circ} 58'$  to  $52^{\circ} 46'$  S., and east and west from long.  $57^{\circ} 32'$  to  $61^{\circ} 29'$  W. The feathered tribes, he remarks, are very numerous on the lonely isles in the southern hemisphere, both in the South Seas and in the South Atlantic Ocean. Of penguins there are four kinds which resort to the Falkland Islands, viz.—the King, the Macaroni, the Jackass, and the Rookery penguin; but the most remarkable bird found on those shores, is the penguin's intimate associate and most particular friend, the Albatross.

When a sufficient number of penguins, albatrosses, &c., are assembled on the shore, and a deliberate consultation on the subject has been held, they proceed to the execution

of the grand purpose for which they left their favourite element. In the first place they select a level piece of ground, often comprising an extent of four or five acres, as near the water as practicable, always preferring that which is the least encumbered with stones.

As soon as they are satisfied on this point, they proceed to lay out their plan, which they commence by tracing a well defined parallelogram, of sufficient magnitude to accommodate the whole fraternity. One side of this square runs parallel with the water's edge, and is always left open; the other three sides are differently arranged.

These industrious feathered labourers next proceed to clear all the ground within the square from obstructions of every kind, picking up the stones in their bills, and carefully depositing them outside of the lines before mentioned, until they sometimes create a little wall on three sides of the rookery; within this range of stones and rubbish they form a pathway, quite smooth, six or eight feet in width. This is for a general promenade by day, and for the sentinels to patrol by night. The whole area is then laid out in little squares of equal sizes, formed by narrow paths, which cross each other at right-angles, and which are also made very smooth; at each intersection of these paths an albatross constructs her nest, while in the centre of each little square is a penguin's nest, so that each albatross is surrounded by four penguins. In this regular manner the whole area is occupied by these feathered sojourners of different species, having at convenient distances, accommodations for other kinds of oceanic birds, such as the shag, or green cormorant, and another which seamen call the nelly.

The penguin's nest is merely a slight excavation in the earth, just deep enough to prevent the egg rolling from its primitive position, while the albatross throws up a little mound of earth, grass, and shells, eight or ten inches high, and about the size of a water-bucket, on the summit of which she forms her nest.

None of the nests in these rookeries are ever left unoccupied for a single moment, until the eggs are hatched, and the young ones old enough to take care of themselves; male and female alternately relieving one another when in search of food. By this precaution they prevent their eggs being stolen by the other birds, which would be the case if left exposed, but which, nevertheless, must be often done, for it frequently happens that when the period of incubation is terminated, the young brood will consist of three or four different kinds of birds in one nest.

To stand at a distance and observe the movements of the birds in these rookeries is not only amusing but edifying, and even affecting. The camp appears in continual motion, all appear engaged in seeking pleasure, refreshment, or recreation; at the same time the air is almost darkened by an immense number of albatrosses and other birds hovering over the rookery like a dense cloud, some continually lighting and meeting their companions, while others are continually rising and shaping their course for the sea.

Sea-fowl in incalculable flocks are observed to congregate for similar purposes everywhere, on the desolate and craggy shores and islands of both the Atlantic and Pacific Oceans; and although the same species of birds are met with in many different latitudes, whose food is alike, and whose droppings can vary little in chemical character, whether this relates to their solubility, fluidity, or solidity, yet, as far as it has been discovered, there seem only very few situations where matter resembling guano, in any quantity, is found. The rocky islands and shores on the Northern and Western coast of Scotland, although they have been no doubt frequented for thousands of years by birds in countless numbers, yet are really known not to have any such deposit upon them, neither does it exist on the lonely islands in the Gulf of St. Lawrence, nor on the rocky shores of North America, in higher latitudes, to which also vast flocks of sea-fowl migrate every season, to rear their young in fancied security, amidst an abundant supply of food, and where vessel-loads of their eggs are collected by visitors, by whom no report has as yet ever been made of the existence of guano. It must be inferred, from the acute and searching talent which Morrell shows for observation, that he would not have allowed the occurrence of guano on the Falkland Islands, or on others equally the resort of sea-fowl, to have escaped him, had it existed. He would have recorded the fact in his description of the South Sea rookeries, and his far-seeing eye would not have failed to discover in mountains of this substance, monuments of production, which, if not of a very pure nature, yet are of more real importance to mankind than what is so often recorded in the annals of other biped republics of higher intelligence, but of much less antiquity. It is obvious, therefore, that peculiar causes exist for the accumulation and preservation of the dung of those birds, in such enormous beds as cover some islands on the coast of Peru, Bolivia, and Africa; and we are not to look for these causes alone in the mere temperature of their climate. Many rocky islands

and precipitous shores within the tropics, in full possession of the feathered tribes of the ocean, may have thus at least one physical cause existing without any such accumulation, and this could scarcely occur without being noted by the prying eye of man. In such climates, the heavy periodical rains, uncounteracted by other agency, must dissolve every thing which is soluble of whatever is deposited on the surface of the earth, and what is not so dissolved would be otherwise in all likelihood washed away; the same must occur in temperate and colder climates, where the constant alternations of wetness and dryness, and of heat and cold, must rapidly effect a thorough decomposition, and facilitate greatly the disappearance of all such matters.

If we take a survey of the localities in which guano has hitherto been found in large quantities, we shall find causes in operation which will account for its accumulation.

The seaboard of Peru and Bolivia, from  $3^{\circ}$  to  $22^{\circ}$  south latitude, a space of about 1,480 miles in a direct line, is generally of a light sandy soil, never refreshed by a drop of rain, and although the dews are heavy, they seem of little consequence to vegetation. On this coast are the numerous islands upon which take place the large deposits of guano; on the islands of Chincha and Pacquica, according to good authority, the beds are of great depth and the quality exceedingly good, but from the coast of Chili, where rain frequently falls, the guano is inferior. Morrell, who seems to have visited most of those islands on the coast of Peru, makes mention of two islands named Lobos Afuero, and Lobos de Terra; and the latter is in latitude  $6^{\circ} 34' S.$ , and longitude  $80^{\circ} 45' W.$ , and has a safe and convenient harbour on the north side, "they are covered," says he, "with the dung of aquatic birds, sufficient to load thousands of ships, having been accumulating for untold ages. It is called *guanar* by the Spaniards, and is probably the richest manure in the world."

If we now turn to the coast of Africa, we shall find from the same author, that Ichaboe Island is covered to the depth of twenty-five feet with guano, and is within one mile and a half from the main, and forty-one miles to the northward of Possession Island, which is in latitude  $26^{\circ} 57' S.$ , longitude  $15^{\circ} 8' E.$

The south and west coast, from about latitude  $16^{\circ}$  to  $27^{\circ}$  south, is a dreary sandy waste, generally destitute of water. The desert in the neighbourhood of Angra Pequena extends into the interior about forty miles, which being traversed, a country is reached inhabited by an inoffensive and civil

race of Hottentots, possessing, as you advance farther, innumerable flocks of cattle, where the land becomes fine and fertile.

About 800 miles of the sea-coast, Morrell says, running north-west and south-east, almost every mile of which was examined by him, presents a range of sandy deserts, upon an average nearly forty miles in breadth. During ten months of the year here, there is scarcely a drop of rain, and for the other two months very little falls. The atmosphere is pure, warm and dry, to such a degree, that a quarter of fresh beef, weighing two hundred weight, hanging in the rigging, will become perfectly dry, without being tainted in the slightest degree, even to the bone.

Thus, to all appearances, there are identical agencies existing on the coast of Peru and Africa, where guano is found of such superior quality and in such wonderful abundance.

For the deposition and accumulation, then, of guano, in any particular locality, it is essential that there should be a sea-coast on which there are numerous isolated rocky situations, where sea-fowl may collect unmolested to hatch their young, and seas in the vicinity supplying abundance of food; warmth of climate, little or no rain, and a perpetually dry atmosphere. Under a terrestrial and atmospherical combination of this sort, Dr. M. Hamilton calculates that a million of birds will produce fifteen tons of guano daily, from their droppings, subject to no further loss from evaporation. No mean quantity would thus in a very few years be accumulated in favourable situations, and many such, it is reasonable to suppose, are to be found in both hemispheres.

We can foresee that the stimulus given by the success which has already attended the voyages for African guano, and the idea that the supplies will soon be exhausted, both on the coast of Peru and Africa, must naturally lead to the exploration of new regions, for an article apparently every year growing more and more in request. It will, however, only be by looking to those topographical bearings referred to, that any one can expect to make fresh discoveries of deposits of this substance to an extent which will make them an object of commercial enterprise, or of a quality which will realize the hopes of the farmer.—*Dr. Jackson on Guano.*

#### The Model Farm of Ohio.

THE model farm of this State contains 109 acres, 75 of which are well cleared, and the whole under fence; 60 acres are

embraced in one enclosure, and this includes all the arable and meadow land upon the farm. The buildings are all of stone, neat, durable and commodious. The dwelling is not large, but capacious enough for the use of the family and a room and a bed or two for an occasional friend. The kitchen and stables are supplied with water from the same spring. No stock but hogs and sheep are permitted to graze. The cattle and horses are constantly kept in their stalls, and are always in good order. The cows are at all times fat enough for the butchers, and the growing stock at two years old, attain the weight of ordinary steers at four. During the summer they are soiled with green food, consequently twenty acres in grass is sufficient to keep four horses and ten cows with their offspring, until the young stock are ready for the market at three or four years old, when they average him \$30 per head. Of these he makes it a point to sell ten head a year. For his stock he raises about one acre of roots, sugar beets, mangel wurtzel, and turnips each year, which yield him on an average about 1500 bushels. Of corn, he cultivates five acres a year, which by proper culture and judicious rotation, yields him 500 bushels. Five acres in wheat give yearly 150 bushels. Five acres of oats, 300 bushels.

He has an orchard of eight acres, in which he has 200 apple trees, 25 pear, 25 plum, 100 peach, and 50 cherry trees. This is divided into four compartments of two acres each. Two of these he ploughs up every year, and in the spring plants them in Jerusalem artichokes. Here he keeps his hogs. In the two that are not ploughed, he has a clover and orchard grass ley, in which the swine feed from the middle of May to the first of August, when they are let into one of the artichoke yards and range at will into the two grass yards, and this till winter, when they are passed into the second artichoke yard, where they are kept till the grass has sufficiently advanced in one of the fields to turn them into that. Thus upon grass, roots and fruit, the swine are kept so thrifty, that a few bushels of grain are sufficient to make them ready for the butcher. In this way he manages to kill thirty hogs a year, which will average 400 lbs. each. He gives them beet wintering.

His sheep range principally in the woods, with a small pasture of five acres. He keeps 75 head, which yield him 300 pounds of wool a year.

As this farmer has raised a large family, and raised them all well, having given each child a good practical education, I was curious to look into his affairs, and as he keeps

a regular account current of his transactions, it gave him no trouble to inform me of the result of his mode of proceeding, which is briefly as follows:

Product of the farm—	
10 beef cattle, average \$30 per head,	\$300
25 hogs, at \$12 per head,	300
200 bushels of corn, at 25 cts. per bu.,	50
Product of sheep,	100
do. dairy,	200
do. orchard,	300
Other and smaller crops,	100
	\$1,350
His hired labour cost him on an average per annum,	300
	\$1,050

Thus from 100 acres of land, even in Ohio, this man has been able to lay by, and invest at interest, on an average, \$500 a year, for the last twelve years. He has now some eight or ten thousand dollars at interest, and his home is a home indeed. Who does better on a farm of 1000 acres? Or who has improved his condition by going west, more than he has by staying here? Of course like others he has suffered somewhat from unfavourable seasons, in some of his crops, but his correct system of culture and intelligent management generally obviate every difficulty which springs from this source, and as his crops are always better than his neighbours, the advance in price more than makes up the deficiency. His system of saving and making manures, turns everything into the improvement of his soil, weeds, ashes, the offal of his stock, soap-suds, bones, and everything that will tend to enrich it, are carefully saved and properly applied.

The history of this man is brief, but to the farmer, interesting. He began with the patrimony of good sense, sound health, and industrious habits. Excellent so far. In 1830 he had six children and \$3000 in cash. He bought this farm in a state of nature in 1830, for which he paid \$400. He expended \$400 more in clearing his land, in addition to his own labour. He first put up a temporary cabin, in which he moved his family. One thousand dollars he put out at a permanent annual interest, and the remaining one thousand two hundred with the earlier profits of his farm, he appropriated to the erection of his buildings, which were complete in 1834. In the selection of his fruit he sought for the best varieties, which always gave him preference in the market. So of his stock. In this he avoided the mania of

high prices, and has made up in judicious crossing and breeding, what others seek at great cost in foreign countries. Everything he does, is done well. Everything he sends to the market commands the highest price, because it is of the best kind. In his parlor is a well selected library of some 300 volumes, and these books are read. He takes one political, one religious, and two agricultural papers, and the N. A. Review; refuses all offices; is, with his family, a regular attendant at church, and is a pious, upright and conscientious man. He is the peace-maker in his neighbourhood, and the chosen arbiter in all their disputes; he loans his money at six per cent., and will take no more.

He says he wants no more land for his own use than he can cultivate well—no more stock than he can keep well—more land will increase his taxes; his labour and expenses will be less profitable.—*Ohio Cultivator.*

For the Farmers' Cabinet.

### Immigration.

To the Editor:

DEAR SIR,—I have occasionally been a reader of your instructive and entertaining paper; well does it merit its title, and long may its proprietor be sustained in his usefulness. I have often thought when perusing its pages, what surprise would Penn manifest could he be permitted to revisit his adopted land, obtained by that equitable and ever memorable treaty with the natives of the forest, and see the magic improvements of art on nature's foundation! Hills have been levelled to plains; forests have been turned into gardens, and *Flora* reigns delighted. The rough paths of former days have been made smooth, and turned into pleasant roads by the devices of Mc Adam; while her beautiful Juniatta and Susquehanna are continually conveying thousands from the Old World onward to the far West. How pleasant are these reflections, if we trace back the wonderful improvements of even but half a century; but a few years since, in my native home, the land of the *pilgrims*, I thought that even Pennsylvania was almost the border of civilization and safe settlement. And now, here, almost two thousand miles beyond, am I reading by the cheerful fire of a Western home, the Farmer's Cabinet, from the City of *Brotherly love*.

There is something more needed, Mr. Editor, in your instructive journal, than merely an exclusive sectional history of home farming. Your people are no longer

content at the old homestead of their ancestors, they are found here, and we are proud of their system and their practices, of which they are so tenacious that they survive even in their adopted homes. Their improvements give cheerfulness and an air of thrift to our country, and to the scenery around, an appearance of contentment.

Under this view of the case, we covet the privilege while we read your Cabinet, to contribute something of our Western farming and management, and something to support our interest and that of those who will continue to come among us. It is to be much regretted, that many among the first and most industrious portion of the eastern population, when coming to this country, have, in selecting a home, merely looked for rich land and its advantages for cultivation, and consequently scattered about and settled in any place, where such advantages were to be obtained. So fascinating is the idea of making a new home in the West, and the mind is so much and pleasantly occupied, that many of the greatest and most important advantages are overlooked and neglected until after the first excitement is worn off, and people are brought to reason by their wants. Now I have seen numerous families and neighbours, who had in their old home been old acquaintances and friends, come into this country together, and instead of settling near each other and forming a neighbourhood of their own, and combining and retaining all their interests, scatter about, at great distances from each other, entirely for the sake of possessing just such a piece of land as pleases them, as though all their interests consisted in such a particular advantage. Let me say to such people, they are not aware how many privileges and pleasures they sacrifice in so doing. Among this community were perhaps mechanics of almost every kind, whose labours would be much needed among themselves. Their little community would have been sufficient to sustain a good school the year round; to have and support religious meetings, &c. The satisfaction of meeting each other as old neighbours, and reviving the reminiscences of early days, is one which must add vastly to the comforts of a new settlement, and should not be slightly given up. But all these advantages and combined interests are often sacrificed with hardly a thought, or reflection, until after the location is made. This state of things is just what is apt to render their new homes wretched and sterile; the excitement of immigration is soon worn off, and the mind turns to its wonted enjoyments and customs; these are not to be obtained—they are broken—they are an-

nilated; and they are comparatively but few who have the firmness to stand this. They become uneasy and discontented, sell out, and are nearly broken up in consequence. Now, the idea of immigration in itself is well enough,—it is just what political economy requires; especially among the young and the more enterprising portion of the people. But let me as an old friend, advise all, when you immigrate in company with a portion of old neighbours and friends, try to make a settlement together—do not let a little fancy about just such and such a piece of land, separate you. Consider that land alone is but poor company, without some one to help you enjoy it, and to sympathise with you and assist you in affliction and trouble. Remember this too; whoever comes into the West, must of necessity, sooner or later experience some sickness, by way of acclimation; and not unfrequently this is the case in harvest time, and if it should be yourself, the head of the family that is sick, how much will you need your neighbours' help to save your crops; or if it is your wife, how desirable to be within reach of tried friends and neighbours.

A. STONE, M. D.

Lake County, Indiana. Dec 12th, 1845.

From the Louisville Weekly Journal.

#### Prof. Morren's Letter on the Potatoe Malady.

M. MORREN, after stating that the evil had prevailed in Belgium for several years, though to a far less alarming degree than at present, proceeds:

"The real cause of the evil is a *fungus*, or sort of mushroom, which the learned will classify under the genus *botrydis*—but which agriculturists, without further specifications, will call a spot, a blemish, or blotches. This mushroom is of extreme tenuity, but it breeds amazingly, and reproduces itself by thousands. Its stems are formed of little, straight hollow threads, which bear on their summits one or more branches, always divided into two, and at the end of these branches reproductive bodies are found, which have the form of eggs, but which are scarcely the hundredth part of a *millimetre* in size. It will be said that this is a very small body to do so much mischief; but I answer that the *itch* is not a disease the less to be feared, because the *acare* which produces it can be seen only by the aid of the microscope.

"After the formation of the yellow spot, and the developement of the *botrydis* on the leaf of the potatoe, the stalk receives the deleterious influence. Here and there its epidermis turns brown, blackens, and, following with the microscope the phases of

the evil, you perceive that it is by the rind that the stalk is attacked. The morbid agent carries its action from the rind on to the epidermis, and though this last does not always disclose mushrooms, it is not the less for that struck with death.

"The infection soon descends into the tubercle itself. If the disease follows its course, the tubercle mortifies forthwith. A potatoe is not a root, but a real branch; whence it follows that a tubercle contains a marrow, which is the eatable part to be preferred, and a separate rind; between the marrow and the rind there is a zone of vessels which represent wood. This construction is apparent to any one who chooses to cut a thin slice of potatoe and place it between his eye and the daylight. The infection attacks that part which receives the sap on its descent.

"By following the progress of the evil upon a great number of tainted tubercles, I have been able to see how the evil, by one continuous progress, at length reaches the heart itself of the potatoe, and corrupts the vegetable entirely. The skin of the diseased potatoe comes off easily; the flesh no longer cracks under the knife; a flatulent liquid drips from the potatoe; a musty, and presently an animal smell, analogous to the smell of mushrooms recently cut, manifests itself, and occasions considerable nausea.

"The evil being traced to its source, the cultivator must direct all his attention to the destruction of the fungus, or mushroom, for it is unfortunately but too true that all the parasites of this genus, once introduced into a country, remain there and propagate. This year the epidemic has been general; the germ exists everywhere; millions upon millions of *propagules*, if their numbers are not diminished this year, will, next year, be attacking the plants, and then it will be more difficult to eradicate the scourge.

"It is essential to adopt the following precautions:

"When the leaves are decidedly spoilt, cut down the vines forthwith and burn them on the spot, instead of taking them away.

"When certain varieties or certain localities are free from the scourge at the time of the harvest, it is always prudent to burn the leaves, for a field may appear secure from the botrydis when it is not so; several leaves are attacked; these leaves throw the propagules on to the tubercles, which, if preserved for purposes of reproduction, will spread the plague the following year.

"If the tubercles—potatoes—themselves are attacked, it is essential to separate, as speedily as may be, the tubercles that are tainted from those that are not. Turn the

sound ones to account as soon as possible, for they are not noxious so long as the rind does not become yellow. The diseased ones should be burnt.

"As it is probable that the tubercles preserved for seed will be infected with the spawn of the mushroom, it would be advisable for cultivators who can, to procure tubercles for reproduction from places where the present scourge is unknown.

"In case of using for reproduction the tubercles of crops visited by the plague this year, it will be necessary to submit them, previous to planting, to the agency of lime, as is practiced with wheat, and all plants that are liable to invasion by parasitical bodies. The process ought to be by the *immersion* of the tubercles in lime water. Twenty-five kilogrammes—50 lbs.—of lime, a quarter of a pound of sulphate of copper, and three kilogrammes—six pounds—of marine salt, for twenty-five litres—quarts—of water, constitute a preparation, the utility of which, in the destruction of parasite vegetation, has been experienced by a great number of well-informed cultivators.

"In the plantations of the spring of 1846, it is essential to plant potatoe in fields as far as possible removed from those actually infected this year, to avoid the danger from the retention in the soil of the spawn of the fungus.

"The use of lime and of marine salt, with a slight mixture of sulphate of copper, is, as I have already said, of acknowledged efficacy in the destruction of parasite germs. Consequently, to powder over with such a mixture, a soil in which diseased potatoe have grown, is a good operation for destroying in that land the germs of the scourge. The operation ought to be strongly recommended everywhere.

"The storing of potatoe from fields that have been this year attacked by the scourge, in cellars, caves, &c., will certainly be to deposite the spawn of the mushroom in those very places. They should, therefore, before receiving the potatoe, be thoroughly cleaned and scoured with lime; and lime or ground charcoal scattered over the bottom,—and on the potatoe as they are stored—will conclude the series of operations, the most rational and the most certain for destroying, *if possible*, the evil at its root.

"C. H. MORREN,

"Member of the Royal Academy of Sciences, &c.  
"Liege, August 14th, 1845."

ROSES.—There are three modes, says Buist, within the reach of all for the propagation of garden or June roses—namely, by layering, budding and grafting.

For the Farmers' Cabinet.

### Raising Wheat and Cattle.

MR. EDITOR.—The strictures on my communication\* to General Richardson on farming, by your correspondent H. S., in the last number of the Cabinet,† should pass unnoticed, so far as I am personally concerned, did I not fear that in some degree they might operate injuriously upon the practice of others. While therefore, I am constrained to say a word by way of rejoinder, I disclaim any unfriendly feeling towards H. S., who, I must say, treated my communication unfairly, yet took occasion to pay me a handsome compliment, for which I am bound in courtesy to make due acknowledgment.

I flatter myself H. S. stands singularly alone in the view he has taken, for I never wrote or advanced any thing during my agricultural career that seems to have met with such general favour from all quarters as that communication, as the numerous letters I have received from the most intelligent agriculturists can fully substantiate. Had your correspondent read the article attentively, he could not have arrived at the conclusion, that I had said unqualifiedly, "When land is worth fifty dollars an acre, wheat at one dollar a bushel will not pay expenses, advising to *raise cattle in preference.*" What I said, and what every candid reader must acknowledge I meant to say, was, that such devotion to raising wheat, to the shameful neglect of the cattle, and raising profitable stock, was an ill-judged practice; that on lands that cost fifty to one hundred dollars per acre, requiring much manure and care, and where labour was high, wheat at the nominal price of one dollar per bushel, would not pay; when the average yield might be put at fifteen bushels to the acre. I said, or conveyed the idea, that farmers situated as I was, could not compete with the wheat growers of the new States, where lands were so rich as to require no manure, and were worth but five to ten dollars per acre. Instead of discouraging the raising of wheat under any circumstances on land that was worth fifty dollars per acre, as Mr. S.'s article would imply, I recommended the raising of grain conditionally, to even the planters of Mississippi. It was likewise as unfair to make me appear as recommending the *raising of cattle exclusively*; I am sure I never intended, nor did I recommend to every farmer in Virginia or Pennsylvania, to compete with the breeders and graziers of Upper and Lower Sandusky, while I am free to say, there are some situations in Virginia and Pennsylva-

nia, where cattle could be raised and fed as cheaply as in those favourite places. I do not dispute that there are, as H. S. says, "*well built*" cattle in Ohio; but he will please recollect, that these well built cattle are almost uniformly a cross from the imported Durham—thanks to the spirited gentlemen of Ohio, who at much pecuniary personal sacrifice, enriched their country by importations of this noble breed.

The extreme of what I recommended, as to the raising of cattle, may be found in the following extract, copied from the communication in question, which on reviewing, I find no occasion to change the opinion advanced therein; I feel satisfied of its correctness, in the qualified sense in which it was offered, to large farmers, living at a distance from a market. I said:

"Those who live at a distance from a market, and have large farms, should turn their attention principally to breeding and grazing; they should not separate these two branches. It is but too common for the grazier to depend upon the drover for his supply of cattle; in that way he can never be assured of the good feeding properties of the young cattle he purchases; better by far to select a good bull, the character of whose breed he can depend upon for easy feeding and early maturing, and progress steadily and patiently for a few years, and in that time he will have possessed himself of a breed that will show good proof of his attention and skill. I am persuaded that the improved Durham steers, under proper management, can be turned off regularly at four years old, to weigh from nine to ten cwt. If this be so, and I have not a doubt of it, what a saving in time and feed is here—nine to ten cwt. of fine beef in four years, against five or six cwt. of the hard feeding tribe in six to seven years. It appeared strange to me, as passing through several farming districts, to see such devotedness to raising grain, to the almost utter neglect of cattle. As far as the eye could reach from the road, nothing could be seen but grain, with here and there a corn-field; while a few stunted cattle and sheep might be seen running along the road sides, excluded from the fields, till they and the swine should have a harvest feast in the stubble field.—I speak now of some parts of Maryland and Pennsylvania—how short-sighted to neglect the cattle or to keep such a breed! not one in a hundred of them could, by any force of feeding, be made to weigh six cwt., or could be put in a condition, from the time it was taken up, at an expense short of the whole value of the animal when it came to be slaughtered."

\* See page 116. † Page 155.

In corroboration of the opinion as to the profitableness of the Durham cattle, I may mention, that at the late Cattle Show in Chester county, Mr. Worth exhibited three steers of Durham blood, rising four years old, which had not yet been put up, and which then were laid at 1500 lbs., average. While viewing those fine steers, I remarked to an intelligent farmer near to me, that it would require but a little feed to make them bring one hundred dollars each. He replied, he thought they would bring that now. Their owner raises grain, corn, &c., but I am very sure he has raised nothing within the last three or four years, that will pay as well as his steers.

I sold last March a young Durham heifer for slaughter, at *one hundred dollars*, and am very certain, that from the time I took her up to feed, she did not consume fifteen dollars worth over and above the hay, and up to that time, less of pasture and hay, by a great deal, than a good animal of the common breed would have consumed; and which under any force of feeding, for the same period, would not have brought forty dollars at the same age, at the same market. Mr. Colman, in his account of the cattle at Smithfield, England, remarks of this breed, that "the dressed weight is stated at 650 lbs. to 800 lbs., at two to three years."

Recommending to H. S. a reperusal of my communication to General Richardson, and to farmers to whom it applied, a fair trial of the practice set forth,—

I remain, very respectfully,

Your obedient servant,

JAMES GOWEN.

Mount Airy, January 5th, 1846.

### Planting the Cranberry.

In its wild or natural state, the cranberry is found in wet situations; in boggy grounds, in damp sandy lands, and on the low margins of ponds and streams. It will live and grow in comparatively dry soils; but it will not bear fruit without its roots are immersed in water at all seasons of the year.

*Soil and situation.*—The first object of the cultivator should be to select the ground for his *cranberry yard*. Every wet situation is not suitable. The soil must either be sand, mud, peat, or a mixture of these. There must be an abundant supply of water at all seasons of the year. If the ground is so situated that it can be flooded during the winter and spring, it is better; but it is not indispensable to success. The ground must be saturated with water, either from springs, running streams, or the drainings from higher land. On the low sandy margins of ponds

the water is not much affected by the season, a sufficient supply of moisture will ascend, because the little spaces between the grains of sand act as so many capillary tubes for the ascent of the water; but when the margin is compact earth or unmixed peat, the dampness will not on that principle rise to the surface. In a selection of a situation for his cranberry yard, the cultivator must observe, first, whether the soil is of a loose, porous character, easily permeable to water; and second, whether there will be an abundant supply of water in the driest seasons. If either of these two requisites is wanting, it will be useless for him to attempt the cultivation of the cranberry.

*Planting and culture.*—In boggy grounds it is advisable to retain the top sod, and cover the surface with beach sand if it can be easily procured; if not, with any sand that does not contain loam or surface soil. Till recently the common method of setting out the vines was, after the bog was covered with sand, it was marked off in parallel rows, like a field of corn, and sods of vines set from three to four feet apart each way. The usual method now is, to set in drills about two feet apart. The vines are separated, and only two or three upright stalks are set together, and are placed from six to twelve inches apart lengthwise of the drill. On wet and barren sandy land the expense of setting out the vines is much less than on bogs.

Cuttings from any part of the stem will strike root, and may be used where it is difficult or expensive to procure a sufficient quantity with roots. Where vines cannot be procured cranberries may be sown. It is not certain but that sowing will ultimately prove to be the cheapest and most expeditious method. We know of but one instance where cranberries were sown. That experiment was successful, and the ground is now thickly set with vines.

The best time for setting the vines, we are unable to state. The common practice has been to set them at any time when the weather would admit, from November to March. The spring we should think was preferable for sowing.

During the first season after they are set, vines frequently put forth numerous runners four or five feet long. The next year the runners put forth upright bearing stems, which produce cranberries on the third year. The vines do not usually become so thick set as to cover the ground before the fifth year.

Manure is worse than useless, and any vegetable or animal matter that will cause fermentation is injurious. As a general rule, the *more barren* the surface soil, the *better is it adapted* to the growth of the

cranberry. The growth of the grasses in such situations will be feeble, while the cranberry obtaining its sustenance mainly from water and the atmosphere, grows luxuriantly, and will ultimately *kill out* the grasses and obtain complete possession of the soil.

During the first three years, it is better to pull out the grasses than to wait for the cranberry vines to overcome them. Bushes must be carefully removed as fast as they spring up, because if suffered to grow they would do great injury. No other attention is necessary, excepting that good fences must be maintained around the vines to prevent the depredations of herbaceous animals.

*Profits.*—One bushel of cranberries to the square rod may be considered a good crop from vines that have been set five years, though we could cite particular instances in which three and four bushels have been gathered. Raising cranberries is like every other business in life; if a man judges rightly, is prudent and industrious, he will commonly succeed; but if he depends more on good luck than on good management, in nine cases out of ten he will fail. The cranberry fever is now running high among us, and almost every man you meet exhibits some symptoms of the disease. That fortunes are suddenly to be made by all who embark in this business we do not believe; but that large profits can be obtained from vines set in good situations, such as are above described, there is no doubt. The experiments of Capt. Henry Hall, Hiram Hall, and Peter Hall, of Dennis; of Captain Edward B. Hallett and Edward Thacher, of this town, and many others that could be named, prove that the raising of cranberries in good situations is a profitable business.

We know that some of the opinions which we have given in this article will militate against the theories of a few of our friends; but we cannot help it. We have carefully examined almost every cranberry bog and yard in the county, and have carefully compared the information thus obtained, and we know that our opinions are corroborated and supported by all who have had the largest experience in the business. We do not wish to discourage any from planting vines. Far from it. We say, go ahead. All we wish is to discourage men from running blindfold into a business, respecting which all the necessary information can be so easily and so readily obtained.—*Yarmouth Register*.

If you would have your hens lay through the winter, keep them warm—feed them liberally, with animal food to pick at, and see that they have access to calcareous substances.

For the Farmers' Cabinet.

### Thaer's Principles of Agriculture—Mineral Manures.

In these remarks on manures there is one thing that constantly forces itself on the mind; the extreme difficulty of deciding as to whether we are right in the kind of manure that we are using for our land. Where land is in good condition this perplexity does not occur, or not to any great extent; but where land is out of order, or where we wish to make it produce more than it has yet done, it requires great judgment and experience to enable one to make up his mind how he shall proceed. We ask ourselves what we shall do, and when we have decided as to this, we then ask, have we the materials with which to carry out our project. Both of these questions are of serious import to the farmer—the one taxing his judgment and powers of reflection—the second all the resources of his experience. The art of manuring appears to consist in returning to the soil what has been taken from it, and in such proportions as to preserve the proper relations of all its ingredients. There is no crop that we can sow, that does not in some degree disturb this relation;—to restore it, to renew the condition that has been so altered, is the first and chief difficulty in the art of cultivation. Necessity obliges us to attempt this restoration, or else our land will be to us like the individual who lives upon his capital, and who has nothing to look forward to as this melts away, but distress and poverty. Where land is rich naturally, it is exhausted with difficulty, and easily brought up if it get out of order; but let us watch the farmer who is the unfortunate owner of a bad soil in bad condition, and we shall be able to form an idea of the expense and labour, and attending efforts expended on that which nature itself has frowned on; it is like an unhappy pedagogue endeavouring to fill the vacant and sterile brain of some dull specimen of the human family—it will require the exhausting toil of half a lifetime, and even then leave little to compensate for the labour, and be always liable to a relapse. The possessor of such a soil should have the age of Methuselah if he is to see the results of his labours; one-fourth of the life of this patriarch would have passed before he saw much good come from his two hundred years of hard work. Even on good soils, but out of order, a man may grow old before it is brought into a fertile condition. It has been our fortune to see land, where, to one coming from a more fertile country, starvation would appear a necessary consequence; yet off such land is fed many a

hardy and industrious family, and from the country where such land abounds, issues many a fine and elevated character, who carries to the furthest limits of this continent the arts of life and the elements of civilization, with an energy of character, a resolute perseverance, and a spirit of enterprise, with which those from more favoured regions cannot compare or compete. If we were to carry out these ideas, they will bring us to that point in which it will be necessary for every farmer to be a man of science:—of course a most absurd conclusion and expectation, not that it would not be much better for the interests of agriculture that they were so, or that agriculture would not be a much higher art if they were so; but that it is absurd to expect such a thing. There is no profession or occupation where each member is of the highest order of mind, and no one where much the larger portion are not ignorant of the principles of the art they profess and practice. The mass of men are followers and imitators—it is the few who are great and do great things; the rest are mere labourers on the already worn and beaten track of life. It is not therefore to be supposed, that science is to direct the man who has the evil fortune to possess land that is out of order, or that he will refer to chemical laws for assistance, consult Liebig, or talk about phosphates, silicates, carbonates, ammonia, alumina, geine, or humus, or use any other learned and vexatious catalogue of terms; but he will turn from these with disgust, drop science and all its beautiful principles, and look for aid to his dung-heap or his lime. He knows that the art of retrieving a worn-out soil is to restore to it what it has lost, but how is he to know what it has lost; or if his land contain an excess of some one thing, as clay or sand, he may be aware that the proper mode of proceeding is to correct this excess, by applying something of an opposite nature. Or if the soil is deficient in the earths, or salts, it may be easy to know and apply the remedy; and also if the land has been exhausted of its humus or vegetable mould. The difficulty does not consist in finding the remedy, but in knowing when it is wanted; or in other words, the great majority of farmers would be unable to tell what was the reason their land did not yield well, nor could they conjecture or discover the cause, unless by an analysis of the soil. And how many are there, who would not rather trust to his own opinions, and to his own meagre means, than to go to some chemist and ask what was the matter with his land, and endeavour to find out why it failed in producing wheat or corn, or any other crop. And in this way be en-

abled to make an immediate application of the remedy. There are, no doubt, peculiar influences exerted by every agent that we employ—a fact that renders it doubly important for us to know how we shall proceed, and whether we are on the right track when we commence our work.

“But what does the soil contain, and what are the components of the substances used as manure? Until these points are satisfactorily determined, a rational system of agriculture cannot exist.” These are the words of Liebig on this point, and there is no man who has anything to do with land, who does not feel their force. With these general remarks, we proceed to take up Von Thaer on “Mineral Manures,” the last part of the chapter on “Manuring the Soil.” He opens with some observations that go to prove the necessity that we have urged of knowing the nature of our soil and its wants. It is on this knowledge that is founded the whole art of manuring and bringing up land—the art of correcting the defects of a soil so as to make it productive. We find, for example, that our land contains too much clay or sand, or too much of some one of the elementary earths, or even of humus, or on the other hand, too little of some of those ingredients of a soil that make it valuable for cultivation; in other words, that the just balance between its component parts is impaired. In these circumstances we cannot expect our land to be as productive as we wish, but how are we to correct the evil? The most natural mode is to introduce into the soil something of an opposite nature to that which is in excess, and to add to it something of the same character as that which is deficient. This art of improving nature, and attempting to adjust her deficiencies is a delicate matter, and as we have already said, requires experience and the exercise of sound judgment to prevent failure. “It is hardly possible,” says Von Thaer, “to correct the defects of an argillaceous and tenacious soil with sand, or those of a sandy soil with clay, excepting in those cases in which the kind of earth necessary to effect the required amelioration is found in the inferior stratum of the soil to which it is to be applied.” In that case it may be done by deep ploughings, so directed, however, as not to bring too thick a layer of the virgin earth to the surface; but where the earth has to be brought from a distance, or raised from a great depth, then we have to calculate the expense, which may be so great as to make it an absurd undertaking. But after having done this, and resolved to attempt it, we then have this fact for our consideration, “that it is exceedingly difficult to effect a

thorough combination of sand and clay, unless these substances are of a marly nature, or contain calcareous particles: where such is not the case, these earths cannot be sufficiently divided to incorporate with each other."

The mode of mixing these soils is by repeated ploughings—the two or three first as superficial as possible—then harrowing, and breaking the clods as soon as they are dry; also by mixing dung or lime with them, or by sowing plants whose roots have sufficient strength to penetrate the clods, the operation may be accelerated; but after going through all this labour, it seems that we must wait before any beneficial effect is produced.

Another mode of ameliorating argillaceous soils, not unfrequent in Europe, is by paring and burning; this process brings them nearer to a sandy soil than any other, by destroying the coherence and tenacity which make clay so difficult to manage.

On soils deficient in consistency and disposed to retain moisture, Von Thaer speaks very highly of sand, as being by far the best dressing, as by penetrating the mould and filling up its spongy texture, it, without affecting the richness of the soil, made it much more manageable in the cultivation. It should be spread on land covered with grass; it then, according to his experience, "produces a more beneficial effect than the most energetic manure; in fact, manure would be rather injurious, than otherwise, to soils of the kind of which we are now speaking."

A. L. E.

(To be continued.)

For the Farmers' Cabinet.

### Fowls.

TO THE EDITOR,—I have been a subscriber to the Cabinet, I believe, from its commencement, and have contributed but little to it, except, perhaps, by adding to its circulation, by speaking of its value. Being no writer, I have left it for those who are more competent; I find many inquiries on its pages on very interesting and instructive subjects. In the last number a writer is inquiring about fowls, which, perhaps, has prompted me to query on the same subject. Your citizens are fond of a fine appearance on the farmers stalls, and good fat poultry contributes much to that appearance. I have had the common, the Poland, Creole, and Pheasant stock of fowls, and as I want to have the most profitable, for the family and stall, will some writer inform where the Game stock of fowls can be obtained, and whether they are good layers, of a round

plump form, and if hardy; and if they are peaceable when running at large? The best stock of all kinds should be obtained by farmers; I am very fond of having a large flock of poultry about my buildings, but I wish to have those that will pay for the grain they eat, which is not a little; and above all, when prepared for the market, I wish to have a breed that will show their feeding. Also the best manner of winter keeping, whether to be housed or running out is best; what is the best kind of food; and if they require animal food when the ground is frozen, or covered with snow? These several questions answered, would gratify a Delaware county farmer, who wishes the welfare of the Cabinet and its editor.

Where can clean orchard grass seed be obtained, and at what price per bushel; when the proper time of sowing, and how much per acre?

My experiment with the pouquette last summer, was to put a small handful in the hill with the corn, all covered together, but it did not show itself in the corn—my corn was frozen down, and after it grew up, it was cut down with the worms, which, perhaps, operated against it.

My neighbour's field showed the effects of the pouquette. The corn was more rank than his compost made it, side by side, and the yield was better when husked; his soil is similar to my own, and why such a difference, I know not—his land has been more cropped and less manured; but strange as it is, I have often seen better corn on thin land than on that which is thought to be good, and which has apparently received equal care. If the next number of the Cabinet shall have a column to spare for these several interrogatories, I believe many farmers will be benefitted, and I shall be obliged.

Respectfully, A. G. H.

Our friend A. G. H., is correct when he says Philadelphians like a fine appearance on the farmers' stalls; and we have been partly ready to conclude that some of our farmers are little aware of the difference it makes, both in the readiness of sale and in the prices obtained, whether things look nice, or otherwise. In scarcely any thing is there so great a contrast as in poultry, unless it be in veal. When did the farmer ever go home and complain to his wife of dull prices, when she had freighted him with plump and fat poultry, nicely picked and handled throughout, as if she had always a clean apron on? Good poultry, well handled, like good fruit, will always bring good prices. But how can it be supposed that miserable skeletons of chickens, murdered in the handling, and looking, when in market, as if they had been thrown pell mell into a basket, and then set on by the market-man;—how can it be supposed these will bring a price to pay for rearing them?

The questions asked about fowls, the editor cannot answer; and if he could, it would be better for A. G. H. to come here and buy *Bement's Poulterer's Companion*, which will tell him all about it, and which will cost him but \$1 25. Every raiser of fowls should have that book.

Our friends Coates and Powell, both in Market street, and whose advertisements are in the Cabinet, will no doubt, furnish good orchard grass seed, and tell when to sow it. The editor has preferred sowing it in the spring.

The accounts of *poudrette* have very generally given it full credit for making the corn grow. For this crop it must be a cheap manure. We would not advise our correspondent to rely upon "thin land," for raising a full crop of corn, in preference to that which is "thought to be good." Indian corn delights in a rich soil. In a very dry summer, however, corn will suffer less in a thin lightish Jersey soil, than in land that is full of manure.—Ed.

#### Officers of the Philadelphia Ag. Society.

At a stated meeting of the Philadelphia Society for promoting Agriculture, held on the 7th inst., the following named gentlemen were elected officers for the ensuing year, viz:

*President*—James Mease, M. D.

*Vice Presidents*—Kenderton Smith, Algernon S. Roberts,—in place of James Gowen, declined.

*Recording Secretary*—Aaron Clement.

*Assistant Recording Secretary*—P. R. Freas.

*Corresponding Secretary*—A. L. Elwyn, M. D.

*Treasurer*—George Blight.

*Curators*—Isaac Newton, Samuel C. Ford.

*Librarian*—Aaron Clement.

Jan. 8th, 1846.

#### Productive Farm.

*To the Editor of the Farmers' Cabinet:—*

MR. ISRAEL LAMBORN, of Marshalton, Chester county, informed me a few weeks ago, that his farm of twenty-seven acres of land, had produced the past season, as follows, viz.: one hundred and fifty bushels of corn, thirty bushels of wheat, and twelve tons of hay, vegetables for family, &c.; that he fattened twelve cattle of 500 lbs. each, kept six large hogs, two horses, and two milch cows; and had also received for pasture, from drovers, \$40.

This may be considered as another, and a very strong evidence of the productiveness of small farms, when properly cultivated and kept in high condition. The principal part of Mr. Lamborn's farm being in grass, the labour on it cost but little. There is, per-

haps, no part of this country where land is better adapted to the growth of grass and grain, than Chester county.

AARON CLEMENT.

Philadelphia, Dec. 28th, 1845.

#### Mildew.

VERY few seem to be aware of the nature of that substance called mildew. We copy, says the American Farmer, an abstract of a lecture by Professor Lindley, of England, on the subject:

"Mildew is often confounded with blight, honey-dew, &c., but it is a distinct substance, and peculiar to peculiar tribes of plants. It generally appears on the leaves or stems, in the form of *red, white and black spots*, as a number of minute projections, or frosty incrustations, or a brownish powder, spreading more or less rapidly, till the plant is destroyed. Mildew is fungi of different kinds, and these are divided into three classes: 1st, those which grow or lie on the surface of leaves: 2nd, those which are formed in the interior of the stem or leaf, and produce when ripe; and third, those which only attack the roots. All these seldom appear but in autumn.

"The first of these fungi injure the plant by preventing its respiration. One of the most common of the fungi, which attack the common cabbage, is the *Cylindrosporium concentricum*, and they have the appearance of small white patches or specks of frosty incrustation. The mildew which attacks rose-bushes, and many other flowering shrubs, is a kind of *Uredo*, so called, from *Ura*, to burn or scorch; for it gives to the plant attacked the appearance of being scorched. The fungus called *Acrosporium Monilioides*, resembles, when magnified, a string of beads, and consists of a number of globules which, when ripe, fall, take root, and form fresh strings, or necklaces. Sometimes tufts of these appear, fixed to stalks, and are then called *Aspergillus*, from their fancied resemblance to the brushes used for sprinkling holy water. The superficial mildew which infects the onion, and is fatal to that plant, is called *Botrytis*, or bunch of grapes. The bean and pea have a superficial mildew—*Uredo Faba*—which spreads along their leaves like white roots curiously interlaced.

"The second class of fungi which spring from the interior of the leaves and stems, are the most fatal. They appear in a sort of bag or case, supposed to be formed of the cuticle of the affected leaf. These attack the oak, pine, and other forest trees; the

genus is the *æcidium*. The *æcidium pine*, found on pine trees has, when magnified, the appearance of a number of nine-pins. When ripe it emits a bright orange coloured powder. A mildew of this kind attacks barley, and is very injurious. It is vulgarly called pepper brand. The *Uredo Scgetum*, or smut, is destructive not only to barley, but to wheat and oats. It destroys the grain, which is converted into a kind of jelly, and attacks the leaves and stems. The *puccinia graminis* which attacks corn, is formed in the interior of the stock, and, when ripe, bursts forth into clusters, like bunches of grapes, of a dark brown colour. The *ergot* on rye is a well known and destructive species of mildew. It grows out of a spike of grain, like a prolonged kernel; is long, horny, and cartilaginous. It originates in the centre of the stem. It affects maize, and various species of grass.

"The principal fungi of the third class are two, which attack the roots of plants, and both resemble truffles. One of these (*Rhizoctonia Crocorum*) attacks crocuses. It is called by the French *Lamort du safran*, and soon destroys the whole crop. The other fungus (*Periola tomentosa*) is found on the potatoe, lucerne, &c. It turns the roots to a purplish hue. They are both propagated by spawn or fibres, which cling round the roots. All these fungi propagate rapidly, requiring only twenty-four hours to come to maturity. One mushroom will propagate 250,000,000. Plants, Dr. L. says, are generally most affected by superficial fungi after a long drought. *Red plants* are said to be more liable to mildew than any other. Mr. Bauer has found that steeping grains of corn in lime water, will cure, or at least, prevent the spread of the internal mildew. There appears, however, as yet, to be no cure for mildew in the roots, but by forming a deep trench round the infected plants, and cutting off all communication between them and the rest of the field."

### Humus.

THE name usually given to this substance is "mould." This term has been misinterpreted by many persons, who have understood it to mean the layer of vegetable earth, and not a particular portion of its constituent parts. Several very clever agricultural writers have fallen into the same error; and thus the obscurity which enveloped this part of the science has been increased. It is on this account that I have adopted the word *humus*, about which there

can be no mistake. In a scientific point of view the term "earth" is not at all applicable to this substance; properly speaking it is not an earth, and has only been called so on account of the pulverulent form.

Humus is always more or less a constituent part of the soil. The fertility of the land depends entirely upon its presence, for, if we except water, it is to this substance alone in the soil that plants owe their nutriment. It is the residue of animal and vegetable putrefaction, and is a black body; when dry it is pulverulent, and when wet has a soft greasy feel. It is varied in its qualities and composition according to the substances from which it has been formed, and the circumstances under which the putrefaction or decomposition took place; there are, however, certain properties which are inherent to it, and in general it is similar in itself. It is the produce of organic power—a compound of carbon, hydrogen, nitrogen, and oxygen, such as cannot be chemically composed; for in inert bodies these substances only enter into simple combinations of some two amongst them, and do not unite altogether as is the case here. Besides the four essential elements of humus, it contains other substances in smaller quantities, viz., phosphoric and sulphuric acids combined with some base; and also earths, and sometimes different salts.

Humus is the product of living matter, and the source of it. It affords food to organization; without it nothing material could have life, at least the most perfect animals and plants could not exist; and, therefore, death and destruction are necessary and accessory to the reproduction of animal and vegetable life. The greater the number of living creatures, the more humus is produced, and, consequently, the supply of the elements for the nutrition of life is increased. Every organic being in life appropriates to itself a daily increasing amount of the raw materials of nature; and these, after having been digested, resolve into humus, which increases in proportion as men, animals, and vegetables are multiplied in any spot on the surface of the earth. It is, however, diminished by the processes of vegetation, wasted by being carried into the ocean by water, and by being conveyed into the atmosphere by the agency of the oxygen contained in the air, which unites with and gradually converts it into a gaseous matter.

We have only to observe the progress of vegetation upon naked rocks, in order to understand the history of humus from the very beginning of the world. At first, only lichens and mosses are found there, from the

decomposition of which more perfect plants derive their nourishment; these, in their turn, die and augment the mass of mould by their putrefaction: and thus at last a bed of humus is formed, capable of affording nourishment to the largest trees.—*Thaer's Agriculture.*

**THE FARMERS' CABINET,**  
AND  
**AMERICAN HERD-BOOK.**

PHILADELPHIA, FIRST MONTH, 1845.

It will be found that we have again in this number recurred to *Colman's Tour*, in continuation of the article relative to the Smithfield market, London. The interest is well kept up.

In a letter from the publisher, received a few weeks ago, he says, "No 5 is in press, and may be expected about the 20th of January. Mr. Colman is busily engaged in writing No. 6." A report was circulated in the papers some time ago, that H. Colman had returned to this country:—this was incorrect; he is still in Europe. As soon as No. 5 is received it will be forwarded to our subscribers. Single Numbers are sold, and subscriptions received.

SOME unknown friend has kindly forwarded a neat copy of Josiah Quincy, Jr's, Address before the N. Y. State Agricultural Society, at Utica, in the Ninth mo. last. We shall make use of it in next Number of the Cabinet.

Dr. Fitch, of Salem, New York, will accept thanks for his valuable *Essay on the Wheat Fly*, and some species allied to it, as it originally appeared in that excellent work of Drs. Emmons and Prime, the *American Quarterly Journal of Agriculture and Science.*

The December Number of *Skinner's Farmers' Library* is rich in valuable matter, and we wish its enterprising editor and publishers every success.

THE quantity of rain and snow which fell in the 12th month, 1845, was almost four inches. .... 3.96 in.  
*Penn. Hospital, 1st mo. 1st, 1846.*

Winter set in early. Old and observant people say the past month was the coldest 12th month that has occurred for twenty years.

**SHORT ADVERTISEMENTS,**

The subject matter of which, may correspond with the agricultural character of this paper, will be inserted at the rate of one dollar for each insertion of ten lines or less; and so in proportion for each additional line Payment in advance.

**COATES' SEED STORE,**  
OF MORE THAN FORTY YEARS STANDING,

Where may constantly be had

Clover, Timothy, Orchard, Herd,

AND OTHER

**GRASS SEEDS,**

TOGETHER WITH A COMPLETE ASSORTMENT OF

**GARDEN SEEDS,**

Of the finest Quality and best Varieties,

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No. 49, Market st., Philad'a.

Agency for the Purchase & Sale of

**IMPROVED BREEDS OF CATTLE & SHEEP.**

THE subscriber takes this method of informing his friends and the public, that he will attend to the purchase and sale of the improved breeds of cattle, sheep, &c., for a reasonable commission. All letters post paid, addressed to him at Philadelphia, will be attended to without delay.

AARON CLEMENT.

Jan. 15th, 1846.

**GUANO.**

TWENTY-FIVE tons first quality Ichaboe Guano, in bags or barrels, for sale in lots to suit purchasers, by

S. & J. J. ALLEN & CO.,

No. 7 South Wharves, 2nd Oil Store below Market street, Philadelphia.

October 15th, 1845.

Gt.

**D. O. PROUTY,**

*Manufacturer of Agricultural Implements, and dealer in Garden and Grass Seeds,*

No. 194 $\frac{1}{2}$  MARKET ST., PHILADELPHIA:

Offers for sale the following articles now in season, viz: Grant's Patent Fan Mill, for chaffing and screening wheat and seeds at one operation. This mill carried off the first premium at the State Fair in New York, Sept., 1845, and the first premium at the Philadelphia Agricultural Exhibition in October, 1845. Corn Shellers in great variety, and warranted to work well. Price from \$2 to \$30, each.

Straw, Hay, and Corn-stalk Cutters of different patterns, among which is Hovey's Patent, an excellent article, at a low price.

Mott's Agricultural Furnace and Cauldron, an article which every farmer should have. Grindstones on friction rollers, of various sizes.

D. O. PROUTY.

We keep on hand at this office, and will supply our friends with Agricultural works generally. Among which are

THE FARMER'S ENCYCLOPEDIA, full-bound in leather;—Price	\$3 50
YOUATT ON THE HORSE, with J. S. Skinner's very valuable Additions;	2 00
BRIDGEMAN'S GARDENER'S ASSISTANT;	2 00
THE AMERICAN POULTRY BOOK;	37½
THE FARMER'S LAND MEASURER;	37½
DANA'S MUCK MANUAL;	50
Complete sets of the FARMERS' CABINET, half-bound, 9 vols.	7 50
DOWNING'S Landscape Gardening,	3 50
Downing's Fruits and Fruit Trees of America,	1 75
SKINNER'S Every Man his own Farrier,	50
AMERICAN Poulterer's Companion,	1 25
BOUSSINGAULT'S RURAL ECONOMY,	1 50
FARMERS' & EMIGRANTS' HANDBOOK,	1 00
MORRELL'S AMERICAN SHEPHERD,	1 00
BEVAN on the HONEY BEE,	31½
BUISTS' ROSE MANUAL,	75
SKINNER'S CATTLE & SHEEP DOCTOR,	50
AMERICAN FARRIER,	50
THE FARMER'S MINE,	75
HANNAM'S Economy of Waste Manures,	25
LIEBIG'S AGRICULTURAL CHEMISTRY,	25
"    ANIMAL CHEMISTRY,	25
"    FAMILIAR LETTERS,	12½

As well as his larger works on Chemistry and Agriculture.

Subscriptions received for Colman's Agricultural Tour—or single numbers sold.

☞ We are prepared to bind books to order.

**Seed Store,**

*No. 23 Market Street Philadelphia.*

The subscriber keeps constantly a supply of White and Red clover, and other grass seeds. Field seeds, consisting of Spring and Winter Wheats, Potatoe, Oats, Barley, and choice varieties of Seed-corn. Also in season, Fruit and Shade Trees. Garden and Bird seeds generally. Guano in parcels to suit purchasers.

M. S. POWELL,

Philad., March 15th.

**Poudrette.**

A valuable manure—of the best quality, prepared in Philadelphia, for sale at the office of the FARMERS' CABINET, No. 50, North Fourth Street, or at the manufactory, near the Penitentiary on Coates' street. Present price, \$1 75 per barrel, containing four bushels—\$5 for three barrels—\$15 for ten barrels, or thirty cents a bushel. Orders from a distance, enclosing the cash, with cost of portorage, will be promptly attended to, by carefully delivering the barrels on board of such conveyance as may be designated. The results on corn and wheat have been generally very satisfactory. Farmers to the south and in the interior, both of this State and of New Jersey, are invited to try it.

JOSIAH TATUM.

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TERMS.—One dollar per annum, or five dollars for seven copies—payable in advance.

All subscriptions must commence at the beginning of a volume. Having lately struck off a new edition of one or two of the former numbers, which had become exhausted, we are now able to supply, to a limited extent, any of the back volumes. They may be had at one dollar each, in numbers, or one dollar twenty-five cents half-bound and lettered.

For six dollars paid in advance, a complete set of the work will be furnished in numbers, including the tenth volume. The whole can thus readily be forwarded by mail. For twenty-five cents additional, per volume, the work may be obtained neatly half-bound and lettered. Copies returned to the office of publication, will also be bound upon the same terms.

By the decision of the Post Master General, the "Cabinet," is subject only to newspaper postage. To any Post office within thirty miles of Philadelphia, they will go free of charge.

Joseph Rakestraw, Printer.

# THE FARMERS' CABINET, AND



## AMERICAN HERD-BOOK.

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

Perfect Agriculture is the true foundation of all trade and industry.—LIEBIG.

Vol. X.—No. 7.]

2nd mo. (February) 16th, 1846.

[Whole No. 133.]

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BY JOSIAH TATUM,

EDITOR AND PROPRIETOR,

No. 50 North Fourth Street,

PHILADELPHIA.

Price one dollar per year.—For conditions see last page

Address,

*Delivered at the Annual Exhibition of the  
N. Y. State Agricultural Society, at  
Utica, September 18th, 1845.*

By HON. JOSIAH QUINCY, JR., of Massachusetts.

MR. PRESIDENT AND GENTLEMEN of the  
New York State Agricultural Society:

If there were any spot that would of itself inspire a man with eloquence on the subject of agriculture, it is the one we now occupy. We stand in the centre of the agricultural district of the great state of the Union. In full view the lovely valley of the Mohawk, famous in history and celebrated in song, stretches away to the distance. Before us, by thousands and tens of thousands, stand the men who have felled its forests and caused it to blossom like the rose. Around us are the proofs of the skill and intelligence that have characterized their labours. Beneath us is the soil from whose maternal bosom we draw our subsistence. Above us

is the canopy of Heaven that stretches equally over all.

We stand in the great temple dedicated to agriculture—a temple, at the raising of whose columns the “morning stars sang together, and all the sons of God shouted for joy”—a temple, not made with hands, eternal as the Heavens.

But, alas! Mr. President, the age of inspiration is passed, and I never felt a stronger desire to ask the kind consideration of an audience, than when, under rather unusual circumstances, I now rise to address you. The exhibitions of agricultural skill and agricultural success, which we have witnessed on this occasion, have impressed the truth most deeply upon my mind, that it was hardly worth while for the New York State Agricultural Society to send all the way to Boston, to get me to instruct the New York farmers in the management of their farms. If I had indulged any hopes that the agricultural knowledge conveyed in this address would cause two blades of grass to grow where but one grew before, those hopes are dissipated. And to prevent any disappointment, I would assure the audience, that as to flocks and dairies, the raising of cattle and the cultivation of corn, they must go on in the old fashioned way, for anything I have to say to the contrary. But there are other subjects of interest connected with agriculture, and no one can look around upon this assembly without feeling that the farmer is of more importance than his farm; and the results of

the occupation on his character, than any of its more material products.

The relative position of the American farmer possesses a deep interest to individuals and the community. To individuals, as it may decide the wavering as to the course they should pursue, or render them contented with the one they have adopted; to the public, for everything that tends to elevate the agricultural class, is of the first importance to the state.

What, then, is the position of the American farmer when compared with that of the merchant, the politician, the lawyer? Should he be content with his lot for himself and his children? Or should he leave his occupation and adopt some other? Like every other position, that of the farmer has its dark side as well as its bright one. And to decide on its comparative advantages, we must inquire what is the object of man's existence, and how shall he attain the end of his being?

To these questions, history and revelation, the world around and the spirit within us, answer, that the object of man's existence is happiness. Happiness here, and happiness for ever. And the condition of that happiness is the diligent and proper exercise of his affections and his faculties. If this be the case, does the situation of an American farmer offer a fair opportunity of insuring this happiness?

To be happy is the object of life, and all that the world can give towards it, is health and competence. "Health of body is above all riches, and a strong body above infinite wealth." And where is health to be found? There is no need of an audible answer. Look around. Bright eyes and blooming cheeks, as well as strong arms and untiring strength, tell us that earth's first blessing is bestowed upon those who labour upon her bosom.

But health is often undervalued by its possessor, or only appreciated when lost. Wealth, the more obvious and immediate reward of labour, is the chief pursuit of the active. And here the farmer thinks he has a right to complain. The merchant will sometimes make more in a year than he can in a lifetime; and it is not wonderful that he sometimes asks, would it not be better to leave small rewards, though regular and certain, for the chance of obtaining greater? To decide this question, we must ask, What is the price he pays? What is the reward he obtains?

What is the price he pays? To say nothing of his moral exposures, in the great majority of cases, health of body and serenity of mind. Follow such a one into the crowded streets, or the close workshop. His strength for a time sustains him, but confinement and

bad air soon deprive him of his healthful energy, and disease and premature decay become too often his portion. But supposing health can be preserved, where is his serenity of mind?

The risks attendant on rapid accumulation are always in proportion to the chances of success. The farmer sows his seed, and has no doubt but that the harvest will repay him. But he who embarks in speculations that promise sudden and great wealth, knows that he may be "sowing the wind, to reap the whirlwind." And the constant fear of such a result embitters his days and renders his nights restless. And if attained, success gives but little satisfaction. The higher the rise, the wider the horizon; the greater the accumulation, the more exorbitant the desire. And this is not the extent of the evil. A total want of independence is too often the result. Few men in our community have those resources that will enable them to carry on extensive operations on their own means. Almost all depend upon borrowing, and "the borrower is a servant unto the lender." But even if success should be the portion of the aspirant for riches, when is he to attain to it? Does it come forward to meet him? Years of anxiety may be repaid by wealth; but how seldom is this the case. More than ninety in every hundred, even in regular mercantile pursuits, fail. There are but few capital prizes in this lottery. The name of the fortunate holder may be seen at every corner, but where are the ninety and nine who draw blanks? And if attained, how uncertain is its possession! Wealth "gotten by vanity," (by which, I suppose, Solomon meant speculation,) "shall be diminished, but he that gathereth by labour shall increase," is a doctrine as true now as when first delivered; and is one which the experience of every age tends to corroborate.

And, after all, what is the advantage of great wealth, or, what is great wealth itself? It exists only in comparison. "A man is as well off," said the great capitalist of the United States, "who is worth half a million of dollars, as he would be if he were rich." And one of the satirical papers of the day tells us, that when Baron Rothschild, the Jewish banker, read that the income of Louis Philippe was only fifty dollars a minute, his eyes filled with tears; for he was not aware of the existence of such destitution. After the comforts of life are supplied, wealth becomes merely an imaginary advantage, and its possession does not confer any material for happiness, which an industrious and forehanded farmer does not possess. "We will conquer all Italy," said Pyrrhus, to his prime

minister, "and then we will pass into Asia; we will overrun her kingdoms, and then we will wage war upon Africa; and when we have conquered all, we will sit down quietly and enjoy ourselves." "And why," replied his minister, "should we not sit down and enjoy ourselves without taking all this trouble?" And why may not you, it may be said to many an aspirant after wealth, enjoy in reality all you seek, in your present condition?

"Give me neither poverty nor riches," was the prayer of one of the sages of antiquity. And Lord Bacon, the wisest man of modern times, says, "Seek not proud riches, but rather such as thou mayest get justly, use soberly, distribute cheerfully, and leave contentedly." And can there be a truer description of a farmer's fortune? There is no greater independence than that possessed by a contented, fore-handed farmer. "Tell your master," said a Roman general, to the ambassador of the king of Persia, who came to bribe him with great wealth, and found him washing the vegetables that were to constitute his dinner with his own hands, "tell your master that all the gold in Persia can never bribe the man who can contentedly live upon turnips."

And the answer was as true in philosophy, as it was elevated in patriotism. To be happy, man must limit his desires. And when he has sufficient for his needs, should remember that the temptations and perplexities incident to overgrown wealth, more than counterbalance its seeming advantages. Health of body and competence of estate are all the requisites for organic happiness that the world can bestow. And to say that agricultural pursuits are eminently calculated to insure these, is only to reiterate the language of past ages, and to repeat the testimony of our own. If you leave such pursuits, the hazard increases as the profit augments. The amount of the premium is always proportioned to the greatness of the risk.

But health and the conveniences of life are not all that a man requires to make him happy. He desires to be useful, he wishes to be esteemed. And what profession can boast of a higher claim to utility than that of the farmer? The greater part of mankind must be agriculturists, and on their character the well-being of every state must depend. Our free institutions are valued, but how shall they be preserved? By the virtue of the people. History gives no other answer. No truth is more clearly emblazoned on her pages, than that if a nation would be free, her people must be intelligently virtuous. And here the agricultural class be-

comes of the first importance to the state. The influence of a virtuous yeomanry on her character, like that of the air on the individual, is seen in the strength of those who are unconscious of its presence.

But they have still a further power. If, "when the righteous are in authority, the people rejoice," they, who by their numbers hold the gift of office, have an influence second to none in the republic.

The political influence of the agricultural class, is an important but a dangerous topic, before an audience like the present, as particular applications may be made of general observations. To prevent such a consequence, I would illustrate my meaning by reference to the oldest political disquisition in existence, which is remarkable as showing the similarity of political aspirants in all ages; and which, as it was written two thousand years before the discovery of this continent, can hardly be supposed to refer either to the advocates of Texas or the tariff.

It is more than three thousand years since Jotham called to the men of Shechem, to listen to a parable: "The trees of the forest went out to choose a king over them; and they said unto the olive tree, reign thou over us." The answer shows who was meant by the olive. "Should I leave my fatness wherewith by me they honour God and man, and go to be promoted over the trees?" It was the answer of a religious and conscientious man, who feared that public station would not be favourable to the virtues which were the objects of his life.

"And the trees said to the fig tree, come thou and reign over us; and the fig tree answered, should I forsake my sweetness and my good fruit, and go to be promoted over the trees?" Could a better personification have been found of a close, calculating man, who looked out for the main chance, and took special care of number one? It was his own sweetness and good fruit that influenced his decision. The emoluments of office, such a one knew, were small and precarious; and as for honours, he would not give a fig for the whole of them.

"Then said the trees to the vine, come thou and reign over us." The vine was one of your popular fellows, who can take hold of anything to help himself up; who is always on the fence, when nothing higher offers, and who, too pliant to stand alone, will run well if properly supported. But his vocation was "to cheer the hearts of gods and men," and as office-holding and popularity did not agree very well together, he declined the honour.

"Then said all the trees to the bramble, come thou and reign over us." There were

two reasons why this call alone was unanimous. He had nothing particularly to do, and he kept himself perpetually before the public. He had nothing particularly to do, he had neither wine nor oil, beauty nor sweets to recommend him. He was a fit representative of a class who then existed. Nobody could tell what they were made for, and nobody could divine what they followed for a living. But yet the bramble was not one to be forgotten. He was always before the public. He planted himself by the wayside, and caught hold of everybody that passed; there was no getting along for the bramble; and it may be that they made him king, on the same principle that young ladies sometimes marry an importunate lover—to get rid of him. And how did the bramble receive his nomination? Did he distrust his powers or decline the office? Oh no! He was up for everything and up to everything. He could not boast much of himself, so he strove to magnify his office. "And the bramble said, if, in truth, ye anoint me king over you, then come and put your trust in my shadow; if not, then let a fire come out of the bramble and devour the cedars of Lebanon."

Such was the opinion of Jotham, three thousand years ago, on the probable feelings and conduct of rulers, who were placed in authority without the requisites for office. He believed that a fire would go out of the bramble to destroy the noblest and most elevated in the land. By the bramble he meant Abimelech, who was elected king of Shechem, because his mother was a native of the city. His course was as Jotham had foretold; a fire did go out of the bramble. He slew three score and ten men of his brethren on one stone. And as for Shechem, he took occasion of their revolt, and put every man, woman and child to the sword, burned the city with fire, sowed it with salt, and left a warning to future ages, of the danger of putting, through folly or affection, improper men into office.

If now, as formerly, the prosperity of the state is so intimately connected with the character of the rulers, how great is the power, and how evident the duty of a class of men, who, removed from the immediate struggle, hold, by their numbers, the gift of office. If they are faithful, our republic will have a stability that no one before it has possessed. If, doubting their importance, they neglect the trust committed to them, they may learn, too late, that they have sold their country's birthright; and when they would recall the blessing of their fathers, they may find there is no place for repentance, though they seek it diligently and with tears.

But perhaps it will be said that the agricultural class, though collectively powerful, are individually of small comparative importance. Together they may be likened to the ocean, that supports a nation's navy and tosses it from its bosom, with as much ease as it wafts a feather. Still the individual is but a drop, resembling others so nearly as to attract neither notice nor admiration. But this is not peculiar to this class. It applies equally to all. Few, from the very definition, can be distinguished.

But of all the professions, it appears to me that the farmers are the last who ought to complain that, as a class, they do not receive a full proportion of the honours of the republic. Our chief magistrates have differed in many points, but they have generally agreed in this; that before, and in many cases after the election, they have been farmers. There was the farmer of Mount Vernon, and the farmer of Monticello; the farmer of the North Bend, and the farmer of the Hermitage; the farmer of Tennessee, and the farmer of Ashland; the farmer of Lindenwald, and the farmer of Marshfield. So that it well may be urged, that though all the farmers cannot be presidents, all the presidents must be farmers.

But besides this there are in agricultural life great opportunities of individual usefulness. The effects of example and precept extend farther than we can imagine. When you throw wheat into the ground, you know what will be the product; but when you exemplify or inculcate a moral truth, eternity alone can develop the extent of the blessing.

About a hundred years ago, there lived in Boston a tallow-chandler. He was too ignorant to give and too poor to pay for his children's instruction, but he was a wise and an honest man; and there was one book, upon whose precepts he relied, as being able to instruct his children how to live prosperously in this world, as well as to prepare them for another. We are told that he daily repeated to them this proverb: "Seest thou a man diligent in his business? He shall stand before kings." In process of time this tallow-chandler died, and was forgotten. But the good seed had fallen upon good ground. One of his little boys obeyed his father's instruction; he was diligent in his business, and he did stand before kings, the first representative of his native land! He lived as a philosopher, to snatch the lightning from heaven; as a statesman, to wrest the sceptre from tyrants. And when he died, he confessed that it was the moral teachings of his father, added to the little learning he picked up in a town school at Boston, to which he

owed his success, his happiness, and his reputation. He did what he could to testify how sensible he was of these obligations. He bequeathed liberally to his native city, the means of inducing the young to improve their advantages, and to enable the industrious to succeed in their callings. And he erected a monument over his father, to tell his virtues to another age. But the glory of the father was in the child. His son's character was his noblest monument. The examples that son set, of industry, perseverance and economy, have excited and are exciting many to imitate them. And thousands, yet unborn, may owe their success and happiness to the manner in which a text was enforced, by a poor tallow-chandler, upon Benjamin Franklin.

But, being useful and profitable to others, is not the only advantage of a farmer's life. He who is wise may be profitable to himself. In the most busy agricultural life, there are hours that can be devoted to intellectual improvement. And I confess, in my ideal of the American farmer, much more is included than the regular systematic performance of the routine of ploughing and sowing, reaping and gathering into barns.

I cannot satisfy my imagination with the hard-working man, who, after toiling through the day, has no thought at its close, but to satisfy his animal nature and to sleep. No, the man who cannot find some time for the cultivation of his intellect, is in a wrong position; and does not improve as he might the situation in which he is placed. This it is, that spiritualizes his labour and raises him above the brute that labours for him. I do not expect him to be learned on subjects for which he has no occasion; but if he enjoys the priceless boon of health, let him know something of that most wonderful instrument, his own body,—that if that "harp of a thousand strings" should fail, he may with some intelligence repair the evil. Let him know something of the physiology of the vegetable world: and every blade of grass and ear of corn will speak to him of the benevolence and skill of the Great Contriver. Let him not enjoy the sunshine without some knowledge of the laws of light, or see his field drinking in the dew, without understanding its adaptation to the purposes of nutrition. It is in the power of every man to reserve some portion of his time for these pursuits; and he will find that every addition to his stock of knowledge will make his walks the pleasanter, the flowers the sweeter, and everything more full of interest and meaning.

But there is something superior to intellectual pleasure; and can a sphere be better

adapted to a progress in the moral qualities than the one he occupies? Every situation must be a scene of trial. Yet different states have different temptations. The difficulty of entering the narrow path, is not, in every case, likened to the passing of a camel through a needle's eye. Agricultural life has few temptations—no risks are run in its pursuit—no deception is used in its progress—no concealment is required for its success—it is open, manly, straight-forward. It depends on no one's favour; it rests on no one's promise, excepting His, who has said, that "while the world endureth, seed time and harvest, summer and winter, shall not cease." And while free from temptation, such a life gives ample scope for the exercise of all those duties that elevate man, while benefiting his race. It is not required of many men in a generation, to do some great thing for themselves or for their country. It is the little every-day duties and habits that mark the character. It was not in the shouts of multitudes, that the old patriarchal farmer delighted. But it was "when the eye saw him, then it blessed him; and when the ear heard him, then it bore witness of him." The opportunities of exercising the elevated virtues are ever present to the independent farmer. Like the patriarchs of old, he stands at the head of his family. Like them, he should rule his household after him,—instructing, consoling, supporting.

And there are others dependent upon him, who owe their comfort and well-being to his care; and whose dependence may be the means of awakening sentiments, that even religion has not overlooked. When the great lawgiver of the Jews led them from the house of bondage, and by divine command established them as an agricultural people, his laws recognized the advantages of such a life for the formation of character. To remember and love the Giver, and rejoice before Him, in the spring-time and in the harvest, on the anniversary of their deliverance and on festal days, was the first and great commandment, and the second was like unto it. Love and kindness to the neighbour, to the stranger, to the widow, to the fatherless, were enjoined as congenial duties. But the directions stopped not here. The brute creation of every kind shared in his remembrance. The Sabbath was to be observed, "that thy ox and thy ass may rest." And when the harvest was gathered in, the mute and patient labourer was not to be forgotten: he should share the grain for which he had toiled, and the command, "thou shalt not muzzle thy ox when he treadeth out the corn," secured to him at least a portion.

But freedom from many temptations, and

opportunities of exercising the virtues, are not the only facilities that an agricultural life offers for the formation of an elevated character. The scenes that surround it, the unceasing regularity of cold and heat, summer and winter, seed-time and harvest, cannot but lead the observing mind up to their Author. In no crowded workshop his time is spent. The broad fields and the high mountains, and the running streams, diffuse health and cheerfulness around. No smoky lamp sheds a doubtful glimmer over his task; the glorious sun sends his rays for millions of miles to warm, and enlighten, and gladden his path. The religious sentiment is nowhere so naturally developed as among rural scenery. How great is the charm that agricultural allusions throw over sacred poetry! It was a youth spent in rural scenes, that enabled the sweetsinger of Israel to touch a chord, responsive to every human heart.

The voice of the son of Jesse is always sweet, but how different its tones from the various situations of his eventful life. The shepherd-boy, keeping his father's sheep, is filled with adoration as he gazes on the majestic scene above, and exclaims, "what is man that thou art mindful of him, or the son of man that thou visitest him?" Or, rapt with love at the care of the Creator, reminding him of that which he himself exercised towards the objects of his charge, he bursts out, "the Lord is my shepherd, I shall not want." His voice, too, comes to us from the palace and the camp; from the statesman and the warrior; but in a tone how altered. The innocence and faith of the shepherd-boy, have not preserved him in more trying scenes. The wailing of the adulterer and the murderer; the prayer for deliverance from blood and guiltiness; the remorse, the despair of conscience, are there. And well may he exclaim, as he looks back upon his early days and his later career, "Oh! had I wings like a dove, then would I fly away and be at rest."

But some one, smarting under ills that are common to every lot, may say, in description, a farmer's life may be poetic and delightful; but we want to be rich; we want to be powerful; we want to look down upon others. That is happiness; that is the usefulness to which we aspire. I am ambitious, and avaricious and envious. I have no scope here: I can never be happy as a farmer.— And in what position can you be happy? Where do these feelings produce aught but misery? An ambitious, avaricious, envious farmer, cannot be happy on his farm, for it is a law of man's nature that no outward situation shall satisfy a disordered mind. And

of agricultural pursuits no more can be said than is alleged of godliness by the apostle, "with contentment, it is great gain."

What, then, is the conclusion of this whole matter! The agricultural life is one eminently calculated for human happiness and human virtue. But let no other calling or pursuit of honest industry, be despised or envied. One cannot say unto another, "I have no need of thee;" and to every one there are compensations made that render all, in a great degree, satisfied with their lot. Envy not the wealth of the merchant; it has been won by anxieties that you never knew, and is held by so frail a tenure as to deprive its possessor of perfect security and perfect peace. While your slumbers have been sound, his have been disturbed by calculating chances, by fearful anticipations, by uncertainty of results. The reward of your labour is sure. He feels that an hour may strip him of his possessions, and turn him and his family on the world in debt and penury.

Envy not the learning of the student. The hue on his cheek testifies of the vigils by which it has been attained. He has grown pale over the midnight lamp. He has been shut up from the prospect of nature, while sound sleep and refreshing breezes have been your portion and your health.

Envy not the successful statesman. His name may be in every one's mouth. His reputation may be the property of his country; but envy and detraction have marked him. His plans are thwarted, his principles attacked, his ends misrepresented. And if he attain to the highest station, it is to feel that his power only enables him to make one ungrateful, and hundreds his enemies, for every favour he can bestow.

Envy no one. The situation of an independent farmer stands among the first, for happiness and virtue. It is the one to which statesmen and warriors have retired, to find, in the contemplation of the works of nature, that serenity which more conspicuous situations could not impart. It is the situation in which God placed his peculiar people in the land of Judea, and to which all the laws and institutions of this great lawgiver had immediate reference. And, when in fulness of time, the privileges of the chosen seed were to be extended to all his children, it was to shepherds, abiding in the field, that the glad tidings of great joy were first announced. Health of body, serenity of mind, and competence of estate, wait upon this honourable calling; and in giving these, it gives all that the present life can bestow, while it opens, through its influence, the path to Heaven.

For the Farmers' Cabinet.

### Mildew or Blight in the Grape.

THIS disease, for we can call it by no other name, which is so frequently complained of by cultivators of the vine, is the effect of numerous superinducing causes—among which the most important are soil, pruning, the general management, and lastly, the effect of the seasons. A proper choice and preparation of the location of a vine, are quite essential to the successful growth and maturity of a crop of grapes; this should be either dry by nature, or made so by the introduction of a gravelly or shelly subsoil; and though a plentiful supply of moisture is quite necessary to the health of a vine, I have known much injury to result from a general dampness of the soil, making it too compact for the fibrous roots, and impervious to the heat and light of the sun. In regard to pruning, there is generally a want of severity, which even the most practical hesitate to use, but which is best to be done without fear, in order to get shut of the useless wood, and prevent the show of too much fruit for the strength of the vine. This omission is frequently the cause directly of mildew, as it reduces the maturing powers of the root, from their having to be exerted at a greater distance from it, and diffused over such an amount of growing wood. The general management of a vine, under which head, come manure, training, cropping, &c., should be strictly attended to; and the lover of a handsome grapery, and successful crops of grapes, should be referred to *Hoare's Treatise on the Vine*, for distinct and extended information on these subjects. When location, manure, training and fruiting, have been properly attended to, we have almost a guarantee for a crop of grapes; but occasionally there comes an unpropitious season to contend with, and then so many remedies have been recommended to prevent blight, that it is impossible in the limits of this communication to follow them.

Practically, I can remark that I never had the mildew to contend with but twice in the experience of seven years; once manifestly from over-cropping, and the second from three young vines in a rather wet situation, and during a humid summer. Old vines are much more subject to mildew than young, and the best method in this case is to keep the bearing wood as near the main stem of the plant as possible.

Sprinkling flour of sulphur over the plant, or applying strong soapsuds to the branches or roots, is productive of good in some in-

stances: the soapsuds is always beneficial, and can be used freely. T.

Feb. 3, 1846.

### J. Gowen's Letter to Gen. Richardson.

To the Editor of the Farmers' Cabinet:—

SIR,—My attention has just been called to the remarks of your correspondent, H. S., in the December number of the Cabinet, on Mr. Gowen's letter to me. Justice to that distinguished and public-spirited gentleman, seems to require that I should state the fact, that the letter in question was not written for publication, but was a kind reply to some questions I had taken the liberty of putting to him, after a visit to his farm a short time before. It was published at the earnest request of some of our most intelligent agriculturists to whom it had been shown, and has been received with more general approbation, and more extensively read, than any article upon that subject which has been published here within my knowledge.

Whilst I cordially concur with your correspondent in all that he has said in commendation of Mr. Gowen, I think he has fallen far short of the measure of justice due to his letter. Indeed, a fair review would occupy as large a space in your paper as the letter itself. I beg leave, however, to say, that so far from leading me "from the frying-pan into the fire"—or having "shown himself from home in advising a Virginia farmer"—Mr. Gowen has sketched a plan admirably adapted to my own circumstances and the circumstances of others, both in the vicinity of this city and at a distance from market, which, if adopted and followed out with half his energy and spirit, cannot fail of success beyond anything we have yet achieved.

As regards his remark to me, that a farmer cannot grow wheat at \$1 per bushel, it is fully explained where he says, "My remark did not embrace all farmers; it was only applicable to farmers situated pretty much as I am as to soil, climate, and market." And in another place: "There is no particular practice I could recommend that would prove advantageous or applicable to all."

I am by no means singular in the earnest wish that Mr. Gowen was a citizen of Virginia; and I should much regret the annoyance which partial attacks upon his communication to me might occasion, were I not confident that he will feel amply compensated by the substantial good his example and writings are calculated to produce.

Very respectfully, yours,

W. M. H. RICHARDSON.

Richmond, Jan. 15, 1846.

### The Vintage in France.

*Translated for the National Intelligencer,  
from Gaillardet's Letters from Paris, in  
the Courier des Etats Unis.*

Paris, October 6th, 1845.

THE vintage has commenced throughout France. It is a time of frolic and feverish activity in certain provinces, such as Burgundy, Champagne, Bordelais, Roussillon, &c. At this time of year these provinces afford a picture of manners, a few traits of which I will sketch for you, for they are entirely unknown in the New World. America is the favoured land of Ceres, but, hitherto, Bacchus and his green vines have acquired there no right of naturalization.

In Burgundy, as elsewhere, the day for the opening of the vintage is fixed by a municipal proclamation, which is published in hand-bills and distributed through the villages by the sound of the drum. No one is permitted to begin his vintage before this period; the general interest, in this case, gives the law to private interest. The eve of the day fixed upon, the little town of Tonnerre witnessed the arrival of an innumerable crowd of men and women of all ages, coming from the neighbouring towns as well as from the more distant,—they sometimes come ten or fifteen leagues—to exercise their trade of vintagers and basket-carriers. The only tools of the former consist of a flat basket with curved rims, which they carry under the arm or hold by the handle, and a small pruning-hook or knife, with a wooden haft and crooked blade, to cut the bunches of grapes. The basket-carriers, or scuttlers, as they are commonly called, are sturdy young men, with a scuttle, or basket, in the form of a cone, slung upon the back with leather straps; the vintagers empty their baskets of grapes into those of the scuttlers, who, in their turn, empty theirs into a vat or large hoghead, with a single bottom fastened upon wheels. Girls almost monopolize the trade of vintagers. They are preferred to young men, because they are more attentive and receive less wages. Their costume generally consists of a coloured handkerchief, or *marmotte*, which they wear after the manner of the West India mulattresses, wooden shoes, woollen stockings, and a very short fustian petticoat; if the latter were longer, it would draggle on the wet ground when they stooped to cut the grapes. To these two species of the class of vintagers must be added the carters, who hire themselves, their vat, their wheels, and their horses, to transport the produce of the vineyard to the press in town.

A real colony had arrived at Tonnerre, a colony so numerous that all the taverns in the little town would not have sufficed to lodge them. But it is not in taverns that this cohort of natives seek an asylum; at least it is not in the chambers of the tavern, but in their stables and barns, where, for two sous a night, they are furnished with straw *ad libitum*. With this straw they make a bed for themselves, or rather a litter, upon which they all bundle together; the men on one side, the women on the other. The mischievous wags of the town rarely suffer the vintagers to pass their short nights in repose. No trick can be imagined which they do not play them. Sometimes they are roused by the cry of fire, sometimes cold water is squirted over them by means of enormous syringes, sometimes a cat or a live rat is thrown among them. The latter always produces a tremendous uproar. But when the clock strikes three, the whole of this ant-hill suddenly spring to their feet, and, shaking themselves like a flock of ducks coming out of the water, their simple toilet is done. Every one repairs to the great square, which soon resounds with a dismal concert of songs and cries of all sorts. The inhabitants of the neighbourhood, who have no vineyards to call their attention, draw the bedclothes around their heads and avoid the noise, while those who have grapes to gather, dress themselves in haste and go down to the square, with their cotton night-caps on their heads and lanterns in their hands, to make their bargain with such of the vintagers, basketers, and carters, as they may want. The common prices of the day's work varies from ten to twenty sous for the first, and from one and a half to two francs for the second. It is to gain this wretched sum, that parents suffer their young daughters to travel on foot for several leagues, braving cold, privations of every sort, and many perils besides. But it is not on that account the less a fete for all the lads and lasses of the villages; it is a labour in common, mingled with many incidents that serve to enliven and render it attractive, and the country people never absent themselves from this annual harvest of the vine.

As soon as they are engaged by a proprietor, the vintagers of both sexes repair to his house, and there, in the kitchen, they have a breakfast composed of a mutton or veal stew, buns, potatoes, or peas; the whole washed down with that light thin wine from which the English derive the name of *Claret*, (clairet,) given by them to the red wine of France. While the vintagers are at breakfast, the sportsmen, if there happen to be any in the house, put on their hunting-

dress, get their guns ready, and let loose their dogs, which run about in every direction, skipping and yelping with joy. The signal is given, the stirrup-cup is drunk, the vintagers take up their baskets, the *scuttlers* strap on their scuttles, and the troop puts itself in motion. It is composed generally of ten to a hundred, and sometimes as many as three hundred persons, who walk arm in arm. Arrived at the vineyard, the carter, with his enormous vat, stops on the outside, while every vintager, having his section of the vineyard, is put between two of the trellises, and then the work begins. The grapes fall into the baskets as if by enchantment; if there are any small children among the workers, they follow as a rear-guard to glean; that is, to gather the bunches that have been overlooked and pick up the grapes that may have fallen on the ground. A manager or overseer follows the work every where with his eye, urging on the slow, and restraining those who are too rapid to do their work well. The scuttlers, as running porters, are constantly going and coming between the vat and the vintagers. In the mean time, the sportsmen have taken their station on the summit of the hill, and there wait for the game which is roused by the labourers. Shot resounds on all sides, the barking of dogs answer, and at every explosion the vintagers stop their work to look up and ascertain whether the shot has been lucky or unlucky. In the first case they give a shout of applause; in the latter they laugh at the awkward sportsman.

At noon a repast, consisting only of grapes, bread, and cheese, is made upon the grass. At this every one has his *bon mot* ready, and tells his little story. Lovers slap each other with no very light blows upon the shoulders, push each other with elbow or knee, and pinch one another till they cry out. These are the three principal signs among these country lovers; the three principal articles in their code of gallantry. When evening comes, the band return to town in the order in which they left it, and repair again to the house of the proprietor, who distributes to each one his ten or twelve sous and a small loaf, nothing more. With that the vintager sups as he wishes, or rather as he can. Generally, however, from economy, he goes to bed, upon the principle that "he who sleeps dines." This proverb could never have been invented by a restaurateur.

Burgundy, during the season of the vintage, affords one of the most picturesque scenes that can be imagined. Every hill is covered with a moving, motley population. The echoes send back their joyous shouts. All nature seems to enjoy a holiday. The

game alone finds it a season of tribulation. Surrounded on all sides, it wanders here and there, like an exile driven from the domestic hearth. It is to the thrush, particularly, that the vintages are fatal. That species of bird, the flesh of which is as delicious as that of the ortolan, is fond of vineyards, for it prefers grapes to all other food. It eats them in such quantities that it becomes as fat as a quail, and as drunk as—a thrush. The saying is proverbial. But, though they are great drunkards, they ought not to be killed when they cannot stand up; the poor little birds lose their senses entirely, and know not whither to fly. Sometimes they are caught by the hand.

But now, that the grapes are gathered and the vintage over, let us see what remains to be done to obtain the wine. If the grapes are of the white kind, and intended for white wine, they are carried immediately to the press-house. Thus are called the vast barns in which is fixed a sort of press composed of immense beams, which are lowered or raised by means of a screw moved by a wheel, which is turned by ten or twelve persons. Between the upper and lower beams are fixed two wide tables or platforms, on the lower of which the grapes are placed, and as the beam descends these are crushed and the juice flows into a basin. From thence it is poured into scuttles by means of large buckets, and the scuttlers empty it into the casks prepared for it. The residuum of the grapes thus pressed is called lees. The lees become so compact from the pressure, that they are obliged to cut them with an axe. After two or three pressings they are sold to the distiller, who makes from them that peculiar kind of brandy which the soldiers, in their emphatic language, call *sacre chien*.

The grapes intended for red wine, are put into an enormous vat, where they are left to ferment for a week, for it is by fermentation that the juice of the grape, naturally whitish, takes the red colour of its skin. To hasten the fermentation, the grapes are crushed by means of a hammer or maul, and men are sent entirely naked into the vat, where they trample them with their feet. They come out from the vat of the colour of boiled lobsters. This kind of bath is reputed to be very strengthening, and is sometimes recommended to sickly constitutions. When the fermentation is in full activity it boils up with a dull heavy sound, enough to make one shudder. The quicker the fermentation the better the quality of the wine. If the harvest has been bad, they throw common sugar into the vat, which makes it better.

The day on which the grapes are put to

press is a new holiday. Besides the public presses where the large proprietors have their gatherings pressed, there are movable presses, mounted upon four wheels, which are rolled about from door to door, for the use of minor proprietors. As long as the wine runs in a stream into the reservoir, every lover of it has the privilege of drinking as much as he pleases, even to the exhaustion of the contents of the vat, for which purpose a wooden bowl or porringer is left floating on the rosy coloured liquor, at the service of all. The wine merchant takes his taste in a little silver cup, which he always carries about him; it is the tool of his trade. When the pressing is finished and the wine put into barrels, scuttlers and pressers repair to the house of the planter, where an abundant dinner awaits them. At this dinner an enormous leg of mutton occupies the place of honour, and seems to invite the guests to cut and come again. This dish is indispensable, and therefore the day becomes a sort of St. Bartholomew's to the sheep race. The pressers, who often wait upon several proprietors in the course of the same day, particularly if the harvests have not been very abundant, thus get as many meals as they have had customers. They sometimes dine seven or eight times in the twelve hours. Thus they become as fat and as plump as the mutton itself, and have pretty much the same odor. It would not be surprising if their hair should turn into wool.

The casks into which the wine is put as it comes from the press, remain unbunged; that is to say, open, during a certain time, for the liquor undergoes a second fermentation, which throws off all foreign matters and purifies it. During this period the proprietors become wine merchants, and a *bush*, that is to say, a bunch of something green, suspended over the door, indicates that for two sous any one may go down into the cellar and drink at pleasure. Many go down, but few are able to come up again without the help of a friend. The latter, in such a case, takes off his cap or bonnet, and, like Napoleon to the wounded Muscovites, charitably exclaims: "Honour to unfortunate bravery!"

Such are the ordinary phases in the preparation of those wines which many among you, my dear readers, drink without knowing any of the mysteries of their origin. Indeed, many Parisians know as little about it as the Americans.

TAKE counsel of him who is greater, and of him who is less than yourself, and then recur to your own judgment.

For the Farmers' Cabinet.

### The Injudicious Use of Manures.

MR. EDITOR,—Knowing, as I do, that a large proportion of farmers in this country often throw away their manures when they suppose they are using them as they should, I have thought that an article upon this subject would not be out of place.

In consequence of a want of *chemical* knowledge, agriculturists use their manures without judgment or discretion, and oftentimes to their most decided injury, as I shall proceed to show.

Agricultural chemistry teaches us that a certain class of vegetables, such as grain, requires a greater proportion of nitrogen than others. As nitrogen is not a very abundant article with most farmers, and yet of the highest value to the grain grower, it behoves him to make an economical use of it. If he intends to raise a fine crop of good wheat, it is highly necessary that he should not waste that quantity of this element that he has, or that he can get hold of.

All such crops as potatoes, turnips, beets, pumpkins, cabbages, peas, beans, carrots, &c., including clover, herd-grass, timothy, and the other grasses, need but very little of manures containing nitrogen, as they will receive all sufficient from the atmosphere, and rain and snow; while wheat, rye, oats, corn, barley, and buckwheat, need larger proportions of such substances; each differs from the other, however, as to the quantity needed. Wheat, for instance, needs more nitrogen than either of the others, for the formation of the gluten which renders its flour so nutritious. The substances yielding nitrogen most abundantly, are the animal manures, especially the fluid manures, and the dead bodies of animals themselves. In connection with this matter, Liebig, in his work on Agricultural Chemistry, says: "An increase of animal manure gives rise not only to increase in the number of seeds, but also to a most remarkable difference in the proportion of the gluten which they contain." Here we have the highest authority for stating the importance of animal manures.

Those farmers, then, who use their animal manures upon those crops that need them not, thereby depriving their grain crops of them, although they cannot well do without them, in a measure throw them away. Such crops as potatoes, turnips, the grasses, &c., thrive as well when given rotten hay, straw, leaves, saw-dust, or swamp-muck, and such substances, as when furnished with the richest animal manures. They supply their proper food, and with a

right proportion of the right kind of alkalies or alkaline substances, they can dispense entirely with animal manures, leaving them to be used for the grain crops.

Before leaving this subject it will be well perhaps, to say, that *guano* is often very injudiciously used, and the money spent for it thrown away; bringing thereby odium upon what is deridingly called "book farming." The principal constituents of *guano*, different from most manures, are those which peculiarly fit it for *grain*; and whoever uses it for any other purpose, could save his money by dispensing with it and using cheaper and more accessible manures. I have no doubt that many complaints will be made by those who use *guano* upon vegetables, while those who use it on grain, will be well satisfied with its effects. We shall see.

Yours, &c.,  
CHEMICO.

Wilkesbarre, Dec. 9th, 1845.

### The Indian Corn Question.

MUCH attention has of late years been directed in England to the subject of Indian corn, and to the policy of admitting it into that country free of duty. Several of the leading members of Parliament have expressed themselves in favour of such a movement, and a late number of the London Times contains a long article, in which the measure is earnestly advocated. The writer says that Indian corn cannot be cultivated with success in any country in which the ordinary temperature does not rise for at least one month in the summer above 70°, and to arrive at complete maturity it requires a temperature of 75° or 80° for a similar period. The western and southern States of the American Union possess all the requisite conditions of climate and of soil for the growth of this grain, and the result in the States which produce it in the largest quantities is given as follows, in the returns of the Marshals for 1840:

	Bushels of Indian Corn.
Tennessee,	45,000,000
Kentucky,	40,000,000
Virginia,	34,000,000
Ohio,	33,000,000
Indiana,	28,000,000
Illinois,	22,000,000
Alabama,	20,000,000
Georgia,	20,000,000
Missouri,	17,000,000
Pennsylvania,	14,000,000

We pass over the other States, which produce a smaller quantity; but the total amount of Indian corn grown in the United States in 1840, is officially reported to have been

377,531,875 bushels. Nor is this all. We find from the reports of Mr. Ellsworth on improvements in agriculture and the arts, for 1843, that the Indian corn crop of that year was estimated at 494,618,306 bushels, and for the following year, 1844, at 421,958,000 bushels.

Alluding to Indian corn for food, Mr. Ellsworth states that one bushel is perhaps equal to one bushel and three-fourths of barley, or three bushels of oats; while its usual cost in the interior is one-third that of wheat. Upon this, the Times comments as follows:

"There, then, it would seem, is a supply of grain sufficient to feed four times the population of the United States, and to supply a large portion of Europe. What becomes of it? How is it consumed? How does it pay the farmer? How is the land kept in cultivation, when it produces what is apparently so extraordinary an excess of food? Fifty or sixty millions of quarters of grain, said to be almost as nutritious as wheat, in addition to a fair supply of wheat also, are a very extraordinary proportion of food for a population not exceeding twenty millions. But our astonishment is much increased by the statements of the American official tables of trade, from which it appears that little more than one-hundredth part of this prodigious crop has ever been exported to any foreign countries. We must here place the figures themselves before our readers:

Year.	Bushels of Indian Corn exported.	Barrels of Indian Meal exported.
1836	124,791	140,917
1837	151,276	159,435
1838	172,321	171,843
1839	162,300	165,672
1840	574,279	206,063
1841	535,527	232,284
1842	600,308	209,199
1843	672,608	174,354
1844	825,166	404,003

The destination of these exports is the West India Islands, and, in part, our own North American colonies; but it is obvious, that in comparison to the 400 millions of bushels grown upon the soil of the Union, this exportation is imperceptibly small. That vast quantity of nutritious grain is, therefore, by some means or other consumed in the States; and it will be found that a very large portion is devoted to feeding and fattening swine."

The article concludes thus:

"Is it more for the advantage of an American farmer in the western States to transmute his Indian corn into pork, and to make his profits out of fat hogs, or to consign his

grain to an output to be shipped for consumption in Europe or elsewhere? The present small amount of the American exports of these commodities would appear to prove that the home market is preferable to the foreign one, or at least, that the latter is so encumbered with duties that the benefit of a keener demand is counterbalanced by a vast addition to the prime cost of the article before it can reach the foreign consumer. The prime cost of a cargo of Indian corn delivered at Liverpool, would probably not exceed 20s. a quarter; we are even assured that it could be sold there for 16s.; but this is probably an exaggeration, for the average price in New York in 1842, was 55 cents a bushel, though in New Orleans it was 35 cents, and the freight would be about 10*l.* per bushel. But the duty imposed on this grain by the existing Corn Laws of England, is the same as the duty on barley—that is to say, 11s. per quarter, when the price is below 26s., and so on diminishing by the usual scale till the price is 37s. and the duty 1s. This amounts in reality to a fixed duty of 11s., since no such grain is likely to be imported at all at a price above 26s.

“We are persuaded that the abolition of this duty, most absurdly assimilating Indian corn to barley, would be attended with no direct injury to any class in this country, but with lasting advantage to the community. Even in the United States we have seen that the enormous supply of Indian corn does not prevent the rapid extension of wheat-farming; and in this country it would be long before that grain prevailed as a substitute for any portion of our domestic produce, or as a great article of human food. The immediate consequence of its introduction at a low price, would be its application to the fattening of animals, and hence it would confer a direct benefit on the agriculturist; but we have no doubt that it will hereafter be acknowledged to be one of the most valuable productions of the earth, and preferable in several respects to the customary food of many of the people of Europe at the present time. Do we require the hard lesson of public scarcity to conquer the irresolution of a Government, and to correct the prejudices of the people?”—*Bicknell's Reporter*.

For the Farmers' Cabinet.

### Hogs and their trade in the United States and Europe.

TO THE EDITOR,—It is not a little interesting to the political economist to watch the progress, not only of the population in our growing country, but also the rapidly

increased means of subsistence. The theory has been sometimes held up, that the population of the world would keep pace with the means of living. I am not about to examine this broad assertion—but it would seem impossible for us to multiply in *this country* with such rapidity as at all to keep up with the unlimited means which its productiveness throws before us. Truly, when we glance at these means—at the steam-power that is and may be brought into action in our manufactories—at the facilities of transportation on our rail-ways and canals—at every variety of soil, and almost of climate, which we embrace, and the excellency of our civil institutions, we must acknowledge that there is ground for the apprehension, that the destinies of our country are such as history has yet never recorded.

I subjoin the following article, taken from the *Cincinnati Chronicle*, supposing it will be acceptable to the readers of the Cabinet.  
N. C.

THE immense production of hogs in the United States, and the heavy trade in them at Cincinnati, demand something more than a mere superficial view of the transactions, at one point, in order to understand the magnitude and relations of the trade. We can furnish the commercial reader with some statistical facts, which will serve as landmarks in taking a broad view of the subject.

In the year 1839, there were in the United States, in all, 26,301,293 hogs. Of this number more than one half of the whole were in eight States, viz:

Tennessee had	2,926,607
Kentucky	2,310,533
Ohio	2,099,746
Indiana	1,623,608
Illinois	1,494,254
Missouri	1,271,161
Mississippi	1,001,201
Alabama	1,423,873
Total,	14,150,983

The States of Virginia, New York and North Carolina, each have more hogs than Illinois and Missouri; but we have taken the States of the West and the South West together to show the result.

Now, we want to draw two or three inferences from the number of hogs in the several States, before we compare the production with that of Europe.

1. In the first place, hogs are fatted and nearly supported on maize and Indian corn. They exist, therefore, in the several States just in proportion to the production of Indian corn. Now, Tennessee has the most, and

the three States of Tennessee, Ohio and Kentucky, far more than any other three States, of both Indian corn and hogs. The twenty-six millions of hogs in the United States can scarcely consume less than two hundred millions of bushels of corn! They are therefore, the greatest market for that article.

2. If we suppose these hogs to average 180 lbs. each, and to be worth—as they are—\$3 50 per cwt., then this animal alone is, in the United States, worth *one hundred and sixty-six millions of dollars*, or three times the entire cotton crop for the year 1845. The value of swine in the State of Ohio alone, exceeds twelve millions of dollars.

3. It is important to discover how large a proportion of swine are annually killed. There are two sorts of consumption for swine. One may be called the *commercial*, and the other the *domestic* consumption. One is for family use and the other for commerce. Almost every farmer's family kills one or more hogs. This is a constant drain on the increase. But on the other hand the increase of swine is so great that it will exceed in one year the original stock, unless checked. The main inquiry is, how large a proportion of hogs are fatted in order to supply the *provisions* of commerce! In the year 1845, there will have been killed at the various pork packing establishments of Ohio, about 500,000 hogs. About 150,000 of these may be set down as from other States. It is fair, therefore, to assume that commerce consumes about 350,000 hogs in Ohio, per annum. The present stock cannot be much if any under 2,500,000. It follows, therefore, that commerce consumes near about one-sixth part of the stock on hand. We believe that in the United States, generally, this is much too high an estimate; yet the figures in the Western States will show this result very nearly.

4. But suppose the total is really as great as the facts imply, then it follows—a fact of great moment to the packer—that *no safe conclusion whatever can be drawn from the number of hogs killed in one year of the real number of the stock that will be brought to market next year*. This is obvious, if the reader will reflect, that a given stock of hogs will nearly double themselves in one year, and that yet the number of hogs of commerce is only one-sixth part of the original number! This is the great source of the constant errors made in calculating the number of hogs to be brought to market, and the effects on the market. The truth is, the domestic or family consumption is the

great fact, and that we cannot arrive at exactly.

We shall proceed to show the number of hogs raised *proportionably* in Europe and America. We have before us McGregor's Statistics, which contain a table of the agriculture and live stock of Europe for 1828. Since then the population of Europe has increased more than ten per cent., and if we add ten per cent. to the live stock, we shall have the full amount; for this species of stock does not increase in densely populated countries equally with that of other produc-

	Swine of Europe.
Russia,	16,380,000
Austria,	6,050,000
Great Britain,	5,775,000
France,	4,950,000
Italian States,	2,750,000
Bavaria,	1,650,000
Netherlands,	1,540,000
Prussia,	1,645,160
Sweden,	1,320,000
Spain,	1,100,000
Portugal,	770,000
All other States,	2,348,000
Total,	46,278,160

To one who is acquainted with the abundance of swine, and the facility for raising them in the United States, this table must seem extraordinary. It shows that Russia, Austria, and Great Britain, having a population of *one hundred and twenty millions* of people, have only as many swine as the United States with *twenty millions*!

Eight western States, with a population of *six millions*, have as many swine as Great Britain, France, Prussia, and Bavaria, with *seventy-five millions*! *The European States have not enough Indian corn to feed them upon.*

The proportion of swine between the United States and some of the European States, is thus:

United States to Prussia,	6 to 1
“ “ to Austria,	9 to 1
“ “ to Great Britain,	7 to 1
“ “ to France,	10 to 1
“ “ to Spain,	16 to 1

Russia being a thinly populated country, and having the most *mast* has the most swine; but for the converse reason, the southern States of Europe have the least. The United States have six times as many in proportion, as Russia.

The same disproportion extends, but in less proportion, to other animals. If the

people of Europe were a meat-eating people, they could not find a supply in their country. These animals would be killed off in half a dozen years. But they are not a meat-eating people. They live upon every species of vegetable, much as the animals do.

In Ireland they depend upon potatoes. In Scotland, in no small degree, upon oatmeal. Strange as it may seem, thousands of people in Spain and France, live, in a great degree, on chesnuts—a food which is scarcely fit for pigs to eat. In some countries they eat rye, and in Russia they mix all the *bran* of grain, making a very coarse rough bread.

The pork of the western country is chiefly in demand at the Atlantic seaports, for our commercial marine, now rapidly approaching the largest in the world. The adventurous whaler, the hardy fisher for cod and mackerel, the thousand coasters, who sail in every bay and inlet, from Penobscot to the Rio Grande, all, more or less, eat pork. It serves both as butter and meat, with the fish and potatoes which they have constantly on hand.

The demand for American pork, is on the whole, likely to increase; because the class of people who eat it are increasing, and there is no other country to supply the demand.—*Cincinnati Chronicle*.

#### The Grain Crops of the United States.

A LATE number of the London Economist contains quite a long article on the crops of this country. In the course of it some interesting statistics are given. The editor expresses the opinion that at the present time, the only part of Europe which can boast of any surplus grain crops, is the country bordering on the Black Sea, and including the Southern parts of Russia. But the deficiency appears to be so considerable in the countries bordering on the Mediterranean, that but a small portion of that surplus will be available to the eastern part of Europe. Such being the case, the writer turns to the United States with the object of making some estimate as to the surplus of this country. According to the Report made to Congress by the Commissioner of Patents, it appears that the produce of the harvest of 1844, was somewhat less than that of 1843. Various tables are given, and leaving out the years 1840, 1841, and 1842, it is shown that from 1790 to 1800, the average surplus, taking wheat and flour together, was greater than it had been at any subsequent period; while the reduction in the exports of Indian corn has been quite remark-

able. The writer then proceeds to examine the destination of exports from the United States at various periods of time, and says: in 1801, the quantity of flour exported, was 1,102,444 barrels; in 1840, the largest export on record, it was 1,897,501 barrels; in 1843, it was only 841,474 barrels; and the destination of these exports of flour was as follows:

	1801. barrels flour.	1840. barrels flour.	1843. barrels flour.
Brit. N. America	25,452	32,356	190,322
West Indies	497,021	474,385	293,022
South America	—	289,651	285,239
Great Britain	479,720	620,919	19,436
France,	—	73,725	3,304
Spain & Portugal	54,691	1,250	8
Madeira	19,491	3,087	4,506
Rest of Europe	—	13,553	6,958
Africa	—	4,225	5,810
Asia	—	1,035	1,781
Uncertain	26,069	383,115	31,088
Total,	1,102,444	1,897,301	841,474

The exports of wheat and flour to Great Britain during the last *thirty* years, have fluctuated very greatly from year to year; and it may be instructive, as showing the disadvantages under which that trade has laboured, to give them for each year, during the whole period since 1815.

#### Exports of flour from the United States to Great Britain.

	Barrels.		Barrels.
1815	104,885	1830	326,182
1816	5,572	1831	879,430
1817	706,601	1832	95,958
1818	389,530	1833	22,207
1819	51,847	1834	19,687
1820	171,772	1835	5,367
1821	94,541	1836	161
1822	12,096	1837	nil
1823	4,252	1838	8,295
1824	70,837	1839	169,829
1825	27,272	1840	620,919
1826	18,375	1841	208,984
1827	53,129	1842	208,024
1828	23,258	1843	19,436
1829	221,176		

According to the above, whenever an average in Great Britain admitted flour at a moderate duty, a considerable supply was obtained. In 1817 and 1818—in 1829, '30, and '31—and again in 1839, '40, and '41, at all of which periods the duties were low, the amount of shipments to Great Britain immediately increased; but they as rapidly diminished as the duties again rose. There

is just enough here shown to prove what the capabilities of America would be were the market always open to her produce.—*Bicknell's Reporter.*

For the Farmers' Cabinet.

#### Sagacity of an Ox.

CAPT. FREMONT, in the Report of his Expedition to the Rocky Mountains, gives the following:

"Ten or twelve buffalo bulls were seen during the afternoon, and we were surprised by the appearance of a large red ox. We gathered around him as if he had been an old acquaintance, with all our domestic feelings as much awakened as if we had come in sight of an old farm-house. He had probably made his escape from some party of emigrants on Green river; and with a vivid remembrance of some old green field, he was pursuing the straightest course for the frontier that the country admitted. We carried him along with us as a prize; and when it was found in the morning that he had wandered off, I would not let him be pursued; for I would rather have gone through a starving time of three entire days, than let him be killed, after he had successfully run the gauntlet so far among the Indians. I have been told by Mr. Bent's people of an ox born and raised at St. Vrain's fort, which made his escape from them at Elm grove, near the frontier, having come in that year with the wagons. They were on their way out, and saw occasionally places where he had eaten and lain down to rest; but did not see him for about 700 miles, when they overtook him on the road travelling along to the fort, having unaccountably escaped Indians and every other mischance."

Both of these examples show how rapidly instinct and natural sagacity make their appearance, when an animal is removed from the dominion of man. Any one who has seen much of animals, will have observed this in dogs and horses. The above are the two most remarkable examples of this improvement of the faculties in an ox that we remember. The first ox must have been two months' distance from the frontier, six or seven hundred miles, probably. E.

THE POTATO DISEASE.—At the meeting of the Mansion-house Committee, in Dublin, about 200 letters were read. In several it was stated that the disease was checked, while in far the greater number the writers stated that they not only saw no reason to change their former opinions, but also added their further experience as to the progress of the disease.

#### Meeting of the Philadelphia Agricultural Society.

A STATED meeting of the Philadelphia Society for promoting Agriculture, was held on the 4th inst.,—Dr. Mease, President, in the chair.

William I. Leiper and Bethel Moore, were elected members.

The President exhibited some small pieces of silk fabric, of various colours, manufactured in Chester county, during the revolutionary war. It was reeled on a common reel, and wove on the common loom. Considering the time and mode of manufacture, the samples were beautiful.

Mr. James Gowen produced samples of winter and spring wheat, grown by him; the quality of both were excellent.

The following named gentlemen were appointed a committee on publications, viz.: A. L. Elwyn, M. D., Rev. A. Moore, and Mr. Kennedy.

A letter was received from T. J. Corbyn, veterinary surgeon, which was read and ordered to be published.

From the minutes.

AARON CLEMENT, *Rec. Sec.*

Feb. 5, 1846.

#### To Improve Pear Trees.

At a meeting of the Philadelphia Society for promoting Agriculture, held on the 7th ult., Samuel C. Ford made the following statement as to his method of improving the fruit of the pear tree. He said: From experience, I can state the advantage to be derived from the application of iron to the roots of pear trees. It is known to all naturalists that iron enters largely as a component part into the fruit of the pear tree; and as many of our choicest varieties have very much deteriorated, I feel it a duty to state that my fruit has been much improved, and some that were almost worthless, restored by the following application:—During the winter, when the frost will admit, I have my trees dug round to the distance of three feet, baring the upper roots, and then have applied a bushel or more of cinders from a blacksmith's shop—old iron would be better. This oxidizes by the rains of the season, and is taken up in the sap as it ascends in the spring. This is a simple experiment, and one that will be highly prized by all the lovers of fine fruits.

Extract from the minutes.

AARON CLEMENT, *Rec. Sec.*

Philad., Feb. 2, 1846.

SCIENCES are locks, and inquiry the key to them.

## Raising Turkeys.

Soon after the turkey-poults have acquired their first feathers, they are liable to a disease which is very fatal to them, if not attended to. This distemper produces great debility, and the birds appear languid and drooping, and almost totally neglect their food. Their tail and wing-feathers assume a whitish appearance, and their plumage has a bristled aspect. This is occasioned by a disease in two or three of the rump-feathers. On examination the tubes of these will be found filled with blood. The only remedy for this disease is to pluck them out, when the bird will speedily acquire its wonted health and spirits.

In fattening turkeys for the table, various methods are resorted to. Some feed them on barley meal mixed with skim-milk, and confine them a-coop during this time; others merely confine them to a house; while a third class allow them to run quite at liberty; which latter practice, from the experience of those on whose judgment we can most rely, is by far the best method. Care should, however, be taken to feed them abundantly before they are allowed to range about in the morning, and a meal should also be prepared for them at mid-day, to which they will generally repair homewards of their own accord. They should be fed at night, before roosting, with oat-meal and skim-milk; and a day or two previous to their being killed, they should get oats exclusively. We have found, from experience, that when turkeys are purchased for the table, and cooped up, they will never increase in bulk, however plentifully they may be supplied with food and fresh water, but, on the contrary, are very liable to lose flesh. When feeding them for use, a change of food will also be found beneficial. Boiled carrots and Swedish turnips, or potatoes mixed with a little barley or oat-meal, will be greedily taken by them. A cruel method is practiced by some to render turkeys very fat, which is termed cramming. This is done by forming a paste of crumbs of bread, flour, minced suet, and sweet milk, or even cream, into small balls about the bulk of a marble, which is passed over the throat after full ordinary meals.—*Farmers' Library.*

LIME has been used in agriculture many hundred years, and on every variety of soil, and always with beneficial effects, when judiciously applied. In England, recently, large tracts of country, which had been rented with difficulty at 5 shillings per acre, have been rendered worth 30 or 40 shillings per acre, by the application of lime alone.

## Irrigation of Gardens.

WE do not know that this has ever been practiced systematically or on an extended scale; although there are certainly facts enough to show its advantages. The practice of the Dutch gardeners in freely and constantly watering many of their vegetable crops, and their consequent fine growth, are well known. During the present season we had a row of red Antwerp raspberries which exhibited the same influence in a strong light. A part of the row stood under the eaves of a woodhouse and on the north side of the building, and another part stood in open ground, away from the drippings, but from its advantageous position was subjected to much freer cultivation. But the influence of the water from the roof upon the plants was very striking throughout the summer, and at the present time—mid-autumn—these are at least triple the size of the others in open ground.

S. Williams, of Waterloo, whose garden was clayey, during the dry hot weather a few years ago, let in the water through small gutters, between the hills and rows of vegetables. "Its genial influence," says he, "was instantaneous; in ten days, my early potatoes grew two-thirds in size; in fact, I had never been able to get anything like a fair yield of potatoes in this garden before. Cucumbers grew equally fast; even beans and marrowfat peas bore testimony to its quickening power." McIntosh mentions another case of the benefit of water upon strawberries. Strawberry-beds, three feet wide, were kept watered by trenches between them, about nine inches wide, the trenches being lined with brick, forming four-inch walls on each side, and the depth equal to two or three courses of brick. They were laid without mortar, and were for the purpose of preserving the sides of the trenches and for neatness. Water was supplied by a pump, when the ground was dry and the plants were in fruit. "A much greater crop was thus obtained, and the plants continued bearing much longer than in beds where there were no trenches for water." This was in the cool and moist climate of England. How much more striking would the results be in this country.

There is not the slightest question that where water is at command, either from streams, ponds, by pumping with hand or elevating by wind, the finest results would be produced. The water might be distributed by means of trenches, as already described, or by hose furnished with a nose like that of a watering pot: the latter would, doubtless, be much the best and most conve-

nient. A very small pipe would be sufficient. Water containing foreign matter, would, of course, be more enriching than pure water. Those who will try the experiment thoroughly, should make the necessary preparations now, at this comparatively leisure season of the year.—*Cultivator.*

For the Farmers' Cabinet.

### The Prouty & Moore Ploughs.

MR. EDITOR,—Your correspondent, S. M. Stapler, has entirely misunderstood the business of the meeting of the New Castle Society's Ploughing Match. It was not for the trial of ploughs—for there, that question had repeatedly been decided, in favour of the Prouty Plough—but for the *ploughmen*. Hence, the committee, in their report, are made to say, they give no opinion on the merits of the ploughs; consequently the case stands precisely as it did the past year, when the Prouty Ploughs swept the board, taking three premiums of \$10 each. And to show that such is the fact, it is only to observe the result of the trial of the lads; when, in the absence of strength and skill in the holders, the Prouty ploughs again carried all before them; leaving not a doubt that if a third premium had been awarded, it would have been given to the third Prouty plough, in the hands of Mr. Jackson's eldest son. And at the Philadelphia meeting, the same plough received the first premium for "the best plough," as it had often before done. Your correspondent is not more fortunate, when he supposes that Mr. Holcomb has come over for the Moore Plough, in consequence of a preference for it. This is not the fact; as, for three years past, he has not ceased to acknowledge the superiority of the Prouty Plough to all others: the committee on ploughing the last year declaring, by their chairman, "that it did not require half an eye to come to that conclusion." No, but this he has done, in obedience to a law of the Home League Society, by which he considers himself bound to protect "home manufactures"—a step that had long been urged upon him, and to which, it appears, he has at length submitted. But with much deference and respect, I would take leave to remind him, that the Boston people, where these ploughs are made, took 150,000 bushels of Delaware corn and grain from three ports on the Delaware, in about three months of the year 1843; while the amount of Delaware oak plank, shipped for Boston in the year 1845, for ship building and other purposes, was over 200,000 feet; and that the amount for castings obtained of our citizens, Messrs. Hollingsworth, Harvey & Co., for

their Philadelphia house, the past year, will not amount to much less than the sum of \$1,500.

I consider your correspondent's allusion to "the response of the spectators on the decision of the committee," unfortunate; it is a double-edged weapon, dangerous to wield; for although the competitors are bound to submit to the decision of the committee, the spectators sometimes take the right to contest it; and that they did so on this occasion, is well known.

Perhaps one of the most complete triumphs of the Prouty Plough was at the late Philadelphia meeting, where she again carried off the first premium, as "the best plough;" and yet it is asserted by one of the competitors and a spectator, that this was done by a single vote;—true, but to compare small things with great, like the *single vote* which elected Washington to the first presidency, it was *unanimous* in its favour. And here again, the very great superiority of the Prouty Plough was most manifest in the hands of the young son of Mr. Jackson, whose management and work, but little inferior to the best, and superior to most of the other competitors, called forth the applause of the spectators, and a gratuitous award of a premium of \$3 from the committee; with, or I am much mistaken, the sale of a hundred such ploughs as can be entrusted to the hands of a child ten years of age, to execute the most perfect work imaginable, in the thorough cultivation of the soil.

In conclusion, I would point your correspondent's attention to the report of the St. George's Society's committee, Delaware, who declared their inability to award the first premium for ploughing to the Prouty Plough, "seeing she was so perfect as to require no holder;" and to the late decision of the Prince George's Society, Md., who pronounced her ineligible for competition, "seeing that she had already obtained the highest testimony of approbation, the award of their first premium, for the best plough for all purposes."

OBSERVER is indebted to your correspondent, S. M. Stapler, for a most appropriate name for the Prouty Plough; let it henceforth be denominated, "The Corn Breeder;" for so it assuredly is. M.

Wilmington, Del., Jan. 20th, 1846.

THE waste manures of the farm consist of the liquid, or drainage from the cattle sheds, manure heaps, and house; the gaseous evaporations from the manure yards; and vegetable and animal refuse, &c. One great object of the farmer should be to save all these.

### New Jersey Horticulture Society, Burlington.

At a meeting of the New Jersey Horticultural Society, held in Burlington, on the 14th instant, the undersigned were appointed a committee to prepare an Address to the people of New Jersey, setting forth the objects of the Society, and its claims upon the public for support.

The Society was commenced two years since, its object being the improvement of the produce of the garden and orchard, and the promotion of a taste for horticultural pursuits. It now numbers upwards of one hundred members, has awarded during the past year \$250 in premiums, and being now clear of debt, is encouraged by past success to offer upwards of \$300 in premiums for the coming season, a schedule of which is annexed. The fund from which these premiums are paid, is derived solely from the annual fees of members and the fees of admission at exhibitions. It is therefore dependant upon the public for its support, and we call upon all classes of people to give their aid to an institution, in the objects of which all are interested, and of which it may be eminently said, that it can have no other object than the public good. We say "all classes of people," because there is certainly no one, whatever may be his occupation, who is not directly interested in the improvement of the fruits, vegetables, and flowers, which contribute to the comfort of his daily life. The objection has been made, that a Society for the promotion of Horticulture alone, is too exclusive in its objects. To this, we reply, that the cultivation of fruits, flowers, and vegetables, constitutes a branch of agriculture so distinct, and in this State especially, is a source of revenue of so great importance, that it is worthy of especial promotion. In the absence of other statistical information, it may be stated that by the census of 1840, the proportion of persons in New Jersey engaged in Horticultural pursuits, compared with Massachusetts, was as six to one, and with New York, nearly as three to one. Indeed, by her situation, New Jersey seems intended for the garden and orchard of the cities and towns to which her products are so easily sent. Her soil and climate are eminently adapted for the growth of horticultural produce, which already forms one of her principal sources of income, and is yet capable of great improvement and increase.

It is the object of the Horticultural Society to develop these resources, and it is hoped that this call will meet with a response from all parts of the State. Any one

wishing to become a member of the Society, may do so by forwarding to the Treasurer, Ira B. Underhill, of Burlington, the sum of one dollar, and stating his full name, place of residence, and profession. As soon as his name is entered on the list of members, a certificate of membership, together with a copy of the Constitution of the Society, will be sent to him by the Secretary.

The stated meetings of the Society are held on the second Wednesday of each month, and premiums are offered for such articles as are in season.

The annual exhibition in September, is to be held this year at Princeton, and it is the intention of the Society to change the places of exhibition from year to year as they may see fit.

The officers of the Society are appointed annually in the month of June, and are at present as follows:

*President*—Richard S. Field, of Princeton.

*Vice Presidents*—Rt. Rev. G. W. Doane, of Burlington; John S. Chambers, of Trenton; Hon. Wm. Wright, of Newark; Wm. White, of Lawrenceville; Roswell L. Colt, of Paterson; John S. Van Dyke, of Mercer.

*Treasurer*—Ira B. Underhill, of Burlington.

*Recording Secretary*—Wm. W. King, of Burlington.

*Corresponding Secretary*—Horace W. S. Cleveland, of Burlington.

In conclusion, we earnestly repeat the request to every citizen of New Jersey to send us his name.

HORACE W. S. CLEVELAND,  
WILLIAM W. KING,  
IRA B. UNDERHILL,  
*Committee.*

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For the Farmers' Cabinet.

#### Lime.

As the question as to the advantages of lime is now determined on all sides, it may not be very interesting to the practical farmer to go into any examination of its merits as a manure, but there may be some men of this class—and there may be many but recently engaged in agriculture—who would like to know something as to the theory of its operation—as to the time when it should be used—as to the manner of using it—as to the quantity—and as to the kind of soil on which it should be used. All these are matters of great moment to cultivators of the earth. Nature appears to indicate the value of lime, by putting it in some form into all soils capable of being cultivated.

All we have to do then, seems simply to continue by artificial application, what she designed should never be absent; and in this way to renew that which has been removed and exhausted by cultivation. Directed by this simple fact, the farmer must proceed next to determine as to the other points that we have mentioned, as being matters of importance. Lime has both a physical and a chemical action. By the first of these it divides soils and opens them to the influence of the air and moisture; this is one of the sources of its value as an application to clay grounds. By its chemical action it decomposes or hastens the decomposition of the humus, and renders it capable of being absorbed by the most minute fibres of the roots of plants; and is also supposed, by the carbonic acid it contains or draws from the atmosphere, to act specifically on some plants, and supply them with nourishment, or it may be that there are plants which require carbonic acid for their active growth and vegetation, and thence display in a more marked manner the effects of lime, when receiving from it an additional amount of nourishment. Johnson, in his *Agricultural Chemistry*, says:—"The results of all the chemical examinations hitherto made in regard to the nature of the inorganic matter contained in the sap and substance of plants, indicate—if not the absolute necessity of lime to the growth of plants—at least, that in nature all cultivated plants do absorb it by their roots from the soil, and make use of it in some way in aid of their growth." Admitting the entire truth of this statement, it proves that lime is indispensable to a high degree of fertility and luxuriant vegetation, and that without it, land must become less and less productive, until it sink to absolute sterility. This remark is intended to apply to cultivated grounds alone, where crops are every year taken from the ground, and the lime it naturally contains, in this way removed, while no artificial addition is made. As to the quantity of lime that should be thrown on land, there seems no fixed rule. We have never heard two farmers agree on this point, each one, no doubt, being influenced in his opinion by his own experience, and not by any general principles or observations. From forty to a hundred bushels to the acre, appear the quantity between which farmers in general vibrate—some asserting very positively that the first amount is enough, while others with equal strength, say that no advantage can be derived from less than a hundred bushels. Both these opinions may be correct, if the circumstances under which the application is to be made are considered;

but we reach no conclusion and attain no principle to guide us, as a general rule. It is necessary, in the first place, to know the character, condition, and circumstances of the soil, to which the application is to be made. Newly cleared land, containing, as it must, the vegetable deposits of years, perhaps of ages, will bear a very large dressing of lime, as there is an immense amount of vegetable matter for it to act on; the whole of which it dissolves, and fits it, more rapidly than would be done by the slower process of natural decomposition, to become the richest and most lasting of manures. Of course, land the next best suited for the reception of lime, will be that containing a large portion of vegetable matter, though not equal to that of recently cleared ground. Soils containing clay, will bear far larger dressings with lime than the sandy; while newly drained ground and marshes seem to require the very largest and most frequently repeated applications; and next to these, those that are by farmers known as sour soils, which contain a quantity of some of the acids that exist in all soils, and are extremely prejudicial to vegetation when too abundant. We have little doubt that the situation of our fields must be considered, whether on low or high grounds, or whether exposed to the north or south. In a climate like ours, with a scorching summer sun, the sides of hills lying to the south, will in seasons of drought, suffer extremely; while those to the north will hardly feel it. This may have been observed in Chester county during the last two summers. As a general rule, those fields with a southern exposure, and which have the whole force of the sun through the hottest part of the day, should, it appears probable, have less lime thrown upon them than those to the north. These last would be cooler and moister in such seasons, and have a considerable advantage over the others; but taking a number of years together, those to the south, from having the full influence of sun and air, and greater equality of temperature, would be the most productive. But as it is impossible to anticipate seasons of drought, the farmer, as a general rule, cannot do otherwise than manure all his fields alike, without regard to their situation, or whether they lie to the north or the south; but if there is any truth in the remark that we have hazarded above, then he will know how to govern himself. Still the question returns on us, as to the quantity we ought to apply. We may evade, by as many negative circumstances as we please, the clear and straight forward reply to this question, still we have to meet it, and who is there that can answer it? It

seems one of those questions to which no one can give anything but an evasive reply. No matter to whom the question is put, whether to one even who has had the experience of a life in agriculture; he can give you no other answer than that it depends on the quality and condition of your land; and this leaves you exactly where you were before the question was asked, so that if you happen to be engaged in agriculture, and somewhat new to the business, you must grope your way as well as you can, throwing the lead along the shore of your doubts and conjectures, till experience at length puts you fairly afloat. A few general principles are all that can be offered to guide the young agriculturist. We have already given them, and he may rest assured that very few, unless they have been precisely in his circumstances, can do more for him. But in this question of quantity, there is another involved of almost equal importance; and here will be found the same difficulty in giving decisive and determinate replies, as in the case of quantity; it is as to how often lime should be applied, whether in large quantities, at long intervals, or in smaller amounts, at short intervals. We have very little doubt that the last is the best mode of proceeding. But we must be understood only to speak generally, as particular circumstances must be met by particular modes of action. If one clears a piece of ground where there is a large amount of undecomposed vegetable matter, he may and ought to throw on a large dressing of lime, and if this land is not cultivated, but remains in grass, used, we mean for grazing alone; then it will not require more for several years; but if crops are taken from the ground, then we are under the imperative necessity of replacing at least as much as we withdraw. From these remarks we can draw two general conclusions, the one, that on a virgin soil we may put a large dressing of lime, and be perfectly sure that we are doing right; while on land under cultivation, we need put no more than will preserve its fertility. Also, that in the first case, the liming need not be repeated for a long time, while in the other case a heavy dressing at first is unnecessary, and that the liming had better be at short intervals, and not in large quantities. We are inclined to think from what we have seen and know of the management of land in this quarter, that too much lime is generally put on, or perhaps it would be fairer to say, too much in proportion to the barn-yard manure used. Besides regarding lime as a nutriment to plants, and a necessary aid to their vegetation, we must also

regard it as more or less of a stimulant. The not keeping this in view, has, we are disposed to believe, occasioned a good deal of the murmuring and disappointment that may be heard not unfrequently expressed, as to the effects of this agent. Lime requires something to act on, or it will be of very little use. In long cultivated soils, in which the organic matter has been exhausted and not returned by farm-yard manure, lime will do more harm than good, or to state the thing more strongly, it will lead to barrenness. It is in this matter of barn-yard manure, that our farmers in general are deficient. They do not treasure it with sufficient care, or attempt to increase it with sufficient industry, and the little they have they spread over far too much ground. This carelessness not only tells upon the crops, but leads to dissatisfaction in the use of lime. From there not being vegetable matter enough in the ground for the lime to act on, it of course fails and disappoints, and spends much of its force in stimulating instead of fertilizing; thence we are driven to the conclusion, that our farmers use lime too liberally and too frequently, and that it would be better, while they remain inattentive to their barn-yards, in filling them with the means of enriching their lands, either to put on less lime, or to repeat it at longer intervals.

The practice of England will be no guide to us in this matter. There they throw two and three hundred bushels on the acre, and find an advantage in it, probably from the clayey nature of the soil; while in France, sixty or seventy bushels, repeated every seven or eight years, are thought enough. In other parts of Europe, less than this, and at intervals of ten and twelve years, is found to place and preserve the soil in a fertile condition. So that as we have already said, the practice of others, whether individuals or nations, will not assist us, or but very little, unless there is an analogy in the circumstances. It would be a matter of interest to know how much lime is withdrawn from the land every year. If we could ascertain this with certainty, or any thing approaching it, then we should be able to tell how much lime was wanted each year, and whether it would be better to apply it at long or short intervals. One thing we presume will be conceded, that land only requires a certain quantity of lime to bring it to the highest degree of fertility that is possible by the means of this agent. Now, who shall decide whether this shall be attempted by applying one hundred bushels to the acre, and in this way aim at success by a bold effort, or whether we shall undertake it by

a more gradual process. If the first quantity is thrown on, the land receives a surfeit, from which it does not recover for sometime; in other words, it takes sometime for so large an application to be assimilated with the soil, while with a smaller amount we gain the same end as rapidly, if not more so, and far more prudently, for we feel our way, and watch the progress of our land towards the degree of fertility we are endeavouring to reach, and in this way mark the action of the manure, and study the capacity and condition of our land.

We presume that one of the sources of complaint against lime, comes from its not showing its effects with sufficient rapidity to please the hurried and excited hopes of those who apply it, and it is perhaps for this reason that they heap on large quantities to meet their impatient expectations.

It is seldom, if ever, that this agent takes the trouble to try to make itself popular by acting in a hurry. It has, in the first place, to make the acquaintance of the new friend to which it is just introduced, and it may be a considerable time before their tastes are found so congenial as to admit of the reserve and hesitation of a first approach, ripening into the warmth of friendship. Two or three years may pass over—in one case we heard of five—before much effect is observed. But then during this period of apparent inertness, it is very far from doing nothing. On the contrary it is hard at work, acting upon all the materials about it worthy of its notice, or destined by nature to aid it in the great end of cultivation. These may not, however, be in a state to be easily and rapidly affected by the lime. Much will depend on this, not perhaps as to the ultimate purpose, but as to the effects of the application being more or less immediately perceptible; and if its influence were rapid, it is clear that the intervals of its application must be short. While one of the great recommendations of this material is that after a sufficient quantity is put on the ground, the farmer may fold his hands and mark how beautifully it will unfold the fertilizing and rich qualities of his soil.

There is one argument against the use of large quantities of lime at a single dressing, unless when authorized by circumstances, and in favour of small amounts at short intervals, that is perhaps worthy of notice. Every one who has seen fields ploughed that have been limed, must have remarked the very considerable quantity remaining below the surface, and at some depth. Is not this an indication that more has been put on the ground than was of any use—more than the soil could employ? and if so, this portion is

thrown away, for it lies on the subsoil, out of reach of all crops, and putting at a very sullen defiance all cultivation, unless we turn it up by deep ploughing, and with it the virgin soil on which it rests; a practice, that although eminently useful, most farmers oppose. A superficial working of the earth is more to their taste—by which predilection they lose this manure, that has fallen some six inches or more out of their reach, and we have little doubt some portions of other dressings, that have subsided until they came upon a compact inert subsoil, that did not allow of any further action. Lime, as well as other manures, must be near enough to the surface to be acted on by the atmosphere, and where it has gravitated towards the centre of our orb as abovementioned, it is beyond the influence of any action or agent known to man. In the remarks that we have made, we have had to encounter great varieties and great differences of opinion; in the few that now remain, there will probably be very little difference of opinion to reconcile. In the application of lime, the first great and indispensable end to secure, is its complete incorporation with the soil. To effect this thoroughly, the lime must be in a state of very fine division, as chemical action takes place only slightly and imperfectly, where the particles of bodies are not as minute as it is possible to make them. The manner of making the application is therefore of great importance. Our mode of doing it is, it has appeared to us, somewhat too careless and inartificial. The throwing it from a cart, very often, as we have seen, in a high wind, is a mode of distribution far too slovenly for any one who wishes to attain the character of a neat and careful farmer. It must in this manner be far too unequally distributed. The throwing it in heaps, and then spreading, is no doubt far preferable; it may take more time and labour, but does it not secure the object every farmer has in view. But what would be better than either of these common modes of spreading this manure, would be some machine on wheels, or attached to a cart, that would dust our fields as it moved along: an invention of this kind would distribute it equally over the ground and tell the farmer the exact quantity that he had used. It seems a prevailing opinion in parts of Europe, that lime is of much more use when thrown on a fallow, than when put upon the sod; and we have no doubt that it effects one important object, better in this way than in the other—that of extirpating weeds. A good deal of labour is necessary in this mode of cultivation; after the land is fallowed and harrowed, and tho

lime spread, it is then harrowed again, and then ploughed with a very shallow furrow, to bury the manure. A. L. ELWYN.

Feb. 2nd, 1846.

From the Massachusetts Ploughman.

### Report on Farms.

It is plain matter of fact statements like the following, that are valuable to the practical man on his farm. The farmer manages, perhaps, as well as he knows how to do, and yet finds that his success is not such as it ought to be with his means: he looks around him inquiringly of his neighbours, and observes closely how they operate who are apparently more successful than himself; and, of course, if he be intelligent and shrewd, forthwith adapts his course more in accordance with theirs. The man who is indifferent to the lessons taught him by his more enterprising neighbours, will probably improve neither his farm nor his fortune, while he who is constantly on the look-out, will do both.—Ed.

### To the Committee on Farms:

GENTLEMEN,—Before the first of July, I had no intention of inviting you to visit my farm, but then learning that there had been no entry which would secure a report from you, I was unwilling that the Society should lose the benefit of a report, for I think that farmers derive their best hints from the observations and experience of practical farmers embodied in such reports.

I am far from thinking my management the best, or among the best, but as it has fully answered my reasonable expectations, I will as briefly as possible state it.

My farm has a great variety of soil, but the cultivated lands are mostly a gravelly loam. I have about fifty acres in mowing, tillage and orchard; twenty-five acres of meadow, one-fourth of which is peat; seventy-five acres in pasture, and several tracts of woodland. I formerly planted from seven to ten acres each year, but I have found it more profitable to raise hay than corn or potatoes: this last June from thirty cwt. hay delivered in the barn, I received in my grain bins forty bushels of yellow flat corn; the hay cost me in labour and all fair charges twelve dollars; to raise the corn would have cost me twenty-five dollars at least.

By recurring to my journal, (for I have long kept a sort of diary in which I have noted the employments of each day, the time of planting, hoeing, harvesting, the amount of crops, the cost of animals, current receipts and expenditures, &c.) I find that since the first of April, I have expended for labour two hundred and five dollars, and one-third of this has been in making walls, ditches, and permanent improvements. I have kept two pairs of oxen, one horse, and ten cows; one pair of oxen which two years ago cost me

fifty dollars, I have sold to the butcher for one hundred and five dollars; four cows, which cost forty-three, I have sold for seventy-eight dollars, and I have received in exchange of cows thirty dollars. I have kept no account of the milk and butter used and sold, which has been less than the usual quantity. I have four fat swine worth seventy-five dollars, which one year ago cost six dollars; their manure has paid for all the grain they have consumed. I have raised one hundred and fifty-eight bushels of corn, ninety-five bushels of oats, thirty bushels of rye, and one hundred and twenty bushels of potatoes; of carrots, turnips and beets, about two hundred and fifty bushels, and of other vegetables and fruits an abundance. Some years I have had three or four hundred bushels of good apples, this year not more than thirty. I have cut thirty-one tons of English hay, which was made and secured with fifty-five days' labour. I used a horse-rake, which paid for itself in one week; my crop was diminished by the drought from one-fourth to one-third. My meadow hay was a fine crop, and got in good order; I have sold twelve loads of meadow hay and straw, and have by estimation fodder enough, corn fodder included, to keep my stock, and some twelve or fifteen tons to spare. I have carried to market twelve cords of wood, always taking a return load of manure. I purchase commonly about forty-five dollars worth of manure, which I never use without composting. I have used for planting, sowing and top-dressing, 280 loads of compost.

In the barn-yard and pig-pens I make about one hundred and ten loads, and at leisure times get out peat muck, and cart it into the field where it is to be used. I then mix one cord stable or barn-yard dung, preferring the stable, with four cords of muck; after lying till the heap heats, it is again thrown over, and a few feet of fresh dung or spent ashes added, if necessary. I have found this compost better than clear manure, and equal to anything except pig manure for corn and potatoes on gravelly or sandy loams. I have now on hand more than one hundred loads of this compost, besides a good supply of the barn and pig-yards, and I could not farm without it. With this kind of manure I this year had sixty bushels of corn to the acre, without any extra labour or care,—one-fourth of an acre produced at the rate of seventy bushels, and I raised fifty-five bushels of oats on one acre; no great yields certainly; but the expense of cultivation, too, was moderate. All the land on which I have this year raised potatoes, corn and oats, has been since ploughed, manured, and laid down with rye and grass seed, with the exception of one

acre of meadow, which in April I sowed with oats and grass seed after spreading three hundred lbs. of guano; the oat straw was very rank, and the grass has started handsomely. I have tried guano, salt, saltpetre and ashes, this season; but I forbear to speak further of results, because you, gentlemen, have seen them, and will determine for yourselves.

My corn land I usually plant but one year; it is always ploughed in the fall, because the team is in better condition for work, more vegetable matter is ploughed under, and the soil sooner becomes mellow. I have practised ploughing in August or September for rye; laid the furrow flat, rolled it, spread on from twenty-five to thirty loads of compost (thirty bushels to the load), harrowed well, then sowed one peck of herds grass and one bushel of red top, brushed it, and then laid all smooth with a loaded roller. My rye and grass have always done well; the straw selling from seven dollars to ten dollars per acre, and the grain bringing ten per cent. more than the southern. Directly after taking off a crop of hay, early in July, I have inverted the sod, rolled, harrowed in a good deal of compost, sowed one peck of millet to the acre, brushed, then sown grass seed, clover, herds grass, red top, and brushed and rolled smooth. I have never failed of getting a ton of millet fodder to the acre, and when the frost has delayed for about seventy days from the time of sowing, thirty or forty bushels of millet seed to the acre, and the next year and for several years a good crop of hay. But it is not prudent to sow millet after the tenth of July, on account of the frost; it should not be sown before the middle of May; best sown in June. In August I ploughed two acres of land, which was this year mowed; rolled it flat; spread sixty loads of compost, harrowed it well, sowed one-half bushel herds grass, and two bushels red top, then brushed and rolled it smooth: this process has always succeeded with me.

In planting my corn the present season, instead of cross-furrowing, I ran the plough but one way, and not so deep as to disturb the sod, nearly filled the furrows, which were four feet distant in part of the field, with my common compost, in part with pig manure, then dropped the kernels in the furrows, six inches apart, and covered, leaving the surface of the ground even; in May went between the rows with the cultivator and hoe, and again the last of June, but making no hill; and this, with the exception of pulling by hand a few weeds, was all the culture. The crop, as you witnessed, was clean and heavy.

In October, 1842, I ploughed three acres of field land, which had been in grass five years, and rolled it. In May following, harrowed it and spread seventy loads of compost, which was well harrowed, then marked the hills four feet apart each way, dropped the corn and covered; in June went through with the cultivator and hoe, and late in July sowed grass seed among the standing corn, went through with the cultivator and hoe, making no hills; in October, the corn was cut up close, and the ground rolled with a loaded roller. On one acre I had one hundred and two baskets of good corn, and the crops of grass have been fair. I have since followed this plan with better success, when I have used more and better compost.

I have this year let five acres of meadow and three pasture lots. I have top-dressed my reclaimed meadows with a compost of loam and warm manure, and have further extended my experiments in reclaiming meadows. I have attempted some improvements on bushy and mossy pastures, which now promise well; on these I have sown winter and multicole rye, with some spurry and common grass seed.

If I have raised no large crops, the expense and labour have been moderate; and I have the satisfaction of thinking that my farm is in an improving condition.

DANIEL P. KING.

Danvers, Nov. 4th, 1845.

For the Farmers' Cabinet.

### "The Prouty Plough breeds Corn."

In the last Cabinet, S. M. Stapler, of Newport, Delaware, finding the committee on the ploughing match at the Chester and Delaware County Agricultural Exhibition have nothing to say for themselves, volunteers his services to defend them from what he is pleased to call the "censure cast on them by Observer."

The proprietor of the Moore plough, as well as the committee, are under obligations to him for this; for although he has given us no new light on the subject, or made any new issue as to the real merits of the ploughs in question, indeed rather avoided the point of difference between their respective advocates, yet he has done what he could, and is therefore entitled to their thanks.

I, for one, should be entirely willing the Moore plough should take all the premiums for "smooth work" at ploughing time, if I can get the premium for the crops, as with the old motto, "the proof of the pudding is in the eating," so with ploughs, let us judge of them by their effects on the crop, and after trying them. No matter how the work may

look immediately after ploughing, the question cannot be fully tested till the gathering of the crop.

In my former remarks, I intended no censure on the Moore plough particularly, nor on the committee. It no doubt is an excellent plough of its kind, and any committee would probably make the same decision, if they had never used the Prouty plough on their own farms. S. M. Stapler says, if they were unacquainted with the "peculiar merits" of the Prouty plough, so they also were with those of the Moore plough, except the work before them. Granted. But then I have contended that these "peculiar merits" are to be seen in their effects afterwards, and not at first sight of the work.

Any farmer who has used the Prouty plough and any other plough on his farm for a single season, will see the *difference* in the more complete pulverization, in the freedom from clods, and facility for thorough stirring, and harrowing; and in the same degree as these are advantageous in the cultivation of the ground, and growth of crops, particularly in dry seasons, will be acknowledge the superiority of the former. Such persons, and such only, are competent to judge of its merits. The Prouty plough claims a preference altogether on different grounds from any other plough; and if the contest at ploughing matches is, which will make the "smoothest work," she had better never enter for a premium. The case is the same as if two cows were offered for premium at an exhibition, the one valued for milking properties, and the other for feeding. The committee might give the latter the premium, but it would not detract in the least from the merits of the other. Her owner might say, I offered my cow as a milker; she has no pretensions whatever for feeding. So with our plough. It is not pretended at all that she will make "smooth work," turn over an unbroken furrow, and present to the action of the sun and air a glazed and hardened surface; and notwithstanding C. P. Holcomb has "come over," and ordered several Moore ploughs, it will hereafter be generally acknowledged, that unlike "Rohan potatoes, sugar beets, and Dutton corn," the Prouty plough has been written *under* instead of *above* its true merits. It will be found that it will not only *breed corn, but potatoes, wheat, rye, oats, buckwheat, clover*, and every other crop that depends for vigour and productiveness on good tith and scientific cultivation.

As regards Paschall Morris' great crop of corn, there is no doubt, as he asserted, that much of the merit is attributable to this plough, because it was a very dry season, and the benefits of complete pulverization

were more perceptible. The earth being in a state of minute division, presented more points of attraction to the atmosphere, increased its absorption of moisture and nutritive gases, and caused it to suffer less from drought. Any one may observe the increased deposit of dew in a finely pulverized and freshly worked surface.

Those on the Brandywine hills, who are used to ploughing up old green grass sods, will not agree with Friend Stapler, that weeds are not apt to grow on them. My experience is, that on such sods they are apt to grow with great rankness and luxuriance. I have seen them with stalks as large as some of the corn, and nearly as high. I should say they were *more likely* to grow on a twenty year old sod, freshly ploughed up, than on a younger sod, for this reason, that being so firm and compact, and impenetrable to the air from lying so long, the seeds of weeds beneath are unable to vegetate and force their way through. There they lie till turned up by the plough, when they take a start, and are kept down or killed by constant working.

As regards deep ploughing, I consider it the basis of all good farming. He is fortunate who has a deep soil; and he who has not, if he is the owner of the land, should make it so with all expedition; and this can only be done by deep ploughing. A renter might be excused for a shallow furrow, but the proprietor *never*. We do not sufficiently estimate the value of atmospheric influences, and a sterile subsoil brought to the surface, will be meliorated and improved much more than is generally believed. Jethro Tull used to say, the difference in soils was only owing to the minute division brought about by repeated stirring, and exposing to the air; or at least that a bad soil might be made a good one, in this way, without manure.

OBSERVER.

Chester Co., Pa., 2d mo. 3, 1846.

### Sowing Wheat and Timothy.

To the Editor of the Farmers' Cabinet:—

My experience in farming is limited, and as my practice differs in some respects from that which my neighbours consider wise, I thought I would ask counsel through the Cabinet.

In the spring of 1843, I sowed clover with my oats. My crop of oats was good. In the summer of 1844, I was enabled to pasture my cows from the clover: at the proper time I ploughed down the clover sod; manured the same from the barn-yard, and sowed wheat and timothy. In 1845, I harvested 30 bushels of wheat to an acre: in neither

of my trials of sowing on the clover sod have I obtained less than 25 bushels to the acre, and in no instance of sowing on oats stubble have I had more than 20 bushels. The practice undoubtedly increases the quantity of wheat; but the objection urged by my neighbours is, that it will *decrease* my timothy. I am not able to decide whether it does or not, and *that is the point* I wish the experienced to settle. My crops of grass have not been so large as is desirable, but most of my neighbours are in the same condition.

JOSEPHUS.

If the practice of our friend Josephus "undoubtedly increases his wheat crop five or ten bushels, and if he is not able to decide" whether or not it decreases his timothy, it appears pretty plain to the Editor, that he hardly need go to his neighbours for their opinion or experience. A man's own experience, on his own crops and on his own land, is certainly preferable to that of others on other land, and consequently under other circumstances. A farmer need never call in question the soundness of his practice, while he is from year to year continually wanting more barn and crib room; that is, he need not fear, lest, while increasing his crops, he may be injuring his land.—Ed.

For the Farmers' Cabinet.

### Raising Wheat & Cattle in Pennsylvania.

MR. EDITOR.—It was not my intention to treat Mr. Gowen's letter to Gen. Richardson unfairly. My object was to elucidate some facts worth knowing to the farming community. If I have misunderstood the letter, I must beg Mr. G.'s pardon.

My assertion is, that it is unprofitable for the farmer of Pennsylvania east of the Allegheny mountains, to raise cattle to any extent. Mr. G. says, that I stand singularly alone in this view. I call upon the farmers of Chester, Berks, and other counties, who fatten yearly for the market from 20 to 40 steers each, to bear me out, and say if they would find it profitable to raise their cattle, instead of buying them from the western drover.

Mr. Gowen says, I should recollect that these well-built cattle—meaning the Ohio cattle—are almost uniformly a cross from the imported Durham. Now, for nearly 14 years I have almost every year bought western cattle for fattening; they are now the same breed as I found them 14 years ago. Farmers who fatten cattle, will judge whether or not I am correct.

I further assert that, if we had taken the same care of our cattle that they do in England, there would be no necessity for importing any new breed, and that directly it has produced very little benefit, but indirectly it may have given a salutary lesson; viz: that

in cattle well nursed and fed, all the organs will be developed as to shape, milking properties, &c. The gentleman who brings his young bull and heifer home, for which he has paid the snug sum of \$300, takes care that the best of hay is given them; a warm, clean stable is furnished; they are curried once or twice a day; and the best pasture in summer is given them: and he wonders how it does happen that they thrive so much better than his domestic stock, that has been feeding on straw through the winter without shelter, and never touched with a curry-comb; and which are sent in summer time to prowl about the fence corners in the lanes to hunt up a living. No attention is paid, by the way, in breeding to prevent consanguinity.

I take it for granted Mr. Gowen farms for his pleasure, without being desirous to realize profits on the capital he has invested. I refer to his Report to the Committee on Farms, which will be found in the Cabinet, vol. 9, p. 338.

His practice is to hire one man for general work, at \$25 per month,	\$300 00
Two men from early spring to 1st December—this makes 8 months, 208 working days, at 75 cts. per day each man,	312 00
One hired man, at \$12 per month and found,	144 00
One hired man, at \$10 per month and found,	120 00
Boarding of two men, at \$1 50 per week,	156 00
	<hr/>
	\$1,032 00

Here is a single item of more than one thousand dollars for manual labour, to work a farm of 100 acres.

Mr. Gowen no doubt is sincere in his desire to promote the interests of agriculture; his farm is in the highest state of cultivation, and too high an encomium can hardly be rendered him for his praiseworthy efforts; but it may be forgotten that farming to make a living by, and farming for pleasure, are two different things.

H. S.

Bethel, Berks Co., Pa., Jan. 28, 1846.

AMERICAN FLOUR.—It is asserted by one of the most eminent bakers in London, that American flour will absorb from 8 to 10 per cent. more of its own weight of water in manufacturing it into bread or biscuit, than the English wheat; 14 pounds of American flour will make 21 pounds of bread, while the same quantity of English flour will make but 18½ pounds.

Communicated for the Farmers' Cabinet.

### Veterinary Institute.

*To the Members of the Philadelphia Society for Promoting Agriculture:*

GENTLEMEN,—I beg leave to inform you that I have established an Institute at the corner of Ridge Road, near Vine street, where I intend to deliver a course of Lectures on the Anatomy, Physiology, and Pathology of domestic animals, principally deduced from the lectures of Messrs. Coleman, Sewel, and Morton, Professors of the Veterinary College, London; Mr. Dick, of Edinburgh; Messrs. Youatt and Percival, of the University of London, and many others of the acknowledged heads of the profession; and I trust by the additional knowledge obtained in fifteen years extensive practice, I shall be able to at least induce some more able man to embark in so laudable an undertaking.

If the attention of Agricultural Societies, or perchance that of Government, should thus be directed to an object that should long ago have occupied their most serious consideration, these lectures will not have been delivered in vain.

The character of the lectures will depend much on the kind of class I may have the good fortune to form. They will be sufficiently scientific, I trust, for the medical student, yet not so abstruse or technical as to fail to interest the general inquirer.

However underrated the veterinary profession may yet be in the eyes of the public, and even in that of medical men, it will be my pleasing duty to prove to you, that it is a legitimate branch of medical and liberal education, and is closely allied to, or rather a part of medical science, and identified with the agricultural interests and most valuable resources of the country.

The object of the veterinary surgeon, is precisely that of the practitioner of medicine—to preserve health, to relieve disease, to assuage pain, and prolong life; and that, in beings, not indeed possessed of the high intellectual powers of man, but endowed with his susceptibilities of animal pleasure and pain, with many of his good qualities—his useful servants and his willing slaves; and on whom, by having taken them from their natural situations and habits, and by many absurd practices, and by too frequent and disgraceful brutality, he has entailed premature disease and death.

The practice of the veterinarian must be founded on the same principles with that of our best surgeons, and his mode of education ought to be the same. An accurate knowledge of the anatomical structure of his pa-

tients is as necessary to the one as the other. The veterinary surgeon has, however, not one patient only—the mechanism of whose frame, and the healthy function of whose organs he must study—he has many—the horse, the ox, the sheep, the swine, and the dog. Their structure is different; the functions of their various organs are differently discharged; the same diseases differing in character in each of them—the treatment still more different; and in each are diseases peculiar to that animal. In consequence of this there is required from him—and even more than from our medical practitioner—great expense of time and study, to fit him for the discharge of the duties of his profession, honourably towards his employer, and reputably to himself. And then our patients are dumb. They cannot, it is true, impose upon us by false statements of symptoms; they can relate no symptoms at all, and we are compelled to pay the closest attention to the varying and too often bewildering indications of disease, and to exercise the greatest degree of tact and discrimination, such as diligent and anxious observation and long experience can alone supply, lest we should mistake the nature and character of the disease, and rob our employer and destroy our patient.

In addition to this, our blunders are not like the blunders of others, buried with our patients. There is a regular examination of every animal that dies under the Veterinarian's hands, and if, as he may readily and pardonably do with his few advantages, he has mistaken the disease, no mercy is shown towards him.

To the medical student the difference of structure and the difference of function are most interesting, for they lead to difference of disease. Our most enlarged views of the mechanism of the different organs are only comparatively valuable, when they guide us to a comprehensive knowledge of the derangement of these organs generally, and particularly in the human being. It is making an extensive portion of animated nature subservient to our improvement in the most important branch of medical science, the healing art.

The medical man is occasionally consulted with regard to the diseases of domestic animals. What answer shall he give without compromising himself, if he is unacquainted with the strangely varying characters which the same diseases assume in different animals, the strangely different means of effecting cures, and the strangely different effects of the same medicines.

A knowledge of the Veterinary materia medica, will prevent many unsatisfactory,

cruel, and disgraceful experiments on various animals. When I know that twelve drachms of corrosive sublimate may be given to a sheep, and eighteen drachms to the ox, without the slightest effect, and yet a few grains sprinkled on a wound, will destroy either of them—that three drachms of opium in infusion, and which being thus given, would enter into the true stomach—will produce no narcotic effect, no effect whatever on the sheep; that senna will destroy the sheep by inflammation, but will not purge; that two ounces of aloes will destroy the same animal, and without purging—that a fourth of a grain of emetic tartar will vomit, while a drachm of aloes will scarcely purge the smallest dog, and that scarcely any quantity of opium will destroy him—I can have no faith in the effect of poisons, or of any medicaments on these animals as referable to human practice; and I should reprobate a long list of recorded experiments as inconclusive, indefensible, and barbarous. To the man of liberal education, and especially to the proprietor of horses and cattle, these lectures, however imperfectly delivered, will be pregnant with useful instruction. They will lay the foundation of that which his experience must perfect—a competent knowledge of the exterior of the horse and of cattle—those points, these conformations of different parts, on which the beauty and the utility of the animal materially depend. Although practice alone, and the long-formed habit of being with them and studying them, and of trying them, can form the good judge of the horse, or of cattle, yet there are rules and proportions which are easily understood. From ignorance of first principles on these subjects, how many have suffered in their comfort, their pocket, and their pride.

Lectures like these must be interesting, as enabling the owner of horses and cattle to overlook his own stable and farm, and to rid himself of the tyranny of his groom. I have heard gentlemen of influence and talent, confess that they dare not do what they pleased in their own stables: they have blushed at the dishonourable and abject slavery to which they were reduced, and are determined to throw off the yoke. Tyranny here, as everywhere else, was founded on ignorance; the master knew not the proper management of the stable, or the qualities of his horse; he was fearful of committing himself, and shrunk from the sneer of his servant.

On this ignorance of the master, and from the still greater ignorance of the groom, has been founded a system, absurd, cruel, and

destructive to the animal, and unnecessarily expensive to the owner: and after all, there is nothing like the superintendence of the master, while that to be effective and profitable, must be founded on a knowledge of the matter.

In all nations but this, they have Veterinary schools, under the patronage of their respective governments, where young men of liberal education study the profession scientifically, and in order to induce such men to embrace it as a profession, such Veterinary surgeons as are attached to regiments or brigades of horse artillery, receive commissions, consisting of a Veterinary surgeon-general, surgeons, and assistant-surgeons, which forms one of the most useful arms of the medical department. Of what use would their cavalry be, unless they were perfectly sound and fit for service?

In Great Britain their live cattle, independent of three millions of horses, are valued at £200,000,000, and before the establishment of the Veterinary college, there were more than thirteen millions of money annually lost to the country through the diseases of domestic animals, a large portion of which is now preserved. According to the United States statistical returns, there are 4,943,988 horses, 18,578,897 cattle, 24,342,238 sheep, 22,947,017 hogs, and poultry to the value of \$10,801,347, making a total value at reduced prices, of \$856,700,757; and it is not saying too much in stating, that \$10,000,000 of this amount of agricultural property are lost to this country annually, for the want of proper means to instruct proper persons in the Veterinary profession. There is no provision against this evil; the legislature has never interfered to lessen this waste of national wealth. The landed proprietors, the chief owners of this valuable portion of our country's wealth, have not founded any seminary for the education of Veterinary students. A principle of more than Turkish fatalism seems to have oppressed and paralyzed the agriculturist. He is accustomed to these losses—he makes up his mind that he must bear them, and he takes no step to guard against them.

Agricultural Societies now and then offer premiums for the best Essays on the treatment of certain diseases; otherwise they are employed usefully, and profitably, certainly, in discussing the best way of improving the breed of horses and cattle, or of improving their lands; but the diseases of domestic animals, are subjects which they do not understand, and they leave the medical treatment to a set of men proverbial for their want of even a common education or

common understanding, as also for their barbarous and unskilful treatment, killing more animals than die from natural causes.

Respectfully yours,

T. J. CORBYN,

Veterinary Surgeon.

Philad., Veterinary Institute, Ridge Road & Vine st., Jan. 31st, 1846.

### Raising Water by a Simple Process.

To the Editor of the Farmers' Cabinet:—

HAVING long felt the want of water in our barn-yard and fields, we have succeeded in bringing a plentiful supply from a spring by means of a machine for raising water, upon a simple, cheap, and durable plan, which is within reach of every one who has a spring or rivulet at his command, with not less than three feet fall. With this amount of fall, we may throw up to the yard one-sixth of the amount used by the machine;—or, in other words, if a man has a stream or spring furnishing six quarts per minute, he may throw one-sixth of it into his yard for the use of his stock. If there be a greater fall, a greater proportion of the water may be thrown into the yard. Our spring furnishes three quarts per minute; we have 17 feet fall from the spring to the machine, and from the machine to the yard 42 feet rise, and while the machine is at work, it sends into the yard three quarts per minute; and as we can only get one-third of the quantity into the yard, we can consequently only work our machine eight hours out of the twenty-four.

We make this communication, believing that a knowledge of our success may be valuable to the readers of the Cabinet.

REEVE & BROTHERS.

Alloways Town, Salem Co., N. J.

### Prosperity of New Jersey.

WE make the following extract from the message of the Governor of New Jersey, delivered to the Legislature at Trenton, on the 14th ult.

Although not exempt from the influence of the drought which so generally prevailed during the last summer, the crops chiefly relied on by our agriculturists have been abundant. Their surplus products have found a profitable market, whilst the activity displayed by the mechanics and manufacturers, is evidence that labour with them too has been rewarded. The three great sources of national and individual wealth—agriculture, manufactures, and commerce—are so intimately connected, that they necessarily prosper or decline together. Hence protection and encouragement to the one, are alike beneficial to all. They are alike dependent on the fostering care of the government; and if

government be for the protection of the governed, it would seem the first duty to foster and protect the industry and enterprise of her own citizens.

### Wheat.

THERE are two sorts of wheat generally cultivated in this country; the winter wheat, which is sown in autumn, and the spring or summer wheat, sown in early spring. The former has a large, plump ear, smooth, or destitute of awn, with a strong, vigorous, and erect stem. There are of this, two varieties: the red wheat, which is of a dark colour, and has a tough, thick skin, and the common wheat, which affords the best flour. The spring wheat, which is supposed to come from the north of Europe, is less hardy, and has a slenderer stem than the other, with bearded ear. As it comes more rapidly to maturity than the winter wheat, it is sometimes a surer crop in our variable climate, though the quality of the grain is reckoned inferior. The Egyptian, or many-spiked wheat, is cultivated in Egypt and some parts of Italy. It is supposed to be of African origin, and, in its qualities and habits, resembles the spring wheat just mentioned. The stem of this species is branched at the top, and bears several ears, or *spikelets*. The ear is bearded, and the grains are smaller and thinner than the common winter wheat. The *spelt* wheat is supposed to be the *zea* of the Greeks, and the kind of wheat used by the Romans. It is still cultivated in the south of Europe, and it grows on a coarser soil and requires less care and attention than the finer sorts of grain.—*Hogg's Weekly Instructor*.

A GARDEN.—No other sort of abode seems to contribute so much to the tranquillity of mind and comfortableness of body. The sweetness of the air, the pleasantness of the smell, the verdure of the plants, the exercise of working and walking; but, above all, the exemption from care and solicitude, seem equally to favour and improve both contemplation and health—the enjoyments of sense and imagination. A garden has been the inclination of kings and the choice of philosophers; the pleasure of the greatest and the care of the meanest; an employment and possession, for which no man is too high or too low. If we believe the scriptures, we must allow that the Creator esteemed the life of man in a garden the happiest he could give him, or else he would not have placed Adam in that of Eden.—*Sir William Temple*.

### Preparing Seed Wheat.

To the Editor of the *Farmers' Cabinet*:

In some neighbourhoods, particularly in New Jersey, the wheat was found last harvest, to be very considerably injured by smut. Different suggestions have been made for a prevention of this evil. Some wet it, and roll it in lime, and believe they derive benefit from the process. The following I find in the *Winchester Farmer*, from a correspondent of that paper, dated the 25th of August, 1845, in Frederick county, Va. The results seem conclusive.

U.

I send you the following memoranda in reference to preparing wheat against smut:

Oct. 1st. Sowed one and a half lands of mixed wheat—blue stem and white—which was soaked in brine several hours on the 27th ult., but was taken out and spread to dry; then a land and a half with the same, rolled in lime and then spread and dried.

Oct. 2nd. Sowed six lands of Egyptian wheat, soaked and washed in a strong brine for ten hours and rolled in lime, the smut—of which there was a great deal—being skimmed off. In the middle of these is one land without any preparation.

June 17th. From four positions in Egyptian wheat, I can reach 9, 13, 4, and 17 smut heads; from four positions in that brined and limed, 0, 0, 2, and 1; being 43 heads in that unprepared, and 3 in that prepared.

June 23d. Four positions in unwashed Egyptian give 9, 32, 15 and 12 smut heads; that washed, 0, 0, 4, and 0, being 68 to 4.

Walking through the blue-stem I gathered thirty-three heads of smut in that brined only, and in that brined and limed but 3. The 4½ bushels of Hampshire white (unprepared) is full of smut; the three pecks of Berkeley white has hardly a head. This was soaked in brine eight hours, and rolled with one quart of lime water-slacked.

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## THE FARMERS' CABINET,

AND

## AMERICAN HERD-BOOK.

PHILADELPHIA, SECOND MONTH, 1845.

---

A FRIEND at Easton, Md., inquires about the *Italian Rye Grass*, which is favourably spoken of in *Colman's Tour*. We have not been able to learn that it is cultivated at all in this vicinity—we doubt whether the seed can be procured here. *Stickney's* variety of Rye Grass is said to be preferable to the Italian, and may

be sown either in spring or autumn. About two bushels are sown to the acre, and the price may be from three to four dollars a bushel. It may be obtained of our seedsmen. "There is much difference of opinion," says the *Farmers' Encyclopedia*, "respecting the merits and comparative value of Rye Grass. It produces an abundance of seed which is easily collected, and readily vegetates on most kinds of soil under circumstances of different management; it soon arrives at perfection, and produces in its first year of growth a good supply of early herbage, which is much liked by cattle." The above remarks are perhaps more particularly applicable to British farming. The second crop, or latter mow, as the English call it, of Rye Grass is quite inconsiderable.

In addition to the advertisements of our friends, Coates, Powell and Prouty, seedsmen, &c., of this city, we give that of A. B. Allen, of New York. But little excuse can be offered by the farmer who sows indifferent seeds, or operates with poor implements. Every facility is offered for obtaining the best of both.

A NUMBER of the inhabitants of Moorestown and its vicinity, Burlington county, N. J., met on the 2d inst., and calling *Chalkley Gillingham* to the Chair, and appointing Wm. Parry, Secretary, they resolved to form an Agricultural Society. A committee was appointed to draft a constitution, &c., which will be submitted to an adjourned meeting to be held on the 26th of this month. There is a good deal of enterprise in that neighbourhood, and we hope much good may be done.

The *Farmers' Library* is translating and publishing "*A Treatise on Milk Cows*," by *Monsieur Guenon*, of France; "whereby the quality and quantity of milk which any cow will give, may be accurately determined, by observing natural marks, or external indications alone; the length of time she will continue to give milk, &c." With Practical Observations and Remarks on Cattle, by John S. Skinner.

Committees have made favourable reports to the agricultural societies of Bordeaux and Aurillac. They say: "M. Guenon has established a natural method, by means of which it is easy to recognize and class the different kinds of milk cows according: 1st. To the quantity of milk which they can yield daily; 2d. The period during which they will continue to give milk; 3d. The quality of their milk." And all this is to be done by observing, as the author says, the shape of certain *quirls* of the hair, on particular parts of the body! What will those of our readers say to this who have been in the habit of smiling with some incredulity, at the grave annunciations of the phrenologist who dives at once into the intellectual character of his subject, by passing his hand over the *skull cap*? Let them subscribe for the *Library*, and read for themselves.

It was stated a couple of weeks ago, in the *National Standard*, that Job and Joseph Black, near Salem, N. J., had then recently slaughtered six spring pigs, the average weight of which was 322 lbs. They were ten months old, and had consequently gained, each, a full pound per day. This denotes pretty good living.

The attention of our farming readers is invited to the communication of Reeve and Brothers, on page 229, in relation to the raising of water. In many situations, particularly where rocks, &c. render wells expensive, it is of great importance to be able to introduce a supply of water for barn-yard and family purposes at a cheap rate. We have understood from Reeve and Brothers, that they would supply the necessary machinery for \$25. The pipe from the machine to the yard would cost about six cents a foot; that from the spring to the machine would be larger, and of course would cost more.

The first stated meeting of the Chester County Horticultural Society, was held at West Chester the 17th of last month. There was, as we have understood, much interest taken in the matter, and we trust the flowers and the fruit will hereafter be more closely looked to.

We learn from the *Washington Reporter* of the 31st ult. that a call is made for a public meeting, to be held at the Court-house in Washington, Pa., on the 16th inst., for the purpose of organizing an Agricultural Society for Washington county.

The New York State Agricultural Society decided at its annual meeting on the 21st ultimo, that its next Exhibition and Fair should be held at *Auburn*, Cayuga county, on the 15th, 16th, and 17th of the Ninth month next. They also elected

J. M. Sherwood, Auburn, President;  
Robert H. Ludlow, Abram Bockee, E. P. Prentice,  
Thomas I. Marvin, Pomeroy Jones, I. R. Speed, H. S. Randal, and Lewis F. Allen, Vice Presidents;  
Luther Tucker, Recording Secretary;  
Joel B. Nott, Corresponding Secretary; and  
J. M. D. McIntyre, Treasurer.

C. F. CROSMAN, of Brighton, is said to have raised the past season 410 bushels of carrots on one quarter of an acre; and has grown about 1000 bushels of beets to the acre.

INQUIRY has been made as to "what course of management will prevent the discouraging disease of mildew on grapes in cold graperies, and what remedy, cure it?" Perhaps the few remarks of T, on page 207, may throw some light on the subject. We would be glad if he, or some one else, would give more extended information in the premises.

## SEED STORE,

No. 23 Market Street, Philadelphia.

The subscriber keeps constantly a supply of White and Red Clover, and other grass seeds; fresh Perennial Rye-grass, and Lucerne seed. Field seeds, consisting of choice Spring Wheat, Barley, Potatoe Oats, Northern and other seed-corn. Also, in season, Fruit and Shade Trees. Garden and Bird seeds generally. Guano in parcels to suit purchasers.

M. S. POWELL.

Philad., Feb., 1846.

tf.

## COATES' SEED STORE,

OF MORE THAN FORTY YEARS STANDING,

Where may constantly be had

Clover, Timothy, Orchard, Herd,

AND OTHER

GRASS SEEDS,

TOGETHER WITH A COMPLETE ASSORTMENT OF

GARDEN SEEDS,

Of the finest Quality and best Varieties,

JOS. P. H. COATES,

No. 49, Market st., Philad'a.

Agency for the Purchase & Sale of

IMPROVED BREEDS OF CATTLE & SHEEP.

The subscriber takes this method of informing his friends and the public, that he will attend to the purchase and sale of the improved breeds of cattle, sheep, &c., for a reasonable commission. All letters post paid, addressed to him at Philadelphia, will be attended to without delay.

AARON CLEMENT.

Jan. 15th, 1846.

## D. O. PROUTY,

Manufacturer of Agricultural Implements, and  
dealer in Garden and Grass Seeds,

No. 194 $\frac{1}{2}$  MARKET ST., PHILADELPHIA:

Offers for sale the following articles now in season, viz: Grant's Patent Fan Mill, for chaffing and screening wheat and seeds at one operation. This mill carried off the first premium at the State Fair in New York, Sept., 1845, and the first premium at the Philadelphia Agricultural Exhibition in October, 1845. Corn Shellers in great variety, and warranted to work well. Price from \$2 to \$30, each.

Straw, Hay, and Corn-stalk Cutters of different patterns, among which is Hovey's Patent, an excellent article, at a low price.

Mott's Agricultural Furnace and Cauldron, an article which every farmer should have. Grindstones on friction rollers, of various sizes.

tf.

D. O. PROUTY.

## SHORT ADVERTISEMENTS,

The subject matter of which, may correspond with the agricultural character of this paper, will be inserted at the rate of one dollar for each insertion of ten lines or less; and so in proportion for each additional line. Payment in advance.

No. 5, COLMAN'S TOUR, has just come to hand.

THE quantity of rain and snow which fell in the 1st month, 1846, was a little more than four inches and a half. . . . . 4.63 inches-

Penn. Hospital, 2nd mo. 1st, 1846.



Are sold only in Philadelphia, at the SEED AND IMPLEMENT WAREHOUSE of the subscriber, No. 65 Chesnut street, below Third, North side.

DAVID LANDRETH.

Purchasers will observe that the above seeds are essentially distinct from those obtained by  Foreign Importation or Chance Purchase  at home, which are generally, at best, uncertain.

 Extract from the "REPORT" of the "VISITING COMMITTEE of the PENNSYLVANIA HORTICULTURAL SOCIETY;" approved and ordered to be printed.

### "Landreth's Nurseries and Gardens.

"These extensive grounds are on Federal street, near the Arsenal. \* \* \* \* \* The earliest collection of Camellias was made here. Some of those now in the possession of these distinguished nurserymen, are ten feet high. \* \* \* \* \* The selection of GREEN-HOUSE PLANTS is valuable and extensive. \* \*

"The NURSERIES are all *very correctly managed*, supplying every part of the Union; a detail of which would occupy too much of our space; we therefore content ourselves with stating that the stock is very large, and in every stage of growth, consisting of

### Forest and Ornamental Trees, Shrubs, Evergreens, Vines and Creepers,

with a collection of herbaceous plants; *Fruit Trees* of the best kind and *most healthy condition*; large beds of seedling apples, pears, plums, &c., as stocks for budding and grafting; *a plan very superior to that of working upon suckers*, which carry with them into the graft all the diseases of the parent stock. \* \* \* \* \*

### GARDEN SEEDS

of the finest quality have been scattered over the country from these grounds, and may always be depended upon. The SEED ESTABLISHMENT of these HORTICULTURISTS is one of the *most extensive in the Union*, and its reputation is well sustained from year to year.

"To obviate the chance of mixture of the farina of the plants of the same family, they have established another nursery, at a suitable distance, so that degeneration cannot take place, and which secures to the purchasers 'a genuine article.' Knowing thus the age, quality, and process of culture of every plant, *the supply from their grounds is recommended with great confidence.*"

\* \* \* Since the date of the "REPORT" from which the above is abstracted, the ENTIRE ESTABLISHMENT has been GREATLY ENLARGED. The collection of Camellias embraces all the finer kinds, and consists of some

thousands of various sizes; so likewise of Roses, and other desirable plants, both tender and hardy—Fruit Trees, &c.

The *Seed Gardens* alone, cover *fifty acres*, and the whole is, as it has been for more than *half a century*, under the successive management of father and son, the *most prominent in America*.

Orders for Trees, Plants, &c., in all their variety, from the Nurseries, now conducted by D. LANDRETH & FULTON, received as above; where, also, Catalogues may be had, gratis. 2t

### New York Agricultural Warehouse.

HAVING taken the commodious store, No. 187 Water street, the subscriber is now opening the *largest and most complete* assortment of Agricultural Implements of all kinds, ever yet offered in this market. Most of these are of new and highly improved pattern, warranted to be made of the best materials, put together in the strongest manner, of a very superior finish, and offered at the lowest cash prices.

### SEEDS FOR THE FARMER.

Such as Improved Winter and Spring Wheat, Rye, Barley, Oats, Corn, Beans, Peas, Rutabaga, Turnip, Cabbage, Beet, Carrot, Parsnep, Clover and Grass-seeds, and improved varieties of Potatoes.

### WIRE-CLOTHS AND SIEVES.

Different kinds and sizes constantly on hand.

### FERTILIZERS.

Peruvian and African Guano, Poudrette, Bonedust, Lime, Plaster of Paris, &c.

### FRUIT AND ORNAMENTAL TREES & SHRUBS.

Orders taken for these, and executed from a choice of the best Nurseries, Gardens, and Conservatories in the United States.

### HORSES, CATTLE, SHEEP, SWINE & POULTRY.

Orders executed for stock of all kinds, to the best advantage.

The subscriber requests samples sent to him of any new or improved Implements, Seeds, &c., &c., which, if found valuable, extra pains will be taken to bring them before the public.

A. B. ALLEN, 187 Water Street, New York,  
Editor of the American Agriculturist, a monthly publication of 32 pages octavo. Price \$1 a year.

3t.

### PEACH TREES.

THE subscriber has for sale about 7,000 peach trees of good size, and of the following approved kinds, viz: Large Early York, Troth's Early Red, Old Mixon, Red Cheek Malacotan, Red Rare Ripe, Yellow Rare Ripe, Caliber's Pavia, Late Yellow Cling, Ward's Late Free and Late Heath.

The assortments may be depended upon.

GEORGE MICKLE.

Woodbury, N. J., 2nd mo. 14th, 1845.

Enquiry may be made at this office.

We keep on hand at this office, and will supply our friends with Agricultural works generally. Among which are

THE FARMER'S ENCYCLOPEDIA, full-bound in leather;—Price	\$3 50
YOUATT ON THE HORSE, with J. S. Skinner's very valuable Additions;	2 00
BRIDGEMAN'S GARDENER'S ASSISTANT;	2 00
THE AMERICAN POULTRY BOOK;	37½
THE FARMER'S LAND MEASURER;	37½
DANA'S MUCK MANUAL;	50
Complete sets of the FARMERS' CABINET, half-bound, 9 vols.	7 50
DOWNING'S Landscape Gardening,	3 50
Downing's Fruits and Fruit Trees of America,	1 50
SKINNER'S Every Man his own Farrier,	50
AMERICAN Poulterer's Companion,	1 25
BOUSSINGAULT'S RURAL ECONOMY,	1 50
FARMERS' & EMIGRANTS' HANDBOOK,	1 00
MORRELL'S AMERICAN SHEPHERD,	1 00
STABLE ECONOMY,	1 00
BEVAN on the HONEY BEE,	31½
BUISTS' ROSE MANUAL,	75
SKINNER'S CATTLE & SHEEP DOCTOR,	50
AMERICAN FARRIER,	50
THE FARMER'S MINE,	75
HOARE ON THE VINE,	50
HANNAM'S Economy of Waste Manures,	25
LIEBIG'S AGRICULTURAL CHEMISTRY,	25
“ ANIMAL CHEMISTRY,	25
“ FAMILIAR LETTERS,	12½

As well as his larger works on Chemistry and Agriculture.

Subscriptions received for Colman's Agricultural Tour—or single numbers sold.

☞ We are prepared to bind books to order.

### GUANO.

TWENTY-FIVE tons first quality Ichaboe Guano, in bags or barrels, for sale in lots to suit purchasers, by

S. & J. J. ALLEN & CO.,

No. 7 South Wharves, 2nd Oil Store below Market street, Philadelphia.

October 15th, 1845.

tf.

### Poudrette.

A valuable manure—of the best quality, prepared in Philadelphia, for sale at the office of the FARMERS' CABINET, No. 50, North Fourth Street, or at the manufactory, near the Penitentiary on Coates' street. Present price, for seven barrels or more, \$1 75 per barrel, containing four bushels each. Any number of barrels less than seven, \$2 each, or thirty-five cents a bushel. Orders from a distance, enclosing the cash, with cost of portage, will be promptly attended to, by carefully delivering the barrels on board of such conveyance as may be designated. The results on corn and wheat have been generally very satisfactory. Farmers to the south and in the interior, both of this State and of New Jersey, are invited to try it.

JOSIAH TATUM.

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## THE FARMERS' CABINET,

IS PUBLISHED MONTHLY BY

JOSIAH TATUM, No. 50 NORTH FOURTH STREET, PHILADELPHIA.

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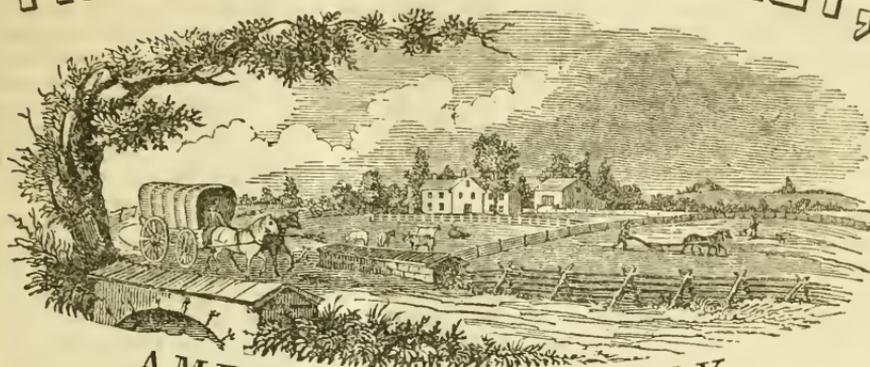
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# THE FARMERS' CABINET, AND



## AMERICAN HERD-BOOK.

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

Perfect Agriculture is the true foundation of all trade and industry.—LIEBIG.

Vol. X.—No. 8.]

3rd mo. (March) 16th, 1846.

[Whole No. 134.]

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BY JOSIAH TATUM,

EDITOR AND PROPRIETOR,

No. 50 North Fourth Street,

PHILADELPHIA.

Price one dollar per year.—For conditions see last page

For the Farmers' Cabinet.

### Potatoe Rot--Objections to various Theories.

MR. EDITOR,—I have for some months past, read with no little interest the various articles which have appeared in different papers on the subject of the potatoe rot. Merely to say that I am somewhat surprised at the various ideas and reasonings in relation to the cause and cure of the disease, would not be to express my feelings upon the subject. I have been astonished; and although I had intended to trouble you no more upon this matter, I have felt it my duty to take it up again and treat it in a different manner.

I notice in many excellent papers, long essays on the potatoe disease; but were it not that their authors sometimes intersperse a few facts among their lengthy disquisitions and fine spun theories, their articles would be worse than useless. But whenever they give facts they render a service, as by

CAB.—VOL. X.—No. 8.

that means people may be enabled to judge for themselves of the cause of the facts, and thus arrive at the truth, if it be possible. I am happy to say, that in your December No. p. 159, I noticed an article devoted to facts more than to theories, although the latter are also given. Before going further, you will permit me to refer you to the nature of those facts. You will perceive that they fully sustain my views. You will recollect that my opinion is, that the disease is caused by a want of alkaline matter. I stated some months since in the Cabinet, that the cellular tissue is composed partly of alkalies, and where these were deficient the result was a weakness, and ultimately a total destruction of that cellular tissue; and as an accompanying circumstance, the death and decay of the potatoe. The destruction of the cellular tissue at the time of the death and decay of the potatoe, while the other parts of the potatoe are comparatively sound, you will perceive is stated in the article just referred to—said article says: "It seems from the microscopic appearance, that the starch escapes injury for a long time after the skin and cellular parts are gone."

But I object to the theory accounting for the fact. The experience of a great many of the farmers of this country has been against such a theory. It is the opinion of the different writers, that the rot was caused by the cold and wet weather, while we are well aware that the rot has been destructive in times of excessive heat and drought; so

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much so, indeed, as to lead scientific men to attribute it to that cause alone. Now how can these theories be reconciled? The facts cause them to clash, and completely demolish each other. We must throw them both away, and look elsewhere for the truth. Another article I have seen, attributes the disease to frost. This theory is demolished by the fact, that our farmers are aware that the rot has commenced and continued during very hot weather.

One of the best ways of testing these theories is, by taking a marked and decisive fact and comparing the theory with it. Such facts we have in abundance, and although I might fill your interesting and useful sheet with them, I will introduce but one. It is the result of an experiment tried by a scientific and observing farmer, and one who is fully to be trusted in his assertions—I have reference to Mr. R. L. Pell, of Ulster county, N. Y. His own account of the experiment may be found in the Report, page 241, of the Commissioner of Patents for 1844; and in my essay, in page 363, of the last volume of the Cabinet.

Here it will be seen, that whenever the rows were treated with substances containing alkalis, the rot did not injure them, but on the contrary the crops were very large; where the rows were left without alkalis, the entire crop rotted. Now if the fungi were the cause of the disease, why did they not attack all the field alike? If the disease was caused by the cold, wet weather or frost, why did entire rows escape, while those in the immediate vicinity were entirely destroyed? If hot weather caused the rot, why were some of the rows exempt from it, and those a few feet distant so completely destroyed? It cannot be supposed that there was a difference of temperature in the different rows, sufficient to produce such a marked effect. If the worms cause the disease, why did they confine their ravages to those rows alone which were not treated with the composition? If the bugs and flies cause the disease, why did they not destroy all indiscriminately?—their power would seem to have been felt severely in some parts of the field, but other parts totally escaped—why was this? If the disease was caused by the potatoe losing part of its vital power, how is it that in a field planted with the same kind of potatoes, some rows were entirely destroyed, and others entirely escaped? It cannot be that, as some say, the foreign varieties would escape the disease, for here we see a foreign variety suffering as much as the worst. It cannot be that sandy soils cause the disease, for here the disease does not confine itself to the sandy

soil, but shows itself in its most terrible form in some rows, and in others immediately adjoining, the disease has not made its appearance. Nor can it be that clayey soils cause the disease, for it is here seen and not seen indiscriminately, without reference to the nature of the soil. The rot cannot be caused by late planting, for early planted also suffer: nor can it be caused by early planting, for those planted late, are not exempt from its destructive effects.

Under these circumstances it appears to me, that they who advocate these theories have been thrown completely at fault by the facts presented, and what is worse, the potatoe growers who have placed confidence in the advice given by the authors of these theories, will find, I fear, that their confidence has been misplaced, and the too probable result will be, that obloquy will fall upon what is deridingly called "book farming." It is somewhat humiliating, too, that although such failure will operate to the disadvantage of "book farming," still, if perchance the true cause of the evil be discovered, and "book farming" renders that service, few will there be to give it the credit. Too much care cannot be taken with this matter, and too blind a confidence should not be placed in any opinion. Good sense and scientific knowledge are much needed, and in no instance is the want of chemical knowledge among agriculturists felt more sensibly than in the case before us.

Before closing this article, I must be allowed to make a few remarks upon an apparent objection which I have seen raised to my theory. I saw in a newspaper, about the middle of December last, an article stating that, among other things, alkaline solutions failed in stopping the rot after it had commenced in a heap of potatoes. Alkaline solutions should not be too much depended upon when the disease has become deeply seated. The dry alkalis—and the drier the better—should be applied in such instances, and rather profusely. There is an immense quantity of carbonic acid disengaged in proportion to the size of the potatoe when decay is rapidly going on, and therefore the alkali which is to neutralize it should not be used with a sparing hand under such circumstances;—hence the reason why alkaline solutions failed in producing the desired effect; and from the same cause many failures will occur in its use. The quantity of ashes applied to a potatoe patch must necessarily vary to suit many circumstances; among which may be mentioned, the strength of the ashes, or their power of producing strong lye—the season of the

year when applied—the subsequent weather—the nature of the soil—the lay of the land—the quantity of the manure yielding carbonic acid—the quantity of carbonic acid produced in the surrounding country—and numerous other circumstances that have occurred to my mind, but do not now present themselves. Under these circumstances I should advise this course to be pursued: give but a handful of ashes to a hill at the time of planting, and if at an advanced stage of growth the tops look very green and luxuriant, sow good ashes over them when the dew is on in the morning, until they look light with them. If after this you observe the luxuriance still continue, and the soft leaves die and turn black and crisped, lose no time in giving them a heavy dressing of good ashes; or if such ashes be not at hand, take your refuse salt from your fish and pork barrels and scatter it thinly over the patch every few days, until the potatoes again present a healthy appearance. Such a course, judiciously pursued, will not fail to secure a large and healthy crop of potatoes when there is danger of disease; and where the danger is greatest, there will the extra produce be sufficient abundantly to repay the trouble and expense of the application of the preventives—not taking into consideration the advantage of a healthy crop.

Trusting that the foregoing remarks may be of some service, I remain

Yours, &c.,

CHEMICO.

Wilkesbarre, Feb. 23rd, 1846.

### Ploughing near Salerno.

THE fields being without fences, have an open look; and the mingling of men and women together in their cultivation, gives them a chequered appearance, and renders them very picturesque. In the middle of a large green wheat field would be a group of men and women weeding the grain; the red petticoats and the blue spencers of the latter contrasting beautifully with the colour of the fields. In one plot of ground I saw a team and a mode of ploughing quite unique, yet withal very simple. The earth was soft, as if already broken up, and needed only a little mellowing: to effect this, a man had harnessed his wife to a plough, which she dragged to and fro with all the patience of an ox, he in the mean time holding it behind, as if he had been accustomed to drive, and she to go. She, with a strap around her breast, leaning gently forward, and he bowed over the plough behind,

presented a most curious picture in the middle of a field. The plough here is a very simple instrument, having but one handle, and no share, but in its place a pointed piece of wood, sometimes shod with iron, projecting forward like a spear; and which merely passes through the ground like a sharp-pointed stick, without turning a smooth furrow like our own.—*Letters from Italy.*

### Agricultural School.

DR. LEE commences the New Year by announcing that he has made arrangements with Gen. Rawson Harmon, of Wheatland, Monroe county, N. Y., to open an Agricultural School for Western New York. It will be located on Gen. H.'s farm, which contains 200 acres of improved land, under excellent cultivation.

Gen. Harmon's farm is regarded as admirably adapted to the establishment of such an institution. He turns out some 15,000 bushels of superior seed wheat every year, beside considerable seed corn, and between 45 and 50 fine woolled bucks. As a breeder of sheep, he has few equals in the country. His facilities for soiling, or for keeping up sheep, cows and swine, can be estimated by practical farmers, when they are informed that his basement rooms, walled in with stone laid in with lime mortar, cover an area of 8,916 square feet—or more than the whole basement surface of seven 30 by 40 feet barns.—*Farmer and Mechanic.*

**OLD BREAD THE BEST.**—It has been found that baked bread on the first day produces from seventy-one to seventy-nine per cent. of nutritive matter, while that five days old yields from eighty-one to eighty-two per cent. New bread loses the five per cent. of its weight by evaporation in cooling. Aside from the advantages of stale bread in its nutritive matter, it is more wholesome, more easily digested, has more taste and is sweeter; while new bread lies heavily in the stomach and is of difficult digestion. With these advantages it is strange that most people reject stale bread or prefer the new. It has been found that, on feeding the poor, very stale bread mixed with soup is far more satisfying than any other they can obtain. Thus the labouring classes consume one-eighth more bread than would be necessary if stale bread were used; or a family that consumed six pounds of bread per day would expend, at the present price, some ten dollars more a year by eating new, than by eating stale bread, with all the other disadvantages we have mentioned.

**Artificial Duck-hatching in China.**

ONE of the greatest lions in Chusan—for we have lions here as well as you in London—is an old Chinaman, who hatches duck-eggs in thousands every spring by artificial heat. The first question put to a sight-seeing stranger who comes here is, whether he has seen the hatching process; and if he has not, he is immediately taken out to see the old Chinaman and his ducks. An account of the house and the process will probably interest you, and I therefore send you a leaf of my private journal, which I wrote on the morning of my first visit.

It was a beautiful morning in the end of May, just such a morning as we have in the same month in England, perhaps a little warmer; the sun was upon the grass, the breeze was cool and refreshing, and altogether the effect produced upon the system was of the most invigorating kind, and I suppose I felt it more, having just arrived from Hong-Kong, and suffering slightly from the unhealthy atmosphere of that island. The mist and vapor were rolling lazily along the sides of the hills which surround the plain on which the city of Tanghai is built; the Chinese, who are generally early risers, were already proceeding to their daily labours; and although the greater part of the labouring population are very poor, yet they seem contented and happy. Walking through the city, out at the north gate, and leaving the ramparts behind, I passed through some rice fields, the first crop of which is just planted, and a five minutes' walk brought me to the poor man's cottage. He received me with Chinese politeness; asked me to sit down; offered me tea and his pipe, two things always at hand in a Chinese house, and perfectly indispensable. Having civilly declined his offer, I asked permission to examine his hatching-house, to which he immediately led the way, and gave me the following account of the process. First, however, let me describe the house.

The Chinese cottages generally, are wretched buildings of mud and stone, with damp earthen floors, scarcely fit for cattle to sleep in, and remind one of what the Scottish cottagers were a few years ago; which now, however, are happily among the things that were. The present one was no exception to the general rule; bad fitting, loose, creaking doors, paper windows, dirty and torn; ducks, geese, fowls, dogs, and pigs in the house and at the doors, seemingly as important, and having equal rights with their master; then there were children, grandchildren, and, for aught that I know, great-grandchildren, all together, forming a most

motley group, which, with their shaved heads, long tails, and strange costume, would be a capital subject for the pencil of Cruikshank.

The hatching-house is built at the side of the cottage, and in a kind of long shed, with mud walls, and thickly thatched with straw. Along the ends and down one side of the building are a number of round straw baskets, well plastered with mud, to prevent them from taking fire. In the bottom of each basket there is a tile placed, or rather the tile forms the bottom of the basket; upon this the fire acts, a small fire-place being below each basket. The top is open, having of course a straw cover, which fits closely, and which covers the eggs when the process is going on, the whole having the appearance of a vase which we sometimes see placed upon a pedestal at home, or rather exactly like the Chinese manure tanks, which perhaps are less known. In the centre of the shed there are a number of large shelves placed one above another, upon which the eggs are laid at a certain stage of the process.

When the eggs are brought, they are put into the baskets described above, the fire is lighted below, and, according to some observations made with a thermometer, the heat kept up seeming to range from 95 to 102 degrees; but the Chinamen regulate the heat by their own feelings, and not by thermometer, and therefore it will of course vary considerably. In four or five days after the eggs have been subject to this temperature, they are taken carefully out, one by one, to a door in which a number of holes have been bored exactly the size of the eggs; they are then held in these holes, and the Chinamen look through to the light, and are able to tell whether they are good or not. If good, they are taken back and replaced in their former quarters; if bad, they are of course excluded. In nine or ten days after this, that is, about fourteen days from the commencement, the eggs are taken out of the baskets and spread out on the shelves which I have already noticed. Here no fire-heat is applied, but they are covered over with cotton and a kind of blanket, remaining in these circumstances about fourteen days more, when the young ducks burst their shells, and the poor Chinaman's shed teems with life. These shelves are large, and capable of holding many thousands of eggs; and it is really a curious sight, particularly during the last two days, when the hatching takes place. The Chinese who rear the young ducks in the surrounding country, know exactly the day when they will be ready for removal, and

in two days after the shell is burst, the whole of these little creatures are sold and conveyed to their new quarters.—*Athenæum*.

### The American Agricultural Association.

At the meeting of this Society, on Monday evening last, the committee on the subject of introducing the Alpaca into this country, made an interesting report, which was followed by resolutions appointing a committee to receive subscriptions for the purpose of introducing this beautiful and valuable animal from South America into the United States. We understand that more than \$4000 have already been subscribed. The valuable work re-published at the office of the New York Farmer and Mechanic, was introduced. This is a republication of an English work, giving the particulars of the introduction of this long woolled animal into Great Britain. It is offered at the low price of 12½ cents.

R. L. Pell, Esq., chairman of the committee in that report, said the experiment so far has been successful in England—that the female became matured two years earlier than in the native mountains, and that the wool was finer, and of increased length.

The following officers were elected for the ensuing year:

*President*—Hon. Luther Bradish.

*Vice Presidents*—Hon. Theodore Frelinghuysen, James Lennox, James Boorman, A. H. Stevens, M. D., T. A. Emmet, H. Maxwell, S. Whitney, S. Knapp, Vice-Chancellor McCoun, Cyrus Mason, D. D., W. A. Seeley, J. S. Livingston.

*Treasurer*—A. P. Halsey.

*Recording Secretary*—R. Ogden Doremus.

*Corresponding Secretary*—A. H. Green.

*Executive Committee*—R. L. Pell, J. W. Draper, M. D., Archibald Russell, Col. Edward Clark, D. P. Gardner, M. D., R. K. Delafield, Shepard Knapp.—*Farmer and Mechanic*.

THERE were two hundred and seventy-three square-rigged vessels lying at the port of New Orleans on the 5th ult., of which two hundred were American. When the crowd of steamboats and sailing craft smaller than brigs is remembered, it may be imagined what a busy scene the wharves at New Orleans present.

WHEN you are an anvil, have patience; when you are a hammer, beat straight.

GOOD CORN CROP.—Whilst on the subject of farming, and to show what *can* be done by perseverance, we will state a case that has come within our own observation. J. J. Scofield, Esq., has a farm about a mile from town, which he has tilled as a farmer ought to. That portion which is not in peach trees is under fine cultivation, and a rotation of crops is resorted to. On one lot he resolved to measure the quantity of corn raised thereon. R. K. Tuttle, Esq., surveyed the land, and found it contained two acres and eighty-one hundredths. The crop measured two hundred and fifty bushels shelled corn, averaging *ninety-one bushels and eight-tenths* of shelled corn to the acre! This is farming to some advantage, as no extra care or attention was paid to this field over those adjoining. Would our farmers but till *less* land than many of them do, and keep it in better plight, they would in return reap heavier crops at much less expense.—*Morristown Jerseyman*.

TAKE CARE OF YOUR SHOES.—At the breaking up of winter you will need good sound shoes or boots, more, even, than in winter. We have used the following mixture, and think it better for making water-proof shoes than any other. We also give the price of the material, just as we obtained them at Craighead's Drug Store:

One pint boiled linseed oil, 15 cents; two ounces beeswax, 4 cents; one ounce of rosin, 4 cents; one ounce oil of turpentine, 6 cents—making 29 cents.

Two ounces of copal varnish would give this mixture some lustre, and cost six cents. Cover the soals, seams, and upper leather with it, when well melted together; dry it in by a fire and cover again, until the leather is filled. Your boots will last longer, the leather will be soft and impervious to water.—*Western Farmer and Gardener*.

SHEEP.—Sheep should not run or be fed with any other stock. Cattle hook them, colts tease and often injure them. It is often said that "colts will pick up what sheep leave." Well managed sheep rarely leave anything—and if they chance to, it is better to rake it up and throw it into the colts' yard, than to feed them together. If sheep are not required to eat their feed pretty clean, they will soon learn to waste large quantities. But if sheep are over-fed with either hay or grain, it is not proper to compel them by starvation to come back and eat it. They will not unless sorely pinched. Clean out the troughs—or rake up the hay, and the next time *feed a little less*.—*Valley Farmer*.

From the Farmers' Library.

**Potatoe Rot--James Gowen's Letter.**

Mount Airy, Dec. 29th, 1845.

MY DEAR SIR,—Your note on the subject of "The Potatoe Rot," dated Saturday, did not reach me at Mount Airy—Sunday intervening—till this morning, Monday. It would give me pleasure to oblige you fully in this matter, did time permit to go more into detail; but the brief space allotted for a reply, will compel me to be as concise as possible.

I hold that atmospheric influence is the sole cause of the late pervading rot in the potatoe; that neither manures nor condition of soils could have produced the calamity; that animalculæ and fungi are as remote from it—the latter may in a partial manner injure a potatoe plant, as they would, under peculiar circumstances, be likely to injure other plants; that the rot is *not* epidemic; and I have reason to believe that sound or *partially* sound potatoes, taken from a diseased crop or heap, will, if planted, produce healthy, sound potatoes, in the absence of the cause which injured them the previous season.

I would therefore encourage the farmers to cultivate their potatoes as formerly, choosing the soils and applying the manures which hitherto were found best adapted to their culture; forgetting or overlooking the rot altogether, and disregarding the nostrums recommended for its prevention: the potatoe won't bear doctoring.

The weather which produces rot is either a severe, continuous drought of some weeks' standing, thereby preventing the natural growth and maturity of the potatoe, for the want of moisture, or very hot weather, bringing the potatoe to a premature ripeness, succeeded by wet, sultry weather, unnaturally *spring-like*, which provokes the tubers to perform the functions of seed, thereby dissolving the connection between them and their vines; the vines die; the roots undergo an incipient fermentation preparatory to decomposition: the operation of budding or growing is checked by the natural autumnal temperature that at length prevails, which arrests the potatoe in its work of producing, and hence its deterioration. The latter condition of the weather is the prevailing cause of the rot.

As to a severe and continuous drought, my own experience points to that of 1838. That season I had a five-acre patch in with potatoes, which did not pay for the trouble of taking them out of the ground. They were small, ill-shaped, bad-tasted, poisonous, spotted and black-hearted, and rotted in cellar. Potatoes that season sold as high as \$1 25

and \$1 50 per bushel—not a bushel of good potatoes at market, except those imported. Then as to dry, hot weather, succeeded by wet, close, over spring-like temperature, the season of 1843 is in point. I took more than common pains that year to produce a surpassing yield, equal, at least, to my famous crop of the preceding year, which was over 440 bushels to the acre—field culture. My seed was in part from those fine potatoes, and in part from some very large, sound potatoes imported from the State of Maine. On taking out the crop in October, the whole was found to be very badly diseased. The weather, from the latter part of June till the beginning of September, was mainly hot, occasionally very hot and dry. September set in with warm rains, thunderstorms and gusts; the moisture and closeness unprecedented; fruit-trees blossomed, as well as many flowering-trees and shrubs; I recollect making a large collection of flowers from the magnolias, some of which I sent to the editor of the "Pennsylvania Inquirer." My potatoe vines looked green and healthy, when all of a sudden they changed colour, drooped and died. I think if I had taken out the potatoes at that juncture they would have proved comparatively good; but they were permitted to remain quite a month after, when they were found badly rotted, tainted, and almost worthless.

Now then, as to the epidemic. In 1844, I planted some four to five acres of potatoes, the seed of which was *principally culled from the diseased crop of 1843*. I planted, also, at the same time, in the same field, other seed of very sound potatoes brought from Maine; they all did equally well; I *could discover no difference*; the crop was a very fair one, and the quality unexceptionable in every respect. I do not mean by this to encourage the planting of diseased or doubtful potatoes. It is safer to plant sound and perfect ones; but I am strong in the opinion that there is no danger of a diseased or tainted potatoe producing a diseased or tainted potatoe. It may, from its want of vitality, be very unproductive, make feeble shoots, the same as decayed potatoes from on ship-board after a long voyage, the heat and moisture of the vessel's hold having caused them to send out enormous shoots, impairing their vigor and producing rot. Such potatoes, when planted, never produce well as to size and quantity; but I have yet to learn that they ever produced a diseased potatoe.

Much has been said of potatoes becoming feeble and sickly from long and constant planting: there may be something in this; time will not permit me to examine it now.

I have, however, numerous sorts of seedlings produced from the apples of my very fine crop of 1842. I shall take occasion to present you with a few to send to some of your friends abroad.

By this you will see that I can offer no remedy or preventive for the rot. He that tempers the wind to the shorn lamb, can only control it. Should it again visit us, we can only exercise our best judgment by taking out the potatoes early—as soon as they exhibit signs of decay—laying them in thin layers in dry, cool situations, or otherwise, as circumstances may justify. Let the farmers go on and plant in confidence, as their best experience may teach, trusting for an abundant yield to that Providence who sendeth the early and the latter rain.

Very respectfully,

Your friend and ob't servant,

JAMES GOWEN.

WILLIAM PETER, ESQ.,

Her Britannic Majesty's Consul, Philadelphia.

### New Jersey.

*Extract from the Oration of Bishop Doane, before the Historical Society of New Jersey, at Trenton, January 16th, 1846.*

UNFOLD with me the map of the United States. Direct your eye along the sloping line of the Atlantic coast, until it reaches well nigh the centre. Select what seems the suggest, sunniest nook, in all that graceful sweep. Rest where a noble river makes almost an island with the ocean; washing its utmost length, and giving, to every pine that crowns the summit of its farthest mountain, a passage to the sea. It is the lot of our inheritance. Examine it more closely. See how the mountains rivet it upon the mainland, at the north. See how their tall and rugged peaks sink down and soften, in the gentle swells and genial valleys of the middle counties. See what a stretch of coast, until the vast alluvial vanishes away into the broad Atlantic. *Is there a question about climate?* I am satisfied that if the arc of highest points, for health, and comfort, and enjoyment, on the map of North America, could be described, it would sweep through New Jersey. There is no better test of this than in the abundance, and variety, and perfection, of its fruits. This was the theme of admiration with the earliest settlers of the country, and deserves to be so still. "I have seen orchards," one writes home, in 1680, "laden with fruit to admiration: their very limbs torn to pieces with the weight, and most delicious to the taste, and lovely to behold. I

have seen an apple tree, from a pippin kernel, yield a barrel of curious cider; and peaches in such plenty that some people took their carts a peach-gathering; I could not but smile at the conceit of it. They are a very delicate fruit, and hang almost like our onions that are tied on ropes." "My brother Robert had as many cherries this year as would have loaded several carts. It is my judgment by what I have observed, that fruit trees in this country destroy themselves by the weight of the fruit." This is a picture from the life, as all who hear me know. *Is the inquiry about agricultural productions!* What can be named, of food, for man or beast, in which New Jersey is deficient? Nay, and she never can be, if her farmers mind their business. Limestone and marl divide the land between them. The very rocks are made to fertilize the soil which lies upon them; or the mouldering shell-fish of the world before the flood, convert the worthless sand-waste into fields of smiling corn. Facilities of transportation, constantly increasing, rapidly equalize the land; and soon will bring it all into successful cultivation, while the river or the creek, the rail-road or canal, that spreads the lime or marl upon the fields, takes down the corn or wheat, the butter or the pork, to the insatiable market of the cities and the ports of foreign export. Such are the agricultural advantages of New Jersey, that the Massachusetts State Commissioner, now travelling in foreign countries, on inquiries in the line of his department, has habitually advised young men from the New England States to come and settle here; the climate and the soil yielding to equal labour a larger return of profit and of comfort, than in any other State in our whole Union. Nay, and old Ocean smiles, and yields his treasures for our culture. "The oysters" that one wrote, from Perth Amboy, in 1684, "would serve all England," are still there; and in plantations to supply the world. *Is the inquiry of our mineral resources?* They are innumerable and inexhaustible. Marble, of every kind and every quality. Slate, in abundance. Varieties of clay, for every use, up to the finest porcelain. A free-stone from New Jersey, rears at the head of the great mart of commerce in our Western world, a Christian church, of noblest, most impressive architecture; which, if it could, would lift the hearts of men up with their eyes to heaven. The richest ores of iron; copper in singular purity; rare stores of zinc. In very deed, "a land whose stones are iron, and out of whose hills thou mayest dig brass." *Are the results of useful arts the subject of investigation!* With such

a store of raw materials of every kind; with water power incalculable; with coal in inexhaustible supplies, lying at the very door; with skilful heads and vigorous hands to turn them all to best account, there is no branch of manufactures which is not, or may not be, made available to Jerseymen. Paterson, Newark, Belleville, Dover, Trenton, and Bridgeton, need but sufficient capital and enterprise to be our Manchester, our Sheffield, and our Birmingham. While, for commercial purposes, inland and foreign, our noble canals, our most efficient railroads, the majestic Delaware, the broad Atlantic—New York and Philadelphia, as much our ports as if they lay upon our waters, give us at once a vast home market, and the market of mankind.

### Raising Sheep at the West.

An opinion has been very prevalent for a long time at the East, that sheep can be fed nearly throughout the year on the natural pastures of the prairies. Though we have never entertained this opinion ourselves, yet we have been unwilling to speak of it without more definite information than we have hitherto had. We have made extensive inquiries on the subject recently, and have further testimony of some authentic written sources, and particularly from the editor of the *Prairie Farmer*, which induces us to state most explicitly, that all such opinions are entirely unfounded.

The herbage on the rolling prairie is frequently of a choice quality for grazing purposes, abounding as it does, in a variety of nutritious grasses, the wild pea, &c., &c. But this does not usually spring up in sufficient abundance to afford a full bite before May, and the first severe frosts of autumn injure it to such an extent, as to make it entirely worthless to sheep. A few days' pasturage on it, in this condition, will kill off sheep as rapidly as rot. Excepting some three or four of the summer months, then, the prairies are worthless as sheep-walks, and other sources than the natural pastures must be provided for them. This can only be done by preparing sufficient pasturage from the cultivated grasses. On these they can subsist as on similar pastures elsewhere; but the rigors of the cold weather will render ample provision necessary for the late fall, winter, and early spring months, as with us. Good grass, straw, pea or bean vines, grain and roots, are just as essential to the health, thrift, and production of sheep on the prairies, as in similar latitudes at the east.

The profits of sheep-raising at the West must, therefore, be reduced to an approxi-

mate level with those elsewhere. Then the low price of land is in their favour; here, proximity to market, and the higher price of mutton, give us a decided advantage; and the improvements made here in fences, roads, buildings, &c., may well nigh neutralize the difference in the first cost of land. Certain it is, that the advantages of sheep-raising in the West are not such as to alarm our Eastern shepherds, from an apprehension that their business will be taken out of their own hands. It is now, and probably will continue to be a lucrative occupation with our Western husbandmen, and as such, should enter largely into their arrangements; but its monopoly can nowhere be secured, we believe, on this continent.—*American Agriculturist.*

### Sketch of the Corn Laws.

A SHORT summary of the history of the Corn Laws cannot fail at this moment to prove interesting. The first act for regulating the rates of duty, was 13th Geo. III., c. 48. Previous to the passing of that act, the statutes or orders in Council on the subject were rather dictated by circumstances, such as prosperous and deficient harvests, than any intelligible and settled principles. Usually, a greater quantity of corn was grown than was required for our own consumption. When there was a scarcity the exportation of all kinds of grain was prohibited, and even bounties offered for importations from abroad. When, on the other hand, there was a glut in the country, bounties were offered for its exportation. From an early period, certainly as early as the reign of Henry VI., the principle of protection to home-grown corn, has been invariably maintained by our legislature. In the reign of James I., the importation of foreign wheat was prohibited when the price in the English market was below 32s. per quarter; and in the reign of Charles II., when the commerce of England became more extended, it seems a complete sliding scale was established, the duty on foreign wheat being 16s., when the price here was 53s. per quarter or under; 8s. when between 53s. and 80s.; and when above the last price all imports to be allowed free. The same line of policy may be traced pervading the whole of the succeeding changes in the laws until 1773, when they assumed a more constant and regular shape. By the act of 13 Geo. III., the duty was 24s. 3d., when wheat was under 50s. per quarter, and when the price was at or above 54s. the duty was 6d. These rates seemed to have been fixed with a view of keeping the price of wheat as nearly as

possible at 50s. per quarter—which, regarding the greater value of money in those days, would probably be about equal to 65s. the quarter at the present time. Shortly after the commencement of the last great war the pivot was raised, and when the price was below 63s. per quarter, the duty on foreign wheat was 30s. 3d., falling to 7½d. when the price reached 66s. These duties were advanced soon afterwards, and in 1815, Mr. Robinson succeeded in passing an act absolutely prohibiting the importation of foreign wheat until the price in our markets had been, for three consecutive months, above 80s. per quarter. Another law was passed in 1822, prohibiting the importation of foreign wheat when the prices were at or under 70s. per quarter; admitting it when between 70s. and 80s. at a duty of 12s.; when between 80s. and 85s., at a duty of 5s.; and when above 85s. at a duty of 1s. This law, however, never came into effect, as it was provided that its operation should be delayed until wheat rose above 80s. per quarter, which did not occur before another alteration took place. Early in 1827, Mr. Canning brought forward a series of resolutions for the purpose of forming them into a corn law. He proposed a sliding scale, nearly similar to the one afterwards carried by the Wellington cabinet, and which remained in force until Sir Robert Peel's bill in 1842, which now regulates the admission of foreign corn.—*English Paper.*

#### **An Experiment with diseased Potatoes.**

THE *New England Farmer* copies the following from the London Agricultural Gazette:

I have great satisfaction in giving the result of an experiment that I have instituted here, amongst others, which has proved in every way effectual in stopping the progress of the disease; and if the disease has not gone so far as to have affected the whole of the skin, or outside of the potatoe, and consequently destroyed all the eyes, will render them safe to be used as sets for a future crop.

The potatoes were carefully sorted, keeping the sound ones separate from those that were diseased, some of the latter being so bad that their whole surface was affected with it, and a tally put to each sample, denoting their particular condition. A quantity of the common quick-lime of this neighbourhood being put into a large shallow tub, water was added in the proportion of about three gallons to every stone—14 lbs.—of lime, and well mixed; the potatoes were put into a wire riddle, and just dipped into

the mixture, keeping it well stirred, until all were done. This was in November: a few of each sample were put into a hot-house, to see what effect the lime had on their eyes. They soon became excited, burst through the lime, and produced vigorous sprouts. A few of each were also boiled, but their flavor was not in the least affected.

The effect of the lime is evidently to arrest the disease at once, by its powerful caustic or antiseptic property, and it absorbs from the tubers the superabundant moisture which they contain, and consequently prevents further decomposition. Having frequently examined them, I can confidently assert that the disease has not made any progress whatever since the application. They were affected with the disease in every stage of its progress, between the sound and rotten potatoe, and in every case it has proved effectual in stopping it, as is easily seen when they are cut; while those of the same sorts, not subjected to the process, and placed exactly under the same circumstances, show every sign of progressing decomposition, and some have entirely rotted.

The advantage and importance of this remedy, are, therefore, very great, as the diseased potatoes are rendered fit for sets. I shall have no hesitation in planting them in the spring for a general crop, and in fact, intend them for this use.

I would strongly recommend the process to be at once adopted by any person who has any unsound potatoes in his possession, as I feel confident it will put a stop to the progress of decay.

I would also recommend every person to dip his sound potatoes, intended to be planted, in the same mixture, only adding about one-fourth more water to the same quantity of lime.—*Joseph Paxton, Chatsworth, Dec. 30th.*

**SIMPLE METHOD OF FILTERING.**—The waters of the Wangho and Yang-tse-kiang, in China, are highly surcharged with mud, the former containing one-seventeenth part, and the latter one ninety-sixth of earth. This renders them both unpleasant and unwholesome to drink. Cunningham, the writer, informs us that the Chinese have adopted a very simple remedy for this evil, which it behoves any one who may chance to visit muddy streams, to remember. Into about a quart of water they throw a small pinch of alum, leaving it to stand a few minutes; it becomes as clear as crystal, a considerable sediment being found at the bottom. The poorest fisherman is always provided with a small portion for this necessary purpose.

**Papers read at a late Meeting of the Farmers' Club.**

PROFESSOR LIEBIG has justly attained a high standing in that part of human science, which relates directly to the important art of providing food from the culture of the earth. It is desirable that such parts of his work as are plain to ordinary comprehension should be as extensively circulated as possible. The whole work requires previous knowledge in a reader to be duly understood. We will make occasional extracts which to us seem best suited to our common farming pursuits. Liebig says:

"It must be admitted as a principle of agriculture, that those substances which have been removed from a soil must be completely restored to it; but whether this restoration be effected by means of excrements, ashes or bones, is in a great measure a matter of indifference.

"The time will come when plants growing upon a field will be supplied with their appropriate manures prepared in chemical manufactories! When a plant will receive only such substances as actually serve it for food—just as at present, a few grains of quinine are given to a patient afflicted with fever, instead of the ounce of wood which he was formerly compelled to swallow in addition."

*Artificial Manure by Liebig.*—An address to the agriculturists of Great Britain, explaining the principles and use of his artificial manure, by Professor Justus Liebig.

In Muspratt & Co's preface it is stated that this eminent chemist has obtained certain compounds, which are of such a nature that different states of moisture in the atmosphere, in different localities, will not diminish their efficacy. That he has found means to give to every soluble ingredient of manure by its combinations with others, any degree of solubility without altering its effect on vegetation. He gives for instance the alkalis in such a state as not to be more soluble than gypsum—the mixture of the manures has been adapted to the mean quantity of rain in England. The manure which is used in summer has a greater degree of solubility than that used in winter.

Taking the importation of bones for the last ten years at one million of tons, in which phosphoric acid is supplied in sufficient quantity for twenty-five million tons of wheat, to have increased the fertility of the fields in the right proportion, eight hundred thousand tons of potash ought to have been added to the million tons of bones in a suitable form.

*Experiments of Boussingault.*—For cen-

turies in Hungary, wheat and tobacco have been cultivated on the same field without any supply of nitrogen. Is it possible that this nitrogen can have had its origin in the soil? Our forests of beech, chesnut, oak, are rich in nitrogen. The source of it can only be in the atmosphere.

From the known quantity of common stable manure which Boussingault put every five years upon his field—four Hessian acres—he estimated by the chemical analysis of the manure, the total quantity of nitrogen furnished for the rotation of the five years. The result was, on nice examination, that the nitrogen used up by the crops did not come from the atmosphere, and that all the plants got, was from the manure. But some plants do obtain their nitrogen from the atmosphere, and Boussingault says they are the leguminous plants. Liebig does not agree to this doctrine. The meadows of Holland for centuries have produced millions of hundreds weight of cheese—all this does not diminish the productiveness of the meadows, although they have never received more nitrogen than they originally contained. Hence we cannot augment the fertility of our fields by manures rich in nitrogen or with ammoniacal salts alone. The crops diminish or increase, in exact proportion to the diminution or increase of the mineral substances conveyed to it in manure.

With respect to ammonia, the experiments of Faraday prove that there is an unknown cause of the formation of ammonia. That as it is known that it is a constituent of air; that it is present wherever air is found; that it is a coercible gas which is condensed on the surface of solid bodies in much larger proportion than air, and further, that it exists in distilled water; these and other still more incomprehensible experiments of Faraday are explained in a simple manner.

For an examination of rain water it was found that out of 77 analyses made of rain water of thunder-storms, 17 contained more or less of nitric acid, partly in combination with lime, and partly with ammonia. In the other 60, only two contained traces of nitric acid. But it does not appear from careful analysis made by Boussingault in South America, where heat and thunder-storms are abundant, that more nitric acid exists in those waters than in the temperate zones, where from eight to ten thunder-storms are an annual average.

The sun-flower and tobacco, and some other plants contain considerable quantities of nitric, while other plants on the same soil have none.—*New York Farmer and Mechanic.*

**Extracts from an Address**

*Before the Agriculturists' and Mechanics' Association of Louisiana, January 5th, 1846; by T. B. Thorpe.*

"The foundations of productive wealth, may be said to rest upon the pursuit of agriculture and the perfection of the mechanical arts. Commerce, superficially, seems to be productive over the tilling of the soil, yet it is not the case. There is something attractive about the large city, the crowd of ships, the well-filled stores, and the state of the successful merchant, that belongs not to the more quiet pursuit of agriculture. The wealth of the soil, however, when understood, amazes; it seems impossible, that grains and grasses, that so quietly perfect in the sunshine and rain, should bear among their trembling leaves, value, that the ever-yielding mines of Golconda and Potosi cannot purchase. The value of all the commerce Great Britain has with our country, is shown to be worth only 'her annual crops of oats and beans;' and 'the whole foreign commerce of Great Britain, in the pursuit of which she overshadows the ocean with her fleets, and plants her colonies in the most distant islands, is actually less in value than the annual grass crop of the British Islands.'

"Louisiana contains within her territory, we should judge, nearly as much cultivatable land as the Island of Great Britain, and by a moment's reflection, we can form some crude estimate of the capability of our State for great wealth. It is a startling thought, and yet it is a true one, that the whole population of the Union might comfortably subsist within the limits of Louisiana. We have been singularly blessed by Providence with every possible advantage. Our country is naturally level beyond the attempt of art; it is encircled and threaded by running streams, that need but little care to form them for every purpose of internal navigation. Upon our Southern coast, washes the sea; through our centre runs the great Mississippi. Our soil is beyond comparison, rich; our climate is free from the heats of the more tropical latitudes, and also free from the frigid blasts.

"The immense resources of our State are almost as undeveloped as they were on the discovery of our continent. We may be said to carry on our agricultural, and until recently, the mechanical arts, with almost rude simplicity. We have done, comparatively speaking, nothing for their improvement. There has been no concentrated action, no intelligent discussion among our

citizens for the general good. The planter has pursued his business, his plantation his little empire, and beyond the lines of his own boundaries, he has seldom gone in pursuit of pleasure or information.

"Agriculture finds a right hand in the mechanical arts. The genius of Whitney added to the value of cotton a thousand fold, by reducing its price and extending its cultivation. The intelligent action of the never-tiring spindle, gives to the richest and poorest of our citizens an apparel that kings could not command, in the historically glorious days of Alfred or Charlemagne. The researches of Packwood and Rilleaux have made sugar, beyond question, a permanent, profitable, staple of our State. Science has overcome the disadvantages of climate, the vacuum-pan detects sweets in the frosted cane, that a few years ago was left in the field as worthless.

"The mechanical arts assist and ameliorate agricultural labours, from the mighty steam-engine, with its multifarious offices, through every contrivance, down to the simple gin-band. In the support of this Association will the mechanical arts find the fittest place for representation. Here should be annually exhibited its improvements, and its new offices. Here should be displayed its wonderful results, and the busy hum of its wheels, as it performs its various functions, should here greet the assembled citizens of our State."

**Potatoc Jelly.**

THE readiness with which a good-sized basin-full of thick jelly may be procured from a single moderate sized potatoe, is a fact worth knowing. I have several times repeated the experiment, and find that it does not require more than eight minutes to change a raw potatoe into a basin full of most excellent jelly, which has only to be seasoned with a little sugar, nutmeg, and white wine, to please the most fastidious palate. To obtain this jelly in perfection, let a potatoe be washed, peeled, and grated; throw the pulp thus procured, into a jug of water and stir it well. Let this stand for a few minutes, and a sufficient quantity of starch will fall to the bottom for the purpose required—pour off the water, and then keep stirring up the starch at the bottom of the basin, while boiling water is poured upon it, and it will soon and suddenly pass to the state of a jelly. The only nicety required is to be careful that the water is absolutely boiling, otherwise the change will not take place. Mr. Darwin has recorded an instance of some of his attendants being unable to boil potatoes

above a certain height on the Cordileras, owing to the diminution of pressure not allowing the water to become sufficiently heated before it boiled. There may possibly be some connexion between the conditions under which potatoes can be boiled, and their starch converted to jelly. Upon comparing this jelly with that from the starch called arrow-root, and obtained direct from Bermuda, I find a difficulty in my own person in discriminating between their flavour, though an invalid in the habit of eating arrow-root. The difference, however, becomes more sensible when both jellies are made palatable with sugar, &c., for then, both the invalid—myself—and another person were equally decided in our preference of the jelly from the potatoe to that from the arrow-root, the latter possessing rather a mawkish flavour, as though it had been prepared with smoky water. I know not whether medical men are able to point out any real difference in the composition of starch obtained from potatoe and that from the arrow-root, or whether past experience has shown them that the one is a more nutritious food for the invalid than the other; but, certainly, arguing *a priori*, and with no wish to give them an opportunity of trying the experiment upon myself, I am inclined to think, that sending to Jamaica for arrow-root starch, at 2s. 6d. to 3s. a pound, is a most superfluous extravagance, whilst we can manufacture that from potatoe at home for about  $\frac{1}{2}$ d. or a 1d.—*Ex. Paper.*

From the North Carolina Farmer.

### The Old North State, versus Oregon and Texas.

MR. EDITOR,—

SIR,—We do not boast of "*tall things*," as do some of our neighbours in this vicinity, but we believe we can tell a story equally important and interesting to our brother farmers of the "Old North State."

I have this day finished housing my corn crop, and I find that, from the labour of sixteen hands, I have made twenty-four hundred barrels—12,000 bushels—of good merchantable corn, besides other crops, the larger part of which crop was made on redeemed swamp lands, which have been under cultivation only three years.

Of such land as this the State has thousands of acres in this county, which the Literary Board would be glad to sell at a very low price, and which, if brought under cultivation, would, under favourable circumstances, yield an annual income of twenty to twenty-five dollars per acre. If our

friends in the western part of the State were fully aware of the value of these State lands, and the pecuniary advantages offered to purchasers, instead of leaving our good old State and emigrating to Oregon, Texas, or California, we should find them wending their way to the east, to reap from her generous soil the rich reward of their labour. We invite our friends of the western part of the State who have been casting a longing eye to the "Far West," to come and see if some good things may not be found in "Old Hyde."

DAVID CARTER.

Hyde co., N. C., Jan. 14th, 1846.

THE VOICE.—Voice is one of the most striking evidences of the Creator's power. How wonderful it is that so many millions of persons should exist, and no one voice should exactly resemble another. To our finite ideas it appears reasonable that the same organs should produce the same sound: it is thus in other animals; in birds and in music; but for man's convenience and increase of pleasure, it is otherwise; the great and beneficent Creator, in his labour for our comfort and happiness, has not overlooked the sound of a voice. Of all the variations of which the human voice is capable, perhaps it is never so grateful to the ear as when venting itself in sympathy; the utterance of gratitude is pleasing when we may have been so happy as to have it in our power to confer a favour on another, but from it we would oft times escape; the tones of gladness may intrude in our melancholy moments, and increase, instead of lighten, our sorrows; the voice of praise may even pain, for we may fear it to be flattery, or feel it to be undeserved—the utterance of pity may wound where it is intended to heal, but that of sympathy must make its way to the heart. There is something in our natures which seeks a corresponding feeling, let that be either of joy or woe.

LIME has been used in agriculture many hundred years, and on every variety of soil, and always with beneficial effects, when judiciously applied. In England, recently, large tracts of country, which had been rented with difficulty at five shillings per acre, have been rendered worth thirty or forty shillings per acre, by the application of lime alone.—*Southern Agriculturist.*

WHEN the weather is pleasant this month, prune your grape-vines.

## Coal Ashes.

*Conversation at the Farmers' Club, from the N. Y. Farmer and Mechanic.*

*Roswell L. Colt*, of Paterson, requested Mr. Wakeman to call the consideration of the Club to the question, whether the ashes of Anthracite and Bituminous coal are useful as a manure?

*Dr. Underhill*, of Croton Point.—I have thought of that for some time. It is important to decide, for the quantity of the ashes is great and greatly increasing. I have tried experiments with the ashes, and found little benefit, except on my tomatoes, planted in a sandy, gravelly soil; on these the benefit was very striking—on other plants I noticed but little effect.

*Mr. Meigs*.—Analysis shows that the ashes of the Anthracite coal is composed of some fifty-three per cent. of silix,—flint—and thirty-six of Alumina—clay—some magnesia, iron manganese. On a clay soil the silix would be useful—on a sandy soil, the clay would be so. Pure beach sand is well applied to clay soil—the benefit is chiefly mechanical. The particles form that degree of looseness in soil which permits the more delicate roots to penetrate. A very small portion of this silix—flint—is chemically developed in the external coverings of the stems of wheat, &c. This wonderful coat of flint, surpassing in its delicate formation, all human conception, is necessary to defend the interior of the plant, and sand should be put upon and mixed with certain stiff clay soils, and clay upon the sandy soils.

*Mr. Wakeman*.—Read Johnson's Analysis of the coal ashes, containing like results.

*Dr. Field*.—I have considered the coal ashes to be very worthy of notice. They have been neglected. They contain no article that it is not useful—acting chemically as well as mechanically in the growth of plants. They are good absorbents of the gases from the air, and in kindling these coal fires a large quantity of wood is necessary, the ashes of which, mixed as they are with the residuum of coal, are fertilizing. Thomas Addis Emmett of New York, uses coal ashes with great benefit to his soil, which is heavy, wet, requiring drainage. He has a highly cultivated garden in which the ashes are used.

### Degeneration of Potatoes.

It has been repeatedly asserted that the reason why the potatoe is now suddenly attacked by a malady, which at one time threatened its extinction, is that it has de-

generated; and on all sides we hear of recommendations that new varieties of the potatoe should be immediately raised from seed.

In this, as in all other matters, it is easy to make assertions; but before we give assent to them, we must ask for some proof of their truth. Do the gentlemen who clamor for new varieties, know which are the old varieties now cultivated, and which the new? Have they any proof that the old varieties have suffered in any peculiar degree, or that the new varieties have escaped? Can they point out any one instance among potatoes in which facts support their views? We think not.

*Dr. Maclean*, a gentleman skilful in all horticultural affairs, raised but the other day, a seedling potatoe of great vigor and excellence: its production is so recent that but few persons yet possess it at all. With this variety, a portion of an old meadow newly trenched over, near London, was planted in the autumn of 1844 and spring of 1845: no manure being used. The crop was so much attacked by the disease, that not a single potatoe was found worth preserving.

In reality there is no proof in any part of the vegetable kingdom, that the races of plants wear out. Such an opinion was entertained, indeed, by the late Mr. Knight, and his views have been adopted by some physiologists. Yet there is not only no proof of their correctness, but the strongest presumption to the contrary. It is superfluous to say, that the Golden Pippin apple is the instance on which this theory mainly turns. It is said that it has worn out, and can no longer be cultivated. But the Golden Pippin still appears abundantly in Covent Garden market; trees as healthy as ever are to be found in this country; we ourselves have seen it in Ireland, where there are no symptoms of its decrepitude, and in Madeira it is in robust health. The wearing-out theory, therefore, falls to the ground.—*Gardeners' Chronicle*.

**EARLY POTATOES.**—One word on a mode of planting potatoes for very early crop. I cut off the crown of the potatoe—where the most eyes are—about one quarter of the potatoe; these I put in boxes at this time of year, with earth about as deep as we commonly plant them. I eat the other parts of my potatoes. These crowns put out roots—begin to vegetate, and as soon as I can set them out in the open air, I do so, and have potatoes from them for my table by the middle of June, nearly one month earlier than common.—*Farmer and Mechanic*.

### Introduction of the Alpaca into the United States.

We have observed with pleasure the intention of the American Agricultural Association, at the suggestion of R. L. Pell, of Ulster county, to introduce the Peruvian sheep, or Alpaca, into the United States. This animal inhabits the slopes, table lands and mountains of Peru, Bolivia and Chili, enduring all the vicissitudes of climate. They are found 12,000 feet above the level of the sea, where they derive a subsistence from the moss, &c., growing upon the rocks, exposed to all the rigors of the elements, and receiving neither food nor care from the hand of man. The shepherd only visits them occasionally; yet such are their gregarious habits, that the members of one flock seldom stray away and mix with another, being kept in discipline by the older ones, who know their grounds, and become attached to the place of their nativity, to which they return at night, evincing an astonishing vigilance and sagacity in keeping the young ones together, and free from harm. Hence there is no need of branding them. So great is the intelligence of some leaders of a flock, that much value is on this account attached to them by their owner,—part of whose duties they perform. These animals, says William Walton, are found on the snow-capped mountain Chimborazo, 11,670 feet above the sea. In this tropical region excessive heat is experienced in the month of August during the day, and towards evening the thermometer regularly falls many degrees below the freezing point, and the next morning rises from eight to twelve degrees above it,—all of which great changes they endure perfectly well. In other parts of the Andes mountains, during half the year snow and hail fall incessantly; whilst in the higher regions, as before noticed, every night the thermometer falls many degrees below the freezing point, and the peaks consequently are constantly covered with an accumulation of ice. The wet season succeeds, when lightning flashes traverse the clouds in rapid succession, followed not by showers, but by torrents of rain, which after collecting, fall headlong from the rocks, leaving the slopes almost bare of soil, and spreading desolation wherever they pass. Still the Alpacas abound and thrive. Their teeth are so strong that they can easily crush and masticate vegetable substances too hard and tough for ordinary cattle. In the formation of their stomach they resemble the camel, and can undergo extreme hunger and thirst. Their meat is tender, wholesome and savory, and

in that country is recommended by physicians to invalids, in preference to fowls—for all declare that their meat is extremely wholesome, and as palatable as that of fat sheep in Castile. Mr. W. further remarks, that in his time there were shambles in the Peruvian towns where it was constantly sold. The quality of Alpaca meat could not fail to be good, when the cleanliness of the animal and nature of its food, and neat and delicate manner in which it feeds, are considered. They eat the purest vegetable substances, which they cull with the greatest care, and in habitual cleanliness surpass every other quadruped. The hardy nature and contented disposition of the Alpaca, cause it to adapt itself to almost any soil or situation. The best proof of its hardiness is its power to endure cold, damp, hunger, and thirst,—vicissitudes to which it is constantly exposed on its native mountains; while its gentle and docile qualities are evinced in its general habits of affection towards its keeper.

No animal in the universe is less affected by the changes of climate and food, nor is there any one to be found more easily domiciliated than this. Another remarkable feature in the Alpaca is, that it does not transpire; for which reason, and its peculiarly cleanly habits, the fleece does not require washing before it is taken from the back. Although often confined to regions where

“ Snow, piled on snow, each mass appears  
The gathered winter of a thousand years.”

The Alpaca is free from all diseases incidental to common sheep. The chest is guarded by a collosity which comes in contact with the ground while the animal reposes, and protects it from catarrhs, or other disorders disabling the limbs. In whatever point of view we contemplate the properties and habits of this animal, it will be found suitable stock for all our western and northern States; waste and unprofitable pastures would suffice them; they would browse on wild grasses and herbage that sheep and cattle reject.

They will yield 12 to 15 pounds of wool, which is suited for the finest class of goods, and calculated to compete with silk. It is almost as fashionable now as that fabric, being worn by her Majesty Victoria. In 1834 the quantity of Alpaca wool imported into England was 5,700 lbs., valued at \$16 per quintal—in 1842, to July 9th, 1,200,000 lbs., valued at \$25 per quintal—up to 1844, 8,657,164 lbs. were imported into Liverpool alone, valued at \$30 per quintal. In France the wool is used instead of Angora for cashmeres and merinoes. It has been proved to

be admirably well suited for mixed goods; and so firmly is its reputation now established, that there is every certainty of a growing demand, to meet which an additional quantity will annually be required. It is supposed that owing to neglect of the inhabitants of Peru, there has been an enormous decline in the number of Alpacas, which will eventually render them difficult to be obtained. We would therefore urge strenuously gentlemen of wealth—manufacturers—merchants—and agriculturists—and in fact all who feel an interest in the welfare of the country, to come forward at once and assist the Society in an undertaking so worthy of all praise. We understand the cost of bringing out three hundred will be \$10,500, delivered in New York; of which sum three thousand have already been promised. We sincerely hope those engaged in an enterprise so noble will not allow the matter to flag.—*New York Journal of Commerce.*

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For the Farmers' Cabinet.

#### Ploughs—Ploughing.

MR. EDITOR.—That Mr. Paschall Morris's theory on cultivation is correct, we have the fullest evidence in his crop of 110 bushels of corn to the acre—see page 115—while the very apt observation in your editorial—see page 225—at the conclusion of the article by "JOSEPHUS,"—"A man's own experience on his own crop and on his own land, is certainly preferable to that of others on other land, and consequently, under other circumstances," sustains him in his position.

But he should inform your readers of the cause of the difference between the Moore Plough and the Prouty Plough, to which he attributes much of his success; while the remarks of your correspondent Mr. Stapler, go to prove the fact, seeing that "others who had planted their corn as well, and had tended it better," were far short in produce. Now the difference is just this: the present "improvement" in the Moore Plough—for it is by no means his plough of the last year or the year before—lies in the concave mould-plate, which, as has elsewhere been remarked, operates upon the principle of the screw, and can only lay the furrow smooth, not being adapted either for ploughing deep and heavy soils, or pulverizing the land. It is, in fact, the Beech Plough in principle; with which so many are acquainted, and which has long been in use in the light lands of Jersey: but let any one go over to Samuel Rogers's farm at Mantua Village, and examine the corn ground that was ploughed by the Prouty Plough during the

three days of the Philadelphia Exhibition, with a furrow fifteen inches wide and eight or nine inches deep, and he will see the difference, for he will find the land lying so light and dry, after a winter's exposure, as to admit of cropping long before any other land in the neighbourhood can be entered upon.

Permit me in conclusion to observe, there is one crop which your correspondent "OBSERVER," has not enumerated, for which the Prouty Plough is peculiarly well adapted—I mean potatoes. Let the farmer spread his land with manure, throw out a furrow, and plant his sets after the plough, and afterwards, in every alternate furrow, say at 23 or 24 inches apart, raking the manure from the next two furrows in width on the sets—which will then have all the dung—spread the surface after planting with lime, and harrow the land just as the sets appear above ground, flat hoeing the crop once afterwards, and all is done until taking up, for which the Prouty Plough will be found by far the best implement that can be adopted; the potatoes rolling out after the plough like eggs out of a basket, and saving one-half the labour in cultivation. W. D.

West Philadelphia.

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#### Productions of the West.

THE last number of the St. Louis Price Current contains some important statistical matter relative to the productions of the West, from which we condense the following information.

**Tobacco.**—The crop of the past season was probably superior to any ever produced in Missouri, and cultivators were well paid for their labour, as prices ruled high throughout the season.

**Lead.**—The production of this article is rapidly on the increase. The shipments from the Galena mines alone, the past year, amounted to 778,461 pigs, being an increase of 156,560 pigs over the previous year. The increased production at the lower mines has been in an equal ratio—the total product being estimated at 150,000 pigs. The actual demand has kept pace with the increased production; and the stock on hand at the close of the year amounted to only 34,500 pigs, which has nearly all changed hands, and is now on board to be sent forward on the opening of navigation.

During the past year it opened at \$3.15 a 3.20, and closed at 4.00 a 4.12½ per hundred. In the latter part of May the market became depressed, and rates receded to 2.95 a 2.98, but soon after recovered, and with occasional

slight checks, continued to maintain an upward tendency, until it reached present rates, say 4.00 a 4.12½ per hundred, with but a few pigs on sale. The total receipts from the Galena mines for the past five years, were as follows:

In 1811	463,404 pigs.
1842	473,599 "
1843	584,431 "
1844	621,900 "
1845	757,906 "

**Wheat.**—The crops of 1845 in this section—embracing the States of Illinois and Missouri, the territories of Iowa and Wisconsin—have been remarkably good, better both in quantity and quality than any crop since 1842. The quantity produced the past year in this section is, however, greatly over estimated by some of the Eastern papers—setting that of Illinois alone at eight million bushels for *export!* when the truth is, the State did not *produce* this quantity. The quantity of wheat received here this season, up to the 1st inst., is 986,096 bushels, and at the same period last year 803,738 bushels. We predict a great demand for this staple on the opening of navigation in the spring, but at lower rates than have been paid for some time past. This demand will be principally from the Ohio river, as it is now a well ascertained fact that the crop of that State—Ohio—is very little over what it was in 1844. The markets of Europe will not begin to *feel* the *want* of wheat and flour till April or May, and by that time the actual deficiency of bread-stuffs in all the Continental markets will have developed itself. The quantity of wheat here is estimated by some at 200,000 bushels! Our own opinion, founded upon considerable inquiry, is that there are not over 70 or 80,000 bushels in the market, including all in the millers' hands, and we question whether true statistics can make it over 50,000 bushels. The comparative receipts for the past three years, were as follows:

	bbls.	sacks.
In 1843	70,777	131,427
In 1844	54,887	257,632
In 1845	77,150	382,323

**Pork and Beef packing.**—The season opened late, and operations have been much retarded by bad roads and the impassable state of the river, checking the free arrival of the raw material, yet some 12 a 14,000 hogs and 23 a 2500 beef cattle have been packed, and from engagements already made, it is estimated that the entire business of the season will amount to near 25,000 hogs, and 6,000 head of beef.

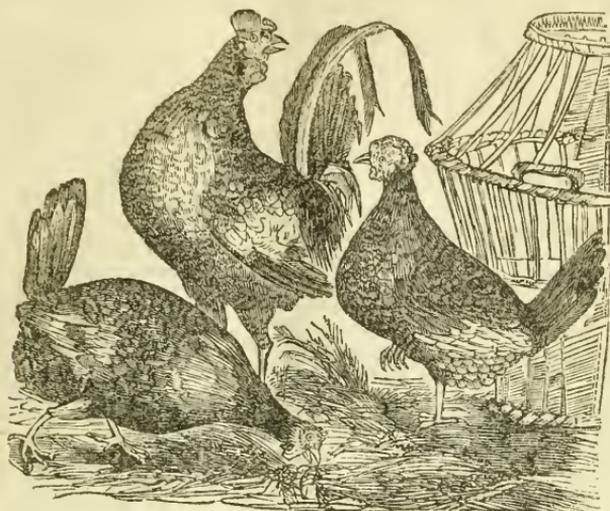
### Air Churn.

THE Bishop of Derry has invented an atmospheric churn. Instead of the present unscientific mode of making butter by churning, his Lordship accomplishes this measure by the simpler manner of forcing a full current of atmospheric air through the cream, by means of an exceedingly well-devised forcing pump. The air passes through a glass tube connected with the air-pump, descending nearly to the bottom of the churn. The churn is of tin, and it fits into another tin cylinder provided with a funnel and stopcock, so as to heat the cream to the necessary temperature. The pump is worked by means of a wince, which is not so laborious as the usual churn. Independently of the happy application of science to this important department of domestic economy, in a practical point of view it is extremely valuable. The milk is not moved by a dasher, as in the common churn; but the oxygen of the atmosphere is brought into close contact with the cream, so as to effect a full combination of the butyaceous part, and to convert it all into butter. On one occasion the churning was carried on for the space of one hour and forty-five minutes, and eleven gallons of cream produced 26 lbs. of butter.

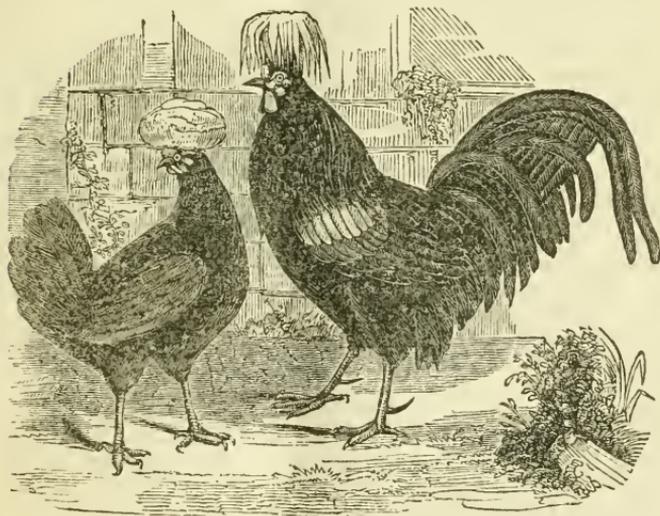
### Effects of Crossing on the Constitution.

THOSE classes of the human race which preserve their blood free from mixture with strangers, while they have less variety in external appearance, and perhaps less variety in the scope of mental capacity, than those who cross and recross at pleasure, have more endurance in action, firmer attachments to purposes, and less desultory impetuosity. This is a physical truth. The explanation of it is difficult; but it may be illustrated and comprehended in some degree by those who study the animal fabric, and who are acquainted with the laws of animal economy. In brute animals—horses, sheep, and cattle—the mixture of different races is observed to change the qualities, to improve the beauty, and to enlarge the size; it diminishes the hardness and the security of the physical health. In man, the mixture of different races improves beauty, augments the volume of the bodily organs, and even perhaps expands the sphere of intellect. It diminishes the power of enduring toil, and renders the habit more susceptible to the causes of disease.—*Jackson's Economy of Animals.*

## DORKING FOWLS.



## POLAND FOWLS.



THE DORKING is a valuable and favourite variety in England, and takes its name from a town in the county of Surrey, where the breed is supposed to have originated, and where, and in its vicinity, they are still said to be found in great plenty and perfection. They have been but little known and scarce in this country until within a few years.

In size, Mowbray says, they rank in the third degree, in the largest of our fowls; well shaped, having a long capacious body and shortish legs, and should have five claws

on each foot. This is a distinctive mark, but of no advantage, but probably tracing their origin to the Poland; as it is said a Poland cock with a common white hen, will occasionally produce a similar bird. The absence of a fifth claw is not, however, considered a proof of a spurious breed. The genuine colour is of an ivory white; the flesh is good flavoured, of a yellow or ivory shade, and highly esteemed.

From the specimens we have seen, we have no reason to believe that colour is any

criterion of purity. The first we ever saw was a pair presented to us by Dr. Wright, of Boston, which he imported. The hen was of an ivory white, and the cock was a lead or hawk-coloured fowl. Since then we have seen some bred by Mr. Allen, of Black Rock, and Mr. Chapman, of New York, which were of various colours, but generally speckled. Our portraits were sketched by Mr. Rotch, from specimens in his yard, one of which was imported.

A gentleman in Boston, who has paid considerable attention to the rearing of poultry, says: "So far as my experience has gone, the Dorkings are *decidedly* the best breed for laying; the eggs come abundantly, and are of the largest size, except when they have been bred 'in-and-in,' too much. I have already seen the effect, and therefore hope to receive a new lot of Dorkings during the summer."

L. F. Allen says, in the American Agriculturist, "The Dorking is a fine large bird, weighing, when at maturity, five to eight pounds. They are large bodied, and of better proportion, according to their size, than any breed I have yet seen; their bodies being very long, full, and well fleshed in breast and other valuable parts. They are short-legged, thickly feathered, with fine delicate heads, both double and single combs, and a shining beautiful plumage. The colour of their legs is white, or flesh-coloured, having five instead of four toes, the fifth being apparently superfluous, and rising like a spur from the same root as the heel toe in the common varieties. They are most excellent layers, good and steady sitters, and kind careful nurses. Their colour is various—from nearly white to almost black, many of them beautifully variegated. They are the capon fowl of England, and are bred in great quantities for the luxurious tables of the wealthy classes in the counties about London. In America they are a scarce bird. I never saw one till the fall of 1841, when a friend by whom I sent, brought me out half a dozen from England; and although they were but chickens when they arrived, and from their long confinement on the voyage, miserably poor and full of vermin, they rapidly improved, commenced laying during the winter, and have thus far exceeded any other fowls I ever kept, in their good qualities. The young have proved very hardy, and easy to rear. The males, of which I imported two, are large strong birds, and the hens are all I could desire of them. Their eggs are of a large size, clear, white, and excellent in quality. For capons, they no doubt exceed all other fowls whatever, often

weighing, full grown, ten or twelve pounds. This variety I have determined to keep for my own purposes."

THE POLAND FOWLS, as they are generally called, were, according to English authors, said to be imported from Holland. Their colour is a shining black, with a white top-knot of feathers on the heads of both cock and hen. The head is flat, and surmounted by a fleshy protuberance, out of which springs the crown of feathers or top-knot, white or black, with the fleshy King David's crown, consisting of four or five spikes. They are not thickly covered with feathers as some other breeds, and still less so with down. The true breed is rather above the middling size; their form is plump and deep, and the legs of the best sorts are not too long, and most have five claws. The top-knot of upright, white feathers, covers so much of the head as almost to blind the eyes; indeed some require clipping, or they would become an easy prey to the hawks. The contrast of this perfectly white crest with the black plumage, is truly beautiful; but the top-knot of the cock differs from his hen, hers being broad and erect feathers, while his are narrow and hanging down in every direction, but they must be perfectly white, and the rest of the plumage perfectly black; broken colours, it is said by some, show a cross breed.

Mowbray says, "the Polanders are not only kept as ornamental, but they are of the most useful varieties, particularly on account of the abundance of the eggs they lay, being least inclined to sit of any other breed, whence they are sometimes called *everlasting layers*, and it is usual to set their eggs under other hens. They fatten as quickly as any other breed, and in quality similar to the Dorking; their flesh perhaps more juicy and of a richer flavor." They are a quiet, domestic fowl, neither quarrelsome nor mischievous, and their eggs of good size, fine flavored and thin shells. Mowbray states that his five Poland hens, in eleven months, laid five hundred and three eggs, weighing, on an average, one ounce and five drams, exclusive of the shells, making a total weight of 50½ pounds.

"The Poland is," says L. F. Allen, in the American Agriculturist, "a shining black in colour, with a beautiful white tuft on its head, a medium size, a good layer, seldom sitting to hatch; rather tender to rear while a chicken, and more thinly feathered and not so hardy in colds and storms as the common hen. In a great part of the United States it will thrive successfully, and lay as many eggs as any other fowl, perhaps more.

Its flesh is good. On the whole, a handsome and profitable fowl. There is a white variety, without a feather of any other colour. These are very beautiful, but not quite so hardy as the black. There is also a splendid gold and black, or pheasant colored variety. These are scarce in the United States. I have seen several beautiful specimens imported from England; but was never able to obtain any for breeding. These colors are more propagated by the poultry-fanciers than others, and are seldom to be had of them."

Mr. Giles, of Providence, who has paid considerable attention to the subject of poultry, in a letter to the author says, "if eggs be the only object in view, then as far as my experience goes, the Poland fowls are the best layers, seldom if ever wanting to sit."  
—*Bement's American Poulterer's Companion.*

### Ploughing.

THE first and most general operation to which the soil is subject, is ploughing. Man must have been early taught that, in order to render the earth productive, it must be tilled; and it would be extremely curious, if the materials of such history were attainable, to trace the progress of improvement from the first instrument employed to stir the earth to the present beautiful and ingenious implement, by which acres, and miles of acres, are at pleasure inverted. It would be interesting to know how the North American Indians cultivated their corn (maize) when the country was discovered; tradition has not preserved the traces of the method which they adopted. Their implements must have been few, and of the most simple description. The smooth stones, some of which I have myself found in places known as their favourite haunts, of a wedge shape, may have been used for digging the ground for the deposit of the seed, and perhaps for keeping the soil loose round the plants: near the sea-shore a clam-shell may have answered the same purpose. Of weeds, probably they had few to contend with, as the land was new and not surcharged with manure, of which perhaps they did not know the use, since, within the memory of persons now living, farmers in the vicinity of Albany were accustomed to cart the manure from their barns on to the Hudson when frozen, and in the neighbourhood of Montreal on to the St. Lawrence, that, at the breaking of the ice in the spring, it might be carried away by the stream. Even much more recently, in some parts of the country, farmers, when they have found the piles of

manure round their barns accumulated to an inconvenient size, have preferred to desert them, and build other barns, rather than be at the trouble and expense of removing these heaps. One is often amused at hearing people boast of "the wisdom of our ancestors;" and to be consistent, we should expect to see such persons adjusting the equilibrium of a bag of grain upon the horse's back by putting the corn in one end and a stone in the other.

When I come to treat of the implements of husbandry, I shall describe an English plough; at present I have to deal only with the operation itself.

I think I may say that, in England and Scotland, the art of ploughing has reached perfection, and that it is unrivalled and unsurpassable. This at least is my opinion, which must be taken at what it is worth. I cannot conceive how it can be improved; and this not in rare instances, and at ploughing matches, but I may say universally. In some cases, the work has been done better than in others; but I have not seen an example of bad ploughing in the country; I have not seen one which, in the United States, would not be pronounced superior.—*Colman's Agricultural Tour.*

For the Farmers' Cabinet.

### Cattle--Philadelphia Agricultural Society.

TO THE EDITOR,—It is matter of surprise to the great body of the agricultural community within twenty or thirty miles of Philadelphia, who take no active part, though they feel interested in the proceedings of the Philadelphia Agricultural Society, to find that the Society continues to devote so large a portion of its premiums, and so much of its attention to what it is pleased to term the "improved breed of cattle,"—which, however, means the "Durhams," par excellence. It is known that of the numerous butter dairies within the verge of the Philadelphia market, scarcely one is composed of Durhams, or indeed of any of the imported breeds; and that as a general rule, they are wholly composed of the native breed of cows, with no admixture of foreign blood, except in some instances where the owners have, by way of trial, introduced a few of the Durhams, generally half-blood; but in no instance within my knowledge has the experiment been so satisfactory as to induce a continuance of the practice; nor do I know of a single instance, among the many purchases made by our enterprising farmers, or presents received from the early patrons of the Durham cattle, of full-blooded calves,

where the animals after reaching maturity have been superior for butter properties, to the common stock; indeed, in a great majority of instances, the calves so raised, though receiving extra attention, have fallen short of the average value, for dairy purposes, of the native breed. The result however, is precisely in accordance with the experiments of the amateur breeders of the Durhams. You may examine their herds, and with a few splendid exceptions, it will be found that their milch cows, when tested by the product in the pail, do not exceed in value, if they equal, the ordinary cows of the country. Almost all the gentlemen who enter upon a career of fancy breeding, endeavour to obtain an animal remarkable for milking properties, which when obtained, proves to be an exception to a very general rule. It only requires a retrospective view of the few celebrated Durham cows that have given character in this part of the country to the whole race, to prove that not one of them has ever produced, so far as we have been informed, any progeny whose yield at all approached the quantity of milk they themselves were alleged to produce. There was the celebrated cow Blossom, said to yield 36 quarts of milk per day, and 13 pounds of butter per week. There was Dairy Maid, who produced upwards of 33 quarts of milk per day, and 12 pounds of butter per week; these and other recorded performances of extraordinary Durham cows, are certainly great, but not greater in yield of butter than some native breeds; for instance, the Germantown cow and a nameless cow, both noticed in the seventh volume of the Cabinet, pages 192 and 283; but of all the progeny of the great Durham milkers, where do we hear of one that at all equals the dam? I am not aware that the owner of Blossom has ever alleged that any of her numerous progeny have rivalled her, or exceeded the ordinary product of common cows; and the energetic and enterprising owner of Dairy Maid, who for a series of years has exerted all his energies to maintain the character of the Durhams, and has been in this section of the country the mainstay in preventing them from sinking to their deserved obscurity for dairy purposes;—that gentleman, with all his ability, has been unable to produce from his numerous herd, a single cow, with the exception of Dairy Maid, whose product has been such as to be worthy of record; if he had, I am sure that even his acknowledged modesty, would not have prevented him from informing the agricultural community of so rare a circumstance. We therefore accept it as proved beyond all controversy, that the celebrated

milkers amongst the Durhams do not produce calves, which, under the most judicious management, and without regard to expense, at all equal their dams. It is also well known that persons engaged in the milk business, who have thoroughly tested the properties of the Durhams, particularly the half-bloods, have generally discarded them, as being less profitable than the common stock.

These observations are not made to depreciate the value of Durham cattle, for although they have failed to realize the expectations of their admirers in relation to the pail, it is probable they will prove an acquisition to the stock-raisers of the interior, and be the means of increasing the size of cattle intended for the shambles.

The object of the present communication is not to enter into a discussion as to the merits of any particular breed of cattle, or to call out adverse statements from any of their admirers—but to call the attention of the managers of the Philadelphia Agricultural Society to the object which should be kept in view, to wit: the advancement of the farming interests of the country adjacent to Philadelphia. To show that they have somewhat failed to interest that class, look at the list of their members—active members—and see how few among them are practical farmers: by that term is meant men who really till their grounds in the sweat of their own brow;—but they are mostly gentlemen, and very liberal gentlemen too, who have acquired fortunes at mercantile or other lucrative pursuits; and who, wearied with the dull round of money-getting, have determined to improve agriculture by money-spending; but who have failed to perceive that their experiments in stock-raising and otherwise, do not influence, because they are not applicable to the condition of the great body of farmers, who have not the means to follow their example, even if they were convinced of their utility—which, however, is far from being the case. I have but few suggestions to make;—it is much easier to note the failure, than to point out an improvement; but I do submit to the consideration of the Society, whether some other course in relation to cattle, is not necessary at the annual exhibitions:—a large part of the premiums of the Society are, and have been for many years, devoted to a particular class of animals, which experience has fully proved, does not in the judgment of the farming community, meet their wants—and hence we find the interest in the cattle department, declining year by year. Whereas, in the department of agricultural implements, though obtaining but a small share of the Society's attention, as

would appear from the amount of premiums; yet as free course is given for every one to exhibit the product of his ingenuity, the greatest advantage has been gained to the community, that exhibitions of the kind are susceptible of.

It must have been gratifying to the committee having the implements in charge, to observe the great interest manifested in almost every improved implement, by the real farmers of the country. To convince every one that some change in the cattle department is requisite, it is only necessary to remark how much greater the interest, and how much larger the attendance at the trial of ploughs, by persons engaged in farming, than at any display of Durham cattle the country can produce. I. U.

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For the Farmers' Cabinet.

### James Gowen on Improved Farming.

MR. EDITOR,—Through a sense of justice, as well as in defence of the improved system of agriculture which for years I have laboured hard to establish, I am compelled to notice the second edition of the remarks of H. S. in the last No. of the Cabinet, growing out of my communication to General Richardson.

While, however, paying my respects to your correspondent, I must confess that I am at a loss as to placing him in his proper position; sometimes I am inclined to class him among those anonymous writers whose shrewdness in screening themselves from the obloquy that would attach to them personally were they known, is *prima facie* evidence of a design to do mischief. Such persons are ever ready to depreciate the excellence which they cannot appropriate to themselves, and for the attainment of which they will take no pains nor make one bold or spirited effort—they take to the unenviable plan of decrying the practice or the virtues that lift other men so far above the narrow and selfish sphere in which they lie bound, under the chain of corroding envy or blighting prejudice; literally carrying out the policy of not only refusing to *do* themselves, but of denying to others "the luxury of doing good." These remarks may not apply to H. S., and in the spirit of a liberal charity I hope they do not; but it requires more I think than a common stock of that virtue, which in its perfection "hopeth all things," to exempt him fully from being somewhat obnoxious to the charge; else why does he make issues unwarranted by facts or circumstances, but for the purpose of bring-

ing my practice into disrepute, and placing me in a false position before your readers? Here is a sample. He says, "my assertion is, that it is unprofitable for the farmer of Pennsylvania, east of the Alleghany mountains, to raise cattle to any extent. Mr. Gowen says I stand singularly alone in this view." I never said such a thing; for I well knew that most of the graziers and farmers purchased their stocks from the drovers—it was against this general practice that I undertook to recommend to some farmers, under certain circumstances, to provide themselves with a *thorough-bred Durham bull*, and breed for themselves. How then could I have said H. S. was singular in his assertion, if he made it, when I not only knew that the practice was common—general, but *wrote against it*, taking exceptions to its expediency and soundness? What I said Mr. H. S. was singular in, was, and I am free to repeat it, his differing with my views or advice on farming, as communicated to General Richardson. What I said was this, and every reader of the Cabinet can see for himself, and judge of the application H. S. makes of it. "I flatter myself H. S. stands singularly alone in the view he has taken, for I never wrote or advanced any thing during my agricultural career that seems to have met with such general favour from all quarters, as that communication."

In keeping with H. S.'s carelessness, is his advocacy of bestowing care on cattle, as though I had recommended a different practice; when, as may be seen, in my communication to the General, I spoke in terms of unqualified censure of neglecting the cattle, thus: "It appeared strange to me, as passing through some farming districts, to see such devotedness to raising grain, to the almost utter neglect of cattle; as far as the eye could reach from the road, nothing could be seen but grain, with here and there a corn-field, while a few stunted cattle and sheep might be seen running along the road-sides excluded from the fields, till they and the swine should have a harvest feast in the stubble." That I should by implication be placed in the category of those who abandon the cattle to "straw and the winter winds," is somewhat amusing, if not provoking.

But I could forgive H. S. all his blundering or prejudice, under whichever of these heads his criticisms on my practice may be classed, had he abstained from giving the one-sided view he did of the business on my farm. What had the expenditures on my place to do with the subject matter that claimed his animadversions, viz: "the raising of cattle and grain," as practised among

us? This was a travelling out of his way, one should suppose, for little purpose; it shows, if other proof was wanting, the deep seated prejudice against "book farming," as it is called, in common with too many of the farmers of the present day, who set their face against all experiment, enterprise, or improvement, in the business of husbandry, and who are ever ready to pull down and level all to their own grade; and here was an opportunity, by giving a one-sided view of my management, to turn my practice into ridicule, and to frighten or deter every one from advancing on the manly and generous path of enterprise and emulation, by holding up in *terrorem*, the "single item of more than one thousand dollars for manual labour, to work a farm of one hundred acres!" Now I dare say that this expenditure of over one thousand dollars per annum for labour alone, on my farm, has furnished many a knowing wink, and many a horse laugh at my expense, or served as the prelude to many a drowsy yawn to many, as they sat toasting their shins by the fire, thinking of nothing, except "one thousand dollars for labour alone! Prodigious! a Pennsylvania farmer to expend one thousand dollars for wages in one year!" If H. S. took leave to descant on my practice by way of illustrating its results, why did he not exhibit the other, the creditor side of the account, which he could have found in the same report that furnished him with the dreadful item of expense? Why did he not state what I produced, consumed and sold, with the improved state of my land, which is an item as fully entitled to credit as the cash I received for sales of produce, or the meat, meal, milk and butter consumed by my family. If a merchant has a ship needing repairs to make her sea-worthy, will he not charge the repairs to the ship, and is she not worth more, by so many hundred or thousand dollars as these repairs cost, than she was before they were made? Certainly she is. And why should not a farmer be allowed credit for the improved soil, substantial fencing, suitable buildings, &c., &c., which cost him time and money?

Referring your readers to the June No., 1845, for my Report to the Committee on Farms, I shall for their further satisfaction, and to give the science of agriculture something like fair play, set down the results of last season's operations on this farm of 100 acres, assuming the yearly wages at one thousand dollars.

I raised not less than one hundred and twenty tons of hay—say at eighteen dollars

per ton, is		\$2,160 00
400 bushels wheat, at \$1 00		400 00
300 do. rye,	80	240 00
100 do. oats,	40	40 00
1000 do. corn,	60	600 00
500 do. potatoes,	75	375 00
900 do. carrots,	40	360 00
600 do. ruta-baga,	25	150 00
600 do. sugar pars.	40	240 00
1500 do. turnips,	12½	187 50
15 hogs slaughtered, weighing		
45 C. at \$5 per C.		225 00
Cattle, calves and pigs, sold,		347 00
Actual net sales of milk & butter,		
over		1,400 00
		<hr/>
		\$6,724 50

independent of milk and butter, meat and vegetables, poultry and fruit for family consumption. While producing this, I maintained upon the farm upwards of fifty head of cattle, seven horses, and some thirty head of swine, and the only outlay incurred for feed during the year 1845, was about three hundred dollars for ship stuff or middlings, which was principally fed to the horses with finely cut timothy hay; and part made into slop for the swine. The horses had no other feed—they get *neither corn nor oats*, and the hogs when fattening, had little else but imperfect ears of corn, a little slop, and occasionally small potatoes cooked for them.

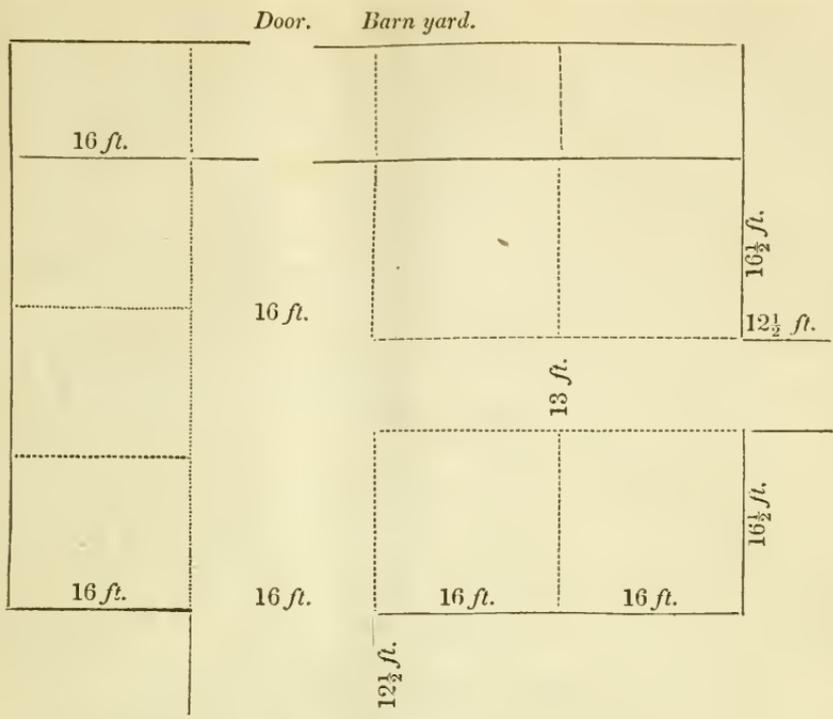
Now can H. S. or any of his brother farmers of the old and easy going school, make a better exhibit in proportion to their outlay and the number of acres they hold? If they can, I should be pleased to see it, and to be permitted an opportunity of examining into their practice, the condition of their land, the character of their stock, &c. While I here invite him to visit Mount Airy, and judge for himself. The stock now consists of 51 head of cows, heifers and calves, principally thorough-bred Durhams:—5 brood sows and 20 shoats, to be fed for next winter's slaughtering.

It was only to-day, Mr. Editor, that I observed the article of H. S. in your last No., and have hastened to reply to it, to turn aside the injury it appeared to me it was calculated to produce, if permitted to go unimproved. I disclaim all personal motive in the matter—if I make much or little by farming, that is my own affair; but that a sound practice should be subverted or set aside, is of consequence to the country and to the spirit of agricultural improvement that is now beginning to dawn upon it.

Respectfully,

JAMES GOWEN.

Mount Airy, March 6th, 1846.



For the Farmers' Cabinet.

### A Good Barn.

TO THE EDITOR,—Having noticed in the sixth No. of the present volume of the Cabinet, an inquiry for a “full description of a convenient large barn, &c.,” by “A NEW SUBSCRIBER,” I concluded to say that I built in the year 1841, a barn that suits me—and I think it the most convenient one I have seen: it answers the description of the one queried after, very nearly. It is 64 feet long by 46 wide, with overshoot twelve feet wide. It is built stable high (seven feet) of stone; then frame-work above; the posts are twenty-two feet high, all thoroughly tied and braced—one drive-way sixteen feet from one end, going in the upper side and on the third floor—the barn being built upon the side of a slight hill—and entering the barn by a portico extended twelve feet from the outside of the barn, and thirteen feet wide; the door is thirteen feet high, and opens inside of the portico; the drive-way or floor is seven feet above the bottoms of all the mows, and fourteen from the stable floors; the mows are so arranged as to be all sixteen feet square, being the most profitable length to cut the timbers, ties, &c.—this floor or drive-way is sixteen feet wide, and

the doors of entrance thirteen feet, leaving a notch of three feet inside the portico to stand the threshing machine upon a grated floor; the grain passing through the upper on to the lower floor, and the straw remaining above, ready to be pitched into any empty mow, from which the grain has been taken, or into one of the overshoot mows, which is kept on purpose—all the space between the floor immediately over the stables, and under the drive floor, can be occupied with cleaning the grain, granaries, chaff, potatoes, apples, &c. Another drive-way and floor enter from the other end, with doors, floor, and all thirteen feet wide and high. This drive-way runs into the one above spoken of, as shown in the cut—under the porticos are glass windows to light the middle floor; this last mentioned drive runs into the other—when done unloading a wagon we drive out at the other doors, thereby saving the inconvenience of backing out—we all the time “go ahead.” By driving in on the third floor, I have two rooms below for granaries, one 16 feet by 58 feet, the other 13 feet by 32 feet, all gain over the old method; beside having seven feet below the floor all around to pitch down—this being fourteen feet below the shelvings of the wagon to fill before we pitch up any.

The sills are eight by nine inches. The posts are seven by eight inches; and the east end beams and braces are all white-oak—rafters, ties, beams, studding, &c., black-oak, gum, or whatever is most convenient; the siding is of cedar, cut three-quarters of an inch thick, one square edge, and lapped; white-pine will do if cedar is not to be had. The roof is white-pine; shingles steeped in whitewash, before being put on—two lightning-rods, one erected at each end;—they should run along the ridge twelve feet, and then be elevated eight feet above the roof, running up a wooden steeple four feet to support them, and a *good* vane upon one of them to tell which way the wind is—very important to the farmer.

The ground floor is all occupied with stables, except the twelve feet overshoot, which is open for cattle in the yard. We stable conveniently eleven horses and mules, and thirty-three cows. I give a figure as nearly as I can of the third floor: the yard is shedded all around except on the south-east side—sheds generally made of crotches and poles covered with stalks, or weeds cut from the stubble field, and removed in summer.

This building may be carried to any length—continuing the thirteen feet floor—and all the mows will come to the floor, and no extra pitching. After filling the mows then fill the end floor. Whole cost of building two thousand dollars.

MAHLON GILLINGHAM.

Near Moorestown, Burlington  
Co., N. J., 2nd mo., 1846.

### General Rules for Ploughing.

THE depth of ploughing, the width of the furrow-slice, the number of ploughings which should be given to land, and the season at which it should be executed, depend on such a variety of circumstances, that it would be difficult to prescribe any universal rules.

The objects of ploughing are, to loosen the soil, and to render it permeable to the roots of plants, that they may extend themselves for nourishment and support; to make it accessible to the air and rain, from which, according to modern theories, it gathers both oxygen and ammonia, for the food of plants; and lastly, to give an opportunity of incorporating manures with the soil, for their support and growth. It has another object, of course, where greensward is turned over, which is, to bury the herbage then on the ground, and substitute other plants.

The depth of ploughing varies in different soils, and for different purposes. The average depth may be considered as five inches,

but no direction on this subject will be found universally applicable. Three of the most eminent practical farmers with whom I am acquainted here, plough not more than three inches; but the surface mould, in these cases is very thin, and the under stratum is a cold, clammy chalk. One farmer, whose cultivation is successful, and who cultivates "a light, poor, thin, moory soil, with a subsoil of either blue or white clay, peat, or white gravel," carefully avoids breaking up the cold subsoil, and cuts up the sward with a breast-plough, which is a kind of paring spade; and after burning the turf and spreading the ashes with a due application of artificial manure, consisting of equal quantities of lime, wood and turf ashes, at the rate of sixty bushels to the acre, and sowing turnip-seed, cultivates between the rows with a single-horse plough, which cannot, of course, take a deep furrow. The second year of the course, when he sows wheat, he ploughs it very lightly with a horse, after having first breast-ploughed it, so as thoroughly to cover in the manure which the sheep who have been folded upon the land have left upon it. The third year it is breast-ploughed, sown in turnips, and cultivated between the rows with a horse, as before described. The fourth year it is simply breast-ploughed for barley. The fifth and sixth years it is in grass. Thus, in the whole course of a six years' rotation, this land is only ploughed four times by men, and three times with a single-horse plough. Another farmer in the same neighbourhood says that, upon this description of land, any other than the breast-plough would not leave the ground sufficiently firm for wheat. Mr. Pusey, M. P., whose excellently managed farm I have had the pleasure of repeatedly going over, in remarking on the above accounts, says, "Occupying similar land, I may add that I never plough it deeply, but I repent of so doing; and am falling more and more each year, by the advice of neighbouring farmers, into the use of the breast-plough, instead of the horse-plough. This manual labour is quite as cheap, for a good workman can pare such hollow tender land at 4s., or even at 3s. per acre. It is possible that the drought of our climate in Gloucestershire and Berkshire may be one cause of the success of this practice in those counties, and that the same soil, if transferred to Westmoreland, would require deeper working. Therefore, without recommending shallow cultivation in districts where deep ploughing has been hitherto practised, I would merely warn beginners against plunging recklessly into the subsoil." These examples are certainly well worth considering. I do not understand that

these practices at all militate against the doctrine of the advantages to be obtained from subsoiling. In cases where subsoiling and thorough draining are not applied, this shallow ploughing may be preferred, as the mingling of the cold and inert subsoil with so thin a surface of vegetable mould would doubtless be prejudicial, at least for a length of time; but the improvement of such land by a system of thorough draining and subsoiling is another matter, to which I shall refer in its proper place. There are considerable tracts of this moorish land—that is, a thin, black, coarse peat, not half decomposed, resting upon a cold and hard pan of gravel or clay, or what some persons have mistaken for marl, in Massachusetts, and other parts of the country, the improvement of which, so far as my experience has gone, has been almost hopeless.

While upon this subject, I may as well give the results of the management of the first farmer referred to, and therefore subjoin them. “By this mode of management, an economical system is followed up through the whole course, by being nearly all performed by manual labour, by which means a remunerating crop will be produced, and the land always kept firm, which is the only difficulty to be overcome on this description of soil. The farm, when first taken by me, was wet; as much out of condition, and as light and weak, as it well could be—parts of it being merely held together by the roots of grass and weeds natural to moory land, but which must be very prejudicial to the production of those crops that are to benefit the farmer. I commenced by draining, and then pursued the foregoing system of cultivation, by which my most sanguine expectations have been realized, though I was told that the land would be too light and too poor to plant wheat after turnips. I have never found any ill effects from paring and burning, experience having taught me that it produces a manure particularly beneficial to the growth of turnips; thereby enabling me to firm the land by sheep.” This farmer speaks of performing a great portion of his work with manual labour. I think some part of it might rather be called pedestrian than manual; for, if he ploughs his land by men, he treads it out by women. He says, “Before the horse-roll can be used, I send women to tread it, and if occasion require, tread it again; after which, I have it twice hoed. I have found more benefit from this mode of pressing than any other, being done at a time when wheat, on this description of soil, requires assistance.”\*

I have found other farmers, who, with their wheat crops on light, chalky soils, ploughed in a very shallow manner, and then were accustomed to tread their land with sheep, in order to give the wheat plant a firmer footing; as, otherwise, in a very light soil, it might be thrown out by the wind. These cases, however, must all be deemed exceptions; and the general rule in England, where the soil admits of it, and manure is abundant, is that of rather deep ploughing. Five or six inches is the average depth; in many cases, much more than this. The loam, or vegetable mould, is, without question, the great source or medium of nourishment to the plants. Be it more or less deep, it is always safe to go to the bottom of this, and, by gradually loosening a portion of the subsoil, or lower stratum, and incorporating it with the mould, and rendering it accessible to the air and light, it acquires the nature of mould, and the whole arable surface is enriched. The deeper the soil, the more deeply the roots are permitted to descend, and the more widely they are enabled to spread themselves—unless they penetrate a substratum unhealthy from wet or the too great prevalence of some unfavourable mineral substance—so much the more luxuriant and productive is the vegetation likely to prove. The depth to which the roots of plants will go down in search of food or moisture, where the soil is in a condition to be penetrated by them, is much greater than a superficial observation would induce us to suppose. It is confidently asserted that the roots of some plants—such, for example, as lucern and sainfoin—go to a depth of fifteen, twenty, and even thirty feet. This seems scarcely credible. Red clover is known to extend its roots to the depth of three feet, and wheat to the depth of two or three feet, where the condition of the soil is favourable to their extension. Von Thaer, the distinguished agriculturist, says, “he has pulled

been put in our “half-civilized” country. I dare say, however, many persons think that it is very well to make such clever animals serviceable; their “keep,” agriculturally speaking, is somewhat expensive; and, as they have their share in the pleasure of consuming, they may as well take their part in the labour of producing. Whatever any persons may think, however, I will say no such uncivil thing; but since the celebrated *danseuse*, Fanny Ellsler, returned from the United States, after a two years’ tour, with a gain of twenty thousand pounds, or one hundred thousand dollars, it cannot be denied that the Americans are quite willing to pay for the use of women’s feet—in a way, we admit, more elegant, tasteful, and classical, but certainly not more respectable, and not half as useful, as that of treading the wheat-ground.

\* This is a use to which women have not as yet

carrots two and a half feet long, the tap-root of which was probably another foot in length." The tap-root of a Swedish turnip has been known to extend thirty-nine inches; the roots of Indian corn full six feet. These statements may appear extraordinary; but, by the free and loose texture of the soil, it is obvious a good husbandman will give every opportunity for the roots and their extremely fine fibres, to extend themselves as far as their instincts may prompt them.

Next to the depth of ploughing, the width of the furrow-slice is to be considered. This, of course, depends mainly upon the construction of the plough. A plough with a wide sole or base, in the hands of a skilful ploughman, may be made to cut a narrow furrow-slice; but a narrow-soled plough cannot be made to cut a wide furrow-slice, though it may sometimes appear to do so by leaving a part of the ground unturned, which the furrow-slice is made to cover. Where, as in old ploughed land, the object is solely to leave the ground loose and light, it is advisable to take a very narrow furrow. Where, otherwise, the object is to move greensward or stubble ground, and to cover in the vegetable matter, such a width of furrow must be taken as will cause the slice, as it is raised by the share, to turn over easily. This width may generally be reckoned at nearly twice the depth, though less will answer; but a furrow-slice of equal sides would not turn, but stand on end. The manner in which the furrow-slice will be turned depends somewhat upon the form of the mould-board, but more, in general, upon the skill of the ploughman. Two modes are adopted; the one to lay the furrow-slice entirely flat, shutting its edge exactly in by the edge of its neighbour; the other, to lay it at an inclination of 45 degrees, lapping the one upon the other. The former mode, where land is to be sown with grass-seed, and, as the phrase is with us, laid down, is undoubtedly to be preferred. Perhaps, in any case where a grain crop is to be cultivated, it should be preferred, as its beneficial effects have been well tested in the United States. In the United States, however, from a higher temperature, the vegetable matter thus pressed down may be expected sooner to be decomposed, and thus sooner furnish a pabulum for the growing plants, than in a climate where, in a much lower and more even temperature, the decomposition cannot be expected to take place so rapidly. In other cases, and for vegetable crops—I mean in contradistinction to grain crops—a different mode of ploughing, that is, laying the furrow-slices one upon the other at an angle of 45 degrees, or half turned over, would leave

the ground more loose, as well as expose a larger surface of the inverted soil to be enriched by the air. In this way, by harrowing and rolling, the vegetable matter will be completely buried. This mode of ploughing is evidently preferred throughout the country, as I have seldom seen the sward completely inverted and laid flat, though I know the practice prevails in some counties. To avoid having any of the grass protrude itself between the furrow-slices, they have here, what I have never seen in the United States, a skim-coulter, that is, a miniature ploughshare, or blade, placed under the beam, and so adjusted as to cut an edge from the furrow-slice as it is turned over; this piece so cut off, at once dropping down, and being buried under the furrow-slice as it goes over. The consequence is, that there is no grass on the edge of the furrow-slice to show itself, and great neatness is therefore given to the whole work. There is another mode of ploughing, which I have sometimes seen practised, by which the furrow-slice is not merely lifted, but may be said to be rolled over, or twisted in a sort of bag-fashion. This seemed to me to be principally owing to the concave form of the mould-board, for no workman could have done it with a straight or convex form of mould-board. It would seem to render the soil more friable and loose; but every departure from a straight line, or wedge form of the mould-board, evidently much increases the draught. The skim-coulter, to which I have referred above, somewhat increases the draught, but in a very small degree.

The great object of the English farmers in ploughing, seems to be the thorough pulverization of the soil; and they are therefore very seldom satisfied with one ploughing, but their land is repeatedly ploughed, scarified, and harrowed. They cross-plough their land, and think it desirable to reduce the sward land to a fine tilth, tearing it to pieces, and bringing all the grass, and roots, and rubbish, to the surface, that they may be raked up and burned, or carried to the manure heaps. The propriety of this practice is, in my mind, quite questionable. It would seem to me much better to turn the sward completely over, and then cultivate on the top of it, without disturbing the grass surface, leaving that, when thus turned over, to a gradual decomposition, that it might in this way supply food to the growing crop, whereas the abstraction of so much vegetable matter must greatly diminish the resources of the soil. Where, however, the field is infested with twitch grass (*triticum repens*)—in which, indeed, many of the fields in England abound to a most extraor-

dinary extent,—there may be no getting rid of it but by actually loosening and tearing it out; but where it is a mere clover ley, or an old grass pasture or meadow, the taking out and removing the vegetable matter seems to be a serious waste. Even the twitch might be managed where the crop is to be hoed, though in grain crops, its presence is extremely prejudicial.—*Colman's Agricultural Tour, No. 5.*

#### Agricultural Meeting.

At a stated meeting of the Philadelphia Society for promoting Agriculture, held on the 4th instant, Alexander Johnson and T. J. Corbyn were elected members, and William A. Hayes, of Maine, an honorary member. A committee of three members was appointed to prepare a list of crops, for which premiums will be offered the approaching season.

After which Dr. Emerson remarked, that he was desirous of obtaining information on the subject of sowing timothy seed, and what season of the year it was most likely to succeed best. Mr. M. S. Powell stated that the farmers of New Jersey were very generally in the practice of sowing it on their wheat during the winter and spring, and found it to answer well. Many of the members present were in favour of sowing it at the time of sowing wheat, particularly on clay soils.

Dr. Elwyn stated that many farmers have sowed clover and timothy seeds with oats, with success. Mr. I. W. Roberts always cuts his oats before they are ripe, for the purpose of making fodder, and finds the young grass more likely to do well, than if the oats be allowed to ripen. Dr. Emerson, Mr. Harrison, Mr. Ford and others, stated that their trials of guano had resulted favourably. Dr. E. stated that seventy bushels of corn per acre had been produced on his fields, that formerly produced but seventeen to twenty bushels; the expense of manuring was from five to six dollars per acre. Wheat had been greatly benefited at a cost of \$3 75 per acre, on Mr. Harrison's farm.

Mr. R. T. Potts expressed himself favourably towards the use of concentrated manures, but thought, nevertheless, we should husband all the resources of our farms. He stated that he had raised over ninety bushels of corn per acre, last year, by putting in the hills a small portion of the manure from his hen-house, mixed with lime and rich mould. Ground bones were admitted to be an excellent manure. Dr. Emerson stated that he had found great difficulty in obtaining a sufficient supply for his mill, erected in the

State of Delaware; such is the demand for them abroad, that agents are employed to purchase them here from a class of persons who traverse the country for a great distance, and gather them for this market. Hundreds, he might say thousands of tons, were shipped annually to Great Britain—such is the estimation they are held in there, that their agents here monopolize nearly all that can be gathered. Mr. Gowen had seen them busily engaged receiving bones at Harrisburg, which had been collected in the country far above that place.

Extract from the minutes.

AARON CLEMENT, *Rec. Sec.*

Philad., March 6th, 1846.

#### Is Indian Corn—Maize—a Native of this Country?

This question, a highly interesting one in natural history, is sometimes asked, and without having particularly or critically looked into the matter, we have always answered that it was. Such has been our general and undoubting impression. We believe that all along our Atlantic borders, it was found by the first European visitors, as constituting the staple upon which the natives depended, when the products of the chase failed. It was limited to be sure in its cultivation, not only because the forecast of the Indian was proverbially deficient, but also because his implements were necessarily of the rudest kind. The use of iron, we must recollect, was unknown, and the *spade* could only have been formed by chiselling the stone into something like a shape, that would admit of its penetrating the earth. We make the following extract from the *Farmers' Encyclopedia*.

ALTHOUGH America is doubtless the native country of a plant so important to her interests, still this has been a disputed point. Fuchs very early maintained that it came from the East; and Mathioli affirmed that it was from America. Regmir and Gregory have presented fresh arguments in favour of its Eastern origin. Among them is the name by which it has long been known in Europe, *Blé de Turquie*; and varieties, it is said, have been brought from the Isle of France, or from China. Moreau de Jonnes, on the contrary, has recently maintained, in a memoir read before the Academy of Science, that its origin was in America. The name *Blé de Turquie*, no more proves it to be of Turkish origin, than the name of the Italian Poplar or Irish potatoe, proves that the tree and the plant grew wild in Italy and Ireland. It can only signify that it spread from Turkey into the neighbouring countries. Its general cultivation in Southern Europe, and the production of some new varieties, proves nothing with regard to the country of the species. In favour of its

American origin, is the fact that it was found in a state of cultivation in every place where the first navigators landed: in Mexico, according to Hernandez; and in Brazil, according to Zeri; and that in the various countries it had proper names, such as *Maize*, *Flaolli*, &c.: whilst, in the Old World, its names were either all of American origin, or from the neighbouring region, whence it was derived. Immediately after the discovery of America, it was spread rapidly in the Old World, and soon became common, a fact not reconcilable with the idea of its former existence there. To these proofs, Aug. de Saint-Hilaire has added another. He has received from M. de Larranhaga, of Monte Video, a new variety of maize, distinguished by the name of *Tunicata*; because instead of having the grains naked, they are entirely covered by the glumes. This variety is from Paraguay, where it is cultivated by the Guaycurus Indians, a people in the lowest scale of civilization; and where, according to the direct testimony of one of them, it grows in the humid forests as a native production.

The early authors who have written about America, with few if any exceptions, mention maize as an indigenous grain. Thus Acoste, in his *Natural History of the West Indies*, calls it "Indian wheat, to make bread of," and says "that it was the only grain found in the West Indies by the Europeans: that it grows upon a long reed with large grains, and sometimes two ears on a reed, on one of which 700 grains have been told: that they sow it grain by grain, and not scattering, as is done with wheat; and it requires a hot and moist soil. There are two sorts of it," says our author, "one large and substantial, the other small and dry, which they call '*moroche*.' The leaves of it and also the reed are very good food for cattle, green; and dry, it serves as well as straw. The grain is better for beasts than barley, but they must drink before they eat it; for if they drink after it, it swells and gives them pain. The Indians eat it hot, boiled, and call it '*mote*,' and sometimes toasted. There is a sort of it large and round, which the Spaniards eat toasted; they also grind it and make cakes, which they eat hot; and these, in some places, they call '*arepas*.' They also make bread, to keep, and sweet cakes of it."

As Acoste died in 1600, at Salamanca, in his sixtieth year, this must be regarded as very early testimony upon the subject. He surely would not have been so very particular in his description of this grain had it been previously known in Europe. Indeed entire ears of Indian corn have been found

enveloped in Peruvian and Mexican mummies, preserved long before the discovery of America.

It is probable that some inferior species of the genus to which maize belongs, have been found in Guinea, Turkey, and other portions of the Old World; but that the kinds now so highly valued and generally cultivated were of American origin, there can be no doubt, both from the strongest negative and positive evidence. Maize is now extensively cultivated in Asia and Africa. In Europe, it is only in the extreme southern parts, France, Spain, and Italy, that the crop can be raised so as to be profitable.

The authorities cited above, are considered pretty conclusive in the matter. In an essay on Indian corn, which may be found in the 2nd volume of the Farmers' Cabinet, and which was delivered by Peter A. Browne, before the Chester County Cabinet of Natural Science, the writer says he "has taken extraordinary pains to ascertain its history," and after he has given the details, he thinks it easy to pronounce, to what portion of the globe the rest of the world is indebted for Indian corn. He cites numerous authorities, the general bearing of which, undoubtedly is, that the plant in question is a native of America. Robertson in his *History of America*, speaks of the natives of the Southern continent confining their industry to rearing a few plants, which in a rich soil and warm climate were easily trained to maturity. "The chief of these," says he, "is *maize*, well known in Europe by the name of Turkey or Indian wheat, a grain extremely prolific, and of simple culture."

Prescott in his *Conquest of Mexico*—and we consider him a careful investigator—says "the great staple of the country, as indeed of the American continent, was maize, or Indian corn, which grew freely along the vallies, and up the steep sides of the Cordilleras to the high level of the table land." And Baron Humboldt, insists that it was found by the Europeans in the New World from the south of Chili to Pennsylvania, and says Prescott, "he might have added to the St. Lawrence," for the Puritan emigrants found it on the New England coast, wherever they landed.

We raise annually, in the United States from four to five hundred millions of bushels of this noble grain. It has sometimes been termed the *meal*, the *meadow* and the *manure* of the American farmer, and we can but feel alive to its history, as well as its cultivation. For cattle and hogs, there is no produce of the field that can equal it; and for man it only gives precedence to the nutritiousness of wheat.—Ed.

For the Farmers' Cabinet.

#### Fine Ears of Corn.

MR. EDITOR,—I send you half a dozen ears of corn from the field of Mr. Paschall Morris, that our friends may perceive there is no mistake in the crop, and which may very properly be termed the effect, whatever may be the cause of so unusual a yield as 110 bushels per acre of shelled corn. At the same time,

it must be acknowledged that we always attribute great garden crops to superior cultivation; especially in the article of digging and pulverization; and I know of no law that should prevent the working of the rule in one case as well as the other. These ears I have obtained, and send, for the purpose of exhibition at the office of the Cabinet; and although they have been selected, yet every practical man will know, that the whole crop must have been in *keeping*, to show the result at harvest.

D. F.

West Chester.

## THE FARMERS' CABINET,

AND

## AMERICAN HERD-BOOK:

PHILADELPHIA, THIRD MONTH, 1845.

ALTHOUGH we have rarely alluded to the numerous evidences received from our subscribers, of the esteem in which they hold the Cabinet, the Editor owes it to himself, as well as to those who are pleased to express themselves so favorably of it, to say that he is by no means insensible to the good opinions of those for whom he labors. He values those good opinions as highly perhaps as any one, and is desirous to merit them. It is his ambition to make the Cabinet of far more value to its readers than the small amount of its price, and when he ceases to believe it is so, his name shall be withdrawn from its head. We have never held out any great or extraordinary promises;—we have never supposed that the Cabinet was to work any remarkable and sudden change in the condition of the farmer who lacked the enterprise or shrewdness necessary to make its hints available; but we have believed, and it is gratifying that others believe, that those who look through its pages will hardly fail to gather many hints that may be carried out advantageously in the every day operations of the farm.

In a letter received a few days ago, from Delaware, the writer is pleased to say, "I value the Cabinet, and am endeavouring to practice in accordance with some of its sentiments, for which I incur the ridicule of some of our old fashioned farmers down here. However, I have the satisfaction to know, that two years labor has about doubled the product of my farm, without any additional outlay more than what I have made on the farm."

And we would impress it on our citizens, that it is not to the farmer alone, that the Cabinet is calculated to be interesting or valuable. Who is the man whose habits or pursuits preclude him from deriving gratification at least, if not profit, from its plain matter-of-fact pages? For this is the character we have always intended to give it. The Editor having no wish himself to deal in visionary schemes or theories, would not willingly lead others into them: and if he does but little good, it is his hope that the Cabinet shall still less do harm.

SINCE the insertion of the Communication of Reeve and Brothers, in the last number of the Cabinet, nu-

merous enquiries have been made in relation to their mode of raising water. We can only refer enquirers to their letter, and to one on the same subject from J. H. B. Latrobe, in the 2nd number of our last volume. We have understood that several farmers in the neighborhood of West Chester, have been entirely successful in availing themselves of this beautiful mode of supplying water to their houses and farm yards.

THE fifth number of Colman's Agricultural Tour in Europe, was received a month ago, treating principally on Soils and ploughing. An extract will be found on page 256. This number completes the first volume, which we shall have bound and for sale in a few days. If subscribers will send their five Nos. to this office, they will be well and cheaply bound.

SINCE our last number was published, a long communication has been received from a valued friend in relation to the *Prouty* and the *Moore* ploughs:—it does not seem to throw any new light on the matter, and as a great deal of talking, or a great deal of writing, will neither make these ploughs better nor worse, we think it is quite possible to say more on the subject than will be of interest to the readers of the Cabinet. That they are both excellent ploughs, we do not hesitate to believe. Conclusive proofs of their excellence may be found in the numerous premiums, each of them has taken at our ploughing matches, and the extensive introduction of them into the hands of our farmers. The editor wishes to state explicitly, that he has no interest in either of them, directly or indirectly, further than that which would lead him to wish the wide spreading of such excellent implements. Let them both advertise in our paper; then they cannot fail to be known from Cape May to the Cherokees: and we may venture to say that wherever they are known and thoroughly tried, they will be liked.

We are indebted for the blocks of the *Dorking* and *Poland* fowls, on page 249, to the courtesy of the *American Farmer*.

DR. K. REBRIDE'S Report of the Pennsylvania Hospital for the Insane, for the year 1845, has been politely forwarded through the post-office, and we have as usual, looked through it with much interest. We have long been of the opinion that this Institution—this branch of that noble charity, the Pennsylvania Hospital, is managed by the principal and his assistants with great efficiency and sound discretion. Numerous proofs of this are observable in the Reports which have been made from time to time by Dr. K., since the Institution was opened five years ago, for the reception of patients. Its whole economy is based upon those liberal and enlightened views which look rather to moral influences, than to the strap, the mitten, or the straight jacket. These last, indeed, might almost be said to be interdicted from the premises. There is certainly no ordinary degree of satisfaction in being able to refer to this retreat, as having thus far realized all the anticipations of its projectors, and we trust it may be allowable to invoke the blessing of the Supreme Being upon their efforts to meliorate, as far as possible, the condition of the most afflicted of our kind.

A FRIEND in North Carolina inquires for any breed or variety of *polled* or *hornless* cattle of high value for dairy purposes; whether it be native, grade, or foreign, is immaterial, the only requisites being hornless, milking richly and copiously, with hardy constitution and good form. He also asks, "Are the *polled* Galloways, or the *polled* Suffolk dun cattle, to be found in your region? and if so, can there be found among them any individual families milking richly and abundantly,—thus qualifying them for dairy stock." The editor not being able to answer these inquiries satisfactorily, throws them in this manner before his readers, with a hope that some one better informed in the matter, will be pleased to reply to them.

THE quantity of rain and melted snow which fell in the 2nd mo., 1846, was three inches and a third. 3.33 in. There were 72 hours of snow, and 15 of rain.

*Penn. Hospital, 3rd mo. 2nd, 1846.*

### New York Agricultural Warehouse.

Farmers, Planters, and Gardeners will find the LARGEST AND MOST COMPLETE assortment of Agricultural Implements of all kinds at this establishment, ever offered in the New York Market. Most of these implements are of new and highly improved patterns, warranted to be made of the best materials, put together in the strongest manner, of a very superior finish, and offered at the lowest cash price.

Among these implements are upwards of FIFTY different kinds of Ploughs manufactured by Ruggles, Nourse and Mason, of Worcester, Mass., also in New York—for the South as well as for the North; Harrows of different patterns and sizes; Rollers of wood and cast iron on a new principle; Seed sowers for all kinds of seeds, a recent invention; Cultivators, with different kinds of teeth; Horse Powers of wood or of cast iron, very strong and superior; Grain Thrashers: Fanning Mills; Mills for grinding corn, &c., a new invention; Corn Sheller for hand or horse power, the latter shelling 200 bushels of ears per hour; Vegetable Cutters, will cut a bushel of roots for cattle in two minutes; Hay, Straw, and Corn stalk Cutters; Scythes, Rakes, Shovels, Spades, Hoes—indeed Field and Garden Tools of all kinds.

*Castings* for the various kinds of Ploughs manufactured in Worcester and New York.

*Seeds for the Farmer and Gardener.*—A choice assortment of the various kinds, such as improved Winter and Spring Wheat, Rye, Barley, Oats, Corn, Beans, Peas, Rutabagas, Turnip, Cabbage, Beet, Carrot, Parsnep, Clover and Grass Seeds, and improved varieties of Potatoes.

*Wire-Cloths and Sieves.*—Different kinds and sizes constantly on hand.

*Fertilizers.*—Peruvian and African Guano, Bonedust, Lime, Plaster of Paris, &c.

*Fruit and Ornamental Trees and Shrubs.*—Orders taken for these, and executed from a choice of the best Nurseries, Gardens, and Conservatories in the United States.

*Horses, Cattle, Sheep and Swine.*—Orders executed for stock of all kinds, to the best advantage.

*A Descriptive Catalogue.*—This will be sent to any

one gratis, upon application, *post paid*, to the subscriber. It comprises nearly 60 pages, and is illustrated with a great variety of wood cuts.

*The American Agriculturist.*—A monthly publication of 32 pages octavo, handsomely embellished with numerous engravings. Price \$1 a year.

*The American Agriculturist Almanac.*—32 pages, with wood cuts. Price \$15 per thousand.

*Agricultural Books.*—A general assortment of all kinds.

A liberal discount made to dealers.

A. B. ALLEN,

No. 187 Water Street, New York.

March 14, 1846.—2t.

### SHORT ADVERTISEMENTS.

The subject matter of which, may correspond with the agricultural character of this paper, will be inserted at the rate of one dollar for each insertion of ten lines or less; and so in proportion for each additional line. Payment in advance.

### SEED STORE,

No. 23 Market Street, Philadelphia.

The subscriber keeps constantly a supply of White and Red Clover, and other grass seeds; fresh Perennial Rye-grass, and Lucerne seed. Field seeds, consisting of choice Spring Wheat, Barley, Potatoe Oats, Northern and other seed-corn. Also, in season, Fruit and Shade Trees. Garden and Bird seeds generally. Guano in parcels to suit purchasers.

M. S. POWELL.

Philad., Feb., 1846.

tf.

### Agency for the Purchase & Sale of IMPROVED BREEDS OF CATTLE & SHEEP.

The subscriber takes this method of informing his friends and the public, that he will attend to the purchase and sale of the improved breeds of cattle, sheep, &c., for a reasonable commission. All letters post paid, addressed to him at Philadelphia, will be attended to without delay.

AARON CLEMENT.

Jan. 15th, 1846.

### COATES' SEED STORE,

OF MORE THAN FORTY YEARS STANDING,

Where may constantly be had

Clover, Timothy, Orchard, Herd,

AND OTHER

GRASS SEEDS,

TOGETHER WITH A COMPLETE ASSORTMENT OF

GARDEN SEEDS,

Of the finest Quality and best Varieties,

JOS. P. H. COATES,

No. 49, Market st., Philad'a.



Are sold only in Philadelphia, at the SEED AND IMPLEMENT WAREHOUSE of the subscriber, No. 65 Chesnut street, below Third, North side.

DAVID LANDRETH.

Purchasers will observe that the above seeds are essentially distinct from those obtained by Foreign Importation or Chance Purchase at home, which are generally, at best, uncertain.

Extract from the "REPORT" of the "VISITING COMMITTEE of the PENNSYLVANIA HORTICULTURAL SOCIETY;" approved and ordered to be printed.

**"Landreth's Nurseries and Gardens.**

"These extensive grounds are on Federal street, near the Arsenal. \* \* \* \* \* The earliest collection of Camellias was made here. Some of those now in the possession of these distinguished nurserymen, are ten feet high. \* \* \* \* \* The selection of GREEN-HOUSE PLANTS is valuable and extensive. \* \*

"The NURSERIES are all very correctly managed, supplying every part of the Union; a detail of which would occupy too much of our space; we therefore content ourselves with stating that the stock is very large, and in every stage of growth, consisting of

**Forest and Ornamental Trees, Shrubs, Evergreens, Vines and Creepers,**

with a collection of herbaceous plants; *Fruit Trees* of the best kind and *most healthy condition*; large beds of seedling apples, pears, plums, &c., as stocks for budding and grafting; *a plan very superior to that of working upon suckers*, which carry with them into the graft all the diseases of the parent stock. \* \* \* \* \*

**GARDEN SEEDS**

of the finest quality have been scattered over the country from these grounds, and may always be depended upon. The SEED ESTABLISHMENT of these HORTICULTURISTS is one of the *most extensive in the Union*, and its reputation is well sustained from year to year.

"To obviate the chance of mixture of the farina of the plants of the same family, they have established another nursery, at a suitable distance, so that degeneration cannot take place, and which secures to the purchasers 'a genuine article.' Knowing thus the age, quality, and process of culture of every plant, the supply from their grounds is recommended with great confidence."

\* \* \* Since the date of the "REPORT" from which the above is abstracted, the ENTIRE ESTABLISHMENT has been GREATLY ENLARGED. The collection of Camellias embraces all the finer kinds, and consists of some thousands of various sizes; so likewise of Roses, and

other desirable plants, both tender and hardy—Fruit Trees, &c.

The *Seed Gardens* alone, cover *fifty acres*, and the whole is, as it has been for more than *half a century*, under the successive management of father and son, the *most prominent in America*.

Orders for Trees, Plants, &c., in all their variety, from the Nurseries, now conducted by D. LANDRETH & FULTON, received as above; where, also, Catalogues may be had, gratis. 2c

FOR SALE AT

**D. O. PROUTY'S  
Agricultural Implement Ware-house,**

194 1/2 Market Street, Philadelphia.

Every variety of Agricultural and Horticultural Implements in general use, of the most approved patterns and superior workmanship, at *extremely low prices*. A full assortment of the *Prouty & Mears' Centre Draught, Self-sharpening, right and left hand, subsoil and side hill, Wheel and Swing Ploughs*, with points and shares so strong and thoroughly purified and hardened, that one hundred acres of land have often been ploughed with a single set, at an expense of 50 to 62 cents. These ploughs are constructed of the best materials and of the highest finish; and for *ease of draught and management*, the facility with which their points and shares are turned and sharpened, the eradication of weeds and the thorough cultivation of the soil, they stand unrivalled in the market. They are warranted to work in any soil, and to give perfect satisfaction after fair trial, or they may be returned, when the purchase money will be refunded.

*Agricultural, Horticultural and Flower Seeds*, in great variety, raised expressly for this establishment, by careful and experienced seed growers, and warranted. Several new and superior varieties of seeds, as *Guernsey Parsnip, Sprotsboro Cabbage, Early Vanack Cabbage, Union-head Lettuce, Seymour's new Giant Celery, Flanders Spinach, large white Carrot, PRINCE ALBERT PEAS, BRITISH QUEEN PEAS*, Dickson's *Ruta Baga, &c., &c.*

March 14th, 1846.

2c.

NEW

**Horticultural and Agricultural Ware-house,  
84 Chesnut Street below Third, South side.**

The subscriber has for the better accommodation of his customers, opened the above ware-house, with a large stock of Garden and Field Seeds, crop of 1845. Implements and Books on Gardening and Farming; he calls the particular attention of farmers to his pure stock of Sweede Turnips, Field Carrots, Beets and Parsnips, Pruning Shears, Saws and Knives.

March 14th, 1846.—1y.

R. BUIST.

THE farmers in the vicinity of Washington, Pa., met at that place on the 18th ult.; adopted a Constitution and elected the necessary officers of an Agricultural Society. John L. Gow, Samuel McFarland, and James McFarren, were appointed to prepare an Address to the citizens of Washington county on the subject.

We keep on hand at this office, and will supply our friends with Agricultural works generally. Among which are

THE FARMER'S ENCYCLOPEDIA, full-bound in leather;—Price	\$3 50
YOUATT ON THE HORSE, with J. S. Skinner's very valuable Additions;	2 00
BRIDGEMAN'S GARDENER'S ASSISTANT;	2 00
THE AMERICAN POULTRY BOOK;	37½
THE FARMER'S LAND MEASURER;	37½
DANA'S MUCK MANUAL;	50
Complete sets of the FARMERS' CABINET, half-bound, 9 vols.	7 50
DOWNING'S Landscape Gardening,	3 50
Downing's Fruits and Fruit Trees of America,	1 50
SKINNER'S Every Man his own Farrier,	50
AMERICAN Poulterer's Companion,	1 25
BOUSSINGAULT'S RURAL ECONOMY,	1 50
FARMERS' & EMIGRANTS' HAND-BOOK,	1 00
MORRELL'S AMERICAN SHEPHERD, STABLE ECONOMY,	1 00
BEVAN on the HONEY BEE,	31½
BUIST'S ROSE MANUAL,	75
SKINNER'S CATTLE & SHEEP DOCTOR,	50
AMERICAN FARRIER,	50
THE FARMER'S MINE,	75
HOARE ON THE VINE,	62½
HANNAM'S Economy of Waste Manures,	25
LIEBIG'S AGRICULTURAL CHEMISTRY,	25
“ ANIMAL CHEMISTRY,	25
“ FAMILIAR LETTERS,	12½

As well as his larger works on Chemistry and Agriculture.

Subscriptions received for Colman's Agricultural Tour—or single numbers sold.

☞ We are prepared to bind books to order.

**GUANO.**

TWENTY-FIVE tons first quality Ichaboe Guano, in bags or barrels, for sale in lots to suit purchasers, by

S. & J. J. ALLEN & CO.,

No. 7 South Wharves, 2nd Oil Store below Market street, Philadelphia.

October 15th, 1845.

tf.

**Poudrette.**

A valuable manure—of the best quality, prepared in Philadelphia, for sale at the office of the FARMERS' CABINET, No. 50, North Fourth Street, or at the manufactory, near the Penitentiary on Coates' street. Present price, for seven barrels or more, \$1 75 per barrel, containing four bushels each. Any number of barrels less than seven, \$2 each, or thirty-five cents a bushel. Orders from a distance, enclosing the cash, with cost of portage, will be promptly attended to, by carefully delivering the barrels on board of such conveyance as may be designated. The results on corn and wheat have been generally very satisfactory. Farmers to the south and in the interior, both of this State and of New Jersey, are invited to try it.

JOSIAH TATUM.

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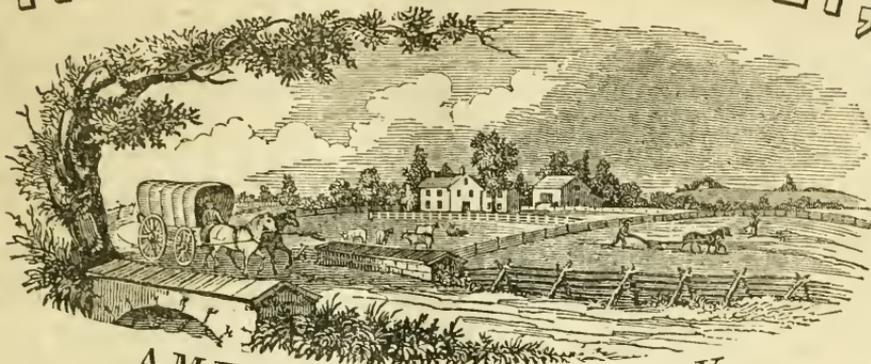
TERMS.—One dollar per annum, or five dollars for seven copies—payable in advance.

All subscriptions must commence at the beginning of a volume. Having lately struck off a new edition of one or two of the former numbers, which had become exhausted, we are now able to supply, to a limited extent, any of the back volumes. They may be had at one dollar each, in numbers, or one dollar twenty-five cents half-bound and lettered.

For six dollars paid in advance, a complete set of the work will be furnished in numbers, including the tenth volume. The whole can thus readily be forwarded by mail. For twenty-five cents additional, per volume, the work may be obtained neatly half-bound and lettered. Copies returned to the office of publication, will also be bound upon the same terms.

By the decision of the Post Master General, the "Cabinet," is subject only to newspaper postage. To any Post office within thirty miles of Philadelphia, they will go free of charge.

# THE FARMERS' CABINET, AND



## AMERICAN HERD-BOOK.

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

Perfect Agriculture is the true foundation of all trade and industry.—LIEBIG.

Vol. X.—No. 9.]

4th mo. (April) 15th, 1846.

[Whole No. 135.]

PUBLISHED MONTHLY,

BY JOSIAH TATUM,

EDITOR AND PROPRIETOR,

No. 50 North Fourth Street,

PHILADELPHIA.

Price one dollar per year.—For conditions see last page

For the Farmers' Cabinet.

### Use of Guano.

As the season is now opening for the commencing of agricultural matters, the following remarks on guano, which is to be used this year more than at any preceding season, may prove of some importance to those who have had no experience in the use of it.

So few experiments have been made in this country on a scale that would satisfy the agriculturist, that it is almost impossible—it would even be an act of presumption—to decide upon its merits in terms of unqualified approbation; and still more difficult and unwise to condemn it with unqualified censure. Most of the experiments that have been made, belong rather to the minor department of horticulture, than to the more general and more important one of agriculture; yet it is only so far as these go, and so far as we have the experience of England, that any opinion can be formed of the

value of this new material. In England there appears to be no question whatever among her best farmers, that it is the most powerful manure ever yet known. We might give results taken from the agricultural periodicals of that country, that would prove incontestably its influence there. But although we may take these statements as truths, and coming from so many and such impartial sources, as fully deserving our unreserved reliance, yet, before we adopt the practice of other countries, in matters of such vital importance as the manuring and management of our land, on whose products the very subsistence of millions depends, it is absolutely necessary for us to know how our modes of agriculture agree or differ—what is the character of the soil to which the application of this article or any other has been made; and above all, whether a difference in climate will prohibit, or a similarity admit, of repeating here experiments, however successful they may have been there. As to the two first of these matters that we consider as necessary elements in deciding precisely and positively, of the propriety of transferring British practice to American fields, it will not be easy to get any very thorough information. It may be said in general terms, that the best farming in England, is more of an art than it is here—that from the enormous rents that are paid for land from the excessive taxation—though we are gradually beating up to the old country in this particular—that

every penny that is expended, is laid out after close calculation, and all the details of the farm, and all its expenses looked after with a nicety and an anxiety, which, however proper and commendable, would be a most painful duty to an American in the present circumstances of the country. Then the price of labour is so extremely low there, and population so plenty, that a farmer of even moderate means, can afford to buy the services and appropriate to the different operations of the farm, several men, women, or children, as the case may require, without increasing materially his outlay, or endangering his returns. While here, at least, in our free States, and it is in these alone, that agriculture attempts or carries through any improvement, all these things—done in England by so many—must be effected by the farmer himself generally speaking, or left undone. This gives double duty to the American farmer—his whole time is occupied—he cannot afford to throw away a chance—to leave an old long tried system, with which he and those who have gone before him have been successful—and take up any new project, though it comes recommended by very lofty pretensions. He must wait till it has the sanction of experience, before he takes it up. Such being the difference in the character and condition of the art, and the individuals who practice it in the two countries, we can very readily suppose that an English farmer can carry through a series of experiments with more ease than an American, and that although a want of success may be more sensibly felt by the first than the last, yet that they can be much more efficiently and thoroughly performed. As to the climate, which is the next thing to consider, all of us in this country, who undertake to adopt and recommend English modes of farming, must remember that England is the land of rain and fog; that these two succeed each other with such slight and short intervals of sunshine, that a warm day or a bright sky, are compliments very sparingly presented by heaven to the inhabitants of that great country, but little island. Here, matters are very differently disposed; our climate is always in extremes—we have droughts, that almost dry up realms to deserts; rains that would drown us, if they did not stop; cold, that causes us to regret the absence of the sun's fiery influence; and heat, that makes us look with anxiety for an iceberg. These produce wide differences between the climates of the two countries, that it is absolutely necessary for us to consider when we are recommended to adopt any thing that has succeeded in England. Yet we believe it is a fact, that the

animals which have been introduced here from that country, have all, without any exception, been of the greatest advantage to our farmers. The horse, for which we are almost exclusively indebted to England, certainly has not degenerated; nor the Durham cattle; nor the pig; both of these seem to be at home in many parts of our country; the last especially, in Chester county, appears to have found a climate and food and a general management so favourable, that he takes the opportunity of developing himself to a size that seems unknown anywhere else. On the whole, then—admitting these statements—however cautious the American farmer should be in adopting the improvements of other countries, it does not appear that the difference in climate is so great as to make anything else than moderate caution necessary. In this particular subject before us, it happens that there is no occasion for looking to England alone for its use or usefulness. Guano has been employed in Peru for centuries—a country whose soil or climate bears no analogy whatever with those of England, and very little, except in the extreme strength of the sun, with our own. There it is almost the sole manure; and so highly valued as to be placed under the protection of the Government. We have now attained two strong arguments; the experience of ages in one country, and the results of several years of successful use, in one of the most highly cultivated lands in the world, and where there is the most vigorous application of mind, science and capital, now at work. So far as these go, they are certainly very much in favour of our making experiments with this manure, even if there were no other reason; yet for the very good one, that our agricultural mind may not appear less active than that of other countries, or our farmers appear more disposed to reject with obstinate indifference, the generous endeavours made by other countries to advance the science to which they are attached, and urge on the great national interest, to whose improvement they are pledged. They should not be deterred or discouraged either by the idea of the superior qualifications of British farmers, or their greater wealth; or any other reasons suggested rather by their fears or their indolence, than by their judgment. Instead of such motives acting on our industrious and enterprising farmers, they would, if they visited England, be surprised to find how much reason there was for being proud of their success, even under the discouraging circumstances of small capitals and a meagre supply of labour. There is a great deal of bad farming in old England, more, perhaps, when we consider the circum-

stances of the two countries, than there is here, so that, in truth, our farmers have no occasion to shrink from attempting what has succeeded there. There is but one department of agriculture from which they need withhold, through the dread of competing with English farmers,—that is systematic breeding: this requires more time, attention, and means, than our people are willing to give to a thing, though of great importance, yet of little or no immediate profit.

For the use of guano in this country, besides these general reasons, there are the particular ones offered by the article itself. Its component parts are precisely those we want for manure, and precisely those we have in the manures usually employed, but in a far more concentrated form. It appears from the analyses made by many distinguished chemists, to contain everything that is wanted to act on soils and increase their powers of producing, as well as every ingredient contained in plants. From this it would seem expressly designed for a strong action on vegetable life, and expressly calculated for the restoration of worn-out soils. In this country, as we have before said, the experiments have been so few and on so small a scale, that we cannot bring forward much of a practical and definite nature to bear out this opinion. All that has been done here, however, proves it, and if we choose to admit the success of England, there is no doubt or question on that point. In the experiments that were made last year in different parts of the country, it should be borne in mind that the season was extremely unfavourable. The drought at the commencement of the season, and the long continued and excessive heat, would have kept back the action of any manure, more particularly of one that must have moisture for its decomposition. There was besides a very severe frost in the spring, that killed acres of wheat and cut down potatoes and corn: this, with the aid of the cut-worm, in some cases very much diminished the anticipated glories of the guano. But as far as the experiments made in East Bradford, went, they prove the strong action of guano on vegetation. The clover and the grass were both very much increased; the corn which was moistened with a solution of guano, showed itself sooner than any of the rest of the field, and appeared, until attacked by the frost and worm, much the most flourishing. For so slight an application, this was all that could be expected; but if this had been followed up by the Peruvian mode of throwing the guano about the roots after the corn reaches a few inches in height, and then again when out in tas-

sel, the full effect would have been seen, and a general conclusion could have been drawn, as respects its action on this vegetable. But unless each plant had been watered after these applications, the excessive drought would have caused disappointment, and the manure considered in fault. A gentleman near Boston, on a poor, sterile, sandy soil, planted a few hills with the variety known as sweet corn. A teaspoonful of guano—South American—was mixed with the soil when the corn was sown. A second application was made when the grain was a foot or more in height; the earth was drawn away from the hill, and about three spoonful thrown in. It was not placed near the stem, but five inches or more from it; the trench made by the hoe, was three or four inches in breadth and a half to two inches deep. The whole was then profusely watered. The product is stated to have been much beyond that which received no guano. Besides these, we know of no experiments made on corn. We cannot appeal to England here; but if this manure is to be used on this, our staple, more experience must confirm its value, and the judgment of our own people direct its application. On grass and clover, the greatest satisfaction has been expressed as to this manure. It has been tried on different soils; at Germantown, Massachusetts, and Chester county; in each of these districts the benefit has been very marked. So far as the experiments in the latter region go, the result was very remarkable, when the season is considered. They were made without any experience but that of British farmers to direct; the result was most satisfactory; and the question presents itself—if this material can produce such excellent effects during a season so entirely unfavourable as the last summer, how much more considerable would they have been in one of more rain? On the potatoe, it will be seen from the account of the experiments made in East Bradford, published in the Farmers' Cabinet of September, that the action of the guano was very marked. Those plants cultivated with it came up the first, and grew far more rapidly than the others, which had only barn-yard manure. The crop of turnips was also much increased, or rather, it should be said, was supposed to be—as there was no other ground manured in any other way and sown with that vegetable, it is impossible to make any comparative estimate. We have in this superficial and unsatisfactory way, given all the positive knowledge we possess. By others, this manure has been tried on peas, melons, strawberries, cabbages, cauliflowers, grapes, and hot-house plants, successfully

and satisfactorily in every case, but as they do not belong to agriculture, it will not, perhaps, be thought worth while to notice them more particularly. As to the mode of application and quantity per acre, we must again fall back on the experience of England. There it has been mixed with the usual ight manures: ashes, plaster, charcoal, muck, &c., and used in quantities from one hundred and fifty pounds the acre, to four hundred: in one case, we think as much as six hundred were put on. Our impression is, that it is as well to apply it alone, for two reasons; one that you then know to what to attribute the condition of your crop; the other, that being an extremely sensitive article, it is impossible to tell how far it may have been effected by its companion. Changes and decompositions may be produced that might alter its whole character, and the guano be made to bear the whole blame of a failure, that was due rather to its associates. We would prefer to throw it on the ground in the spring, and let it be ploughed in at the rate of two to three hundred pounds of the Peruvian, and of three to four hundred of the African. One absolute essential in its use is, that the ground be moist. It will have no effect, or but a bad one, if employed in dry weather, or on a dry surface. We must take advantage of a storm of rain, or exert our judgment in the anticipation of one. It is from this necessity of moisture, that arises its extreme importance on sandy soils—on stiff clays, it does not do so well.

If this material should find favour with our farmers, and a regular supply can be relied on, it will produce two good effects, the saving our barn-yard manure, and the keeping our fields free from weeds, except such as are kindly supplied by our benevolent but negligent neighbours. Even if guano were dearer than it now is, and it can now be put upon our lands at about the same expense as fifty bushels of lime to the acre—the saving of labour in the destruction of weeds, the satisfaction of seeing our fields cleared of this foreign vegetable population, and the keeping our tempers untried, will repay amply, even if there be no decided additions to the crop. Besides, we have very little doubt that the guano will be found very destructive to the insects that cut our corn to pieces, and to all which harass us in our grains, vegetables, or fruits; at least they must be more than usually thick skinned, to be able to bear the application of so irritating a substance.

In this imperfect way we have gone through this important subject; but with such scanty materials, how could we say any thing of much value to the practical

farmer? He cannot go out of his way to make experiments; he can place no confidence in conjectures; he cannot afford to change the whole conduct of his life to adopt novelties, or act upon another's imperfect experience; and in the matter before us, where he has to deal with a thing that is literally the edge-tool of agriculture, it would be madness to run the hazard of losing an entire crop, before the art of managing the instrument had been ascertained and perfected.

A. L. ELWYN.

Philadelphia, March 30th, 1846.

### Consideration of Light.

It is highly probable that many of our readers will conclude the following article, which we take from Paxton's splendid *Magazine of Botany*, is too speculative and scientific for the Farmers' Cabinet. To speak frankly, the editor is more than half inclined to the same opinion; but having read it with considerable interest himself, he has no doubt many of his subscribers will do the same.—ED.

It is probable that we may never attain to a knowledge of the precise nature of light, because we cannot determine *that* of its assured source—the *Sun*. Still there are many phenomena which lead to a shrewd conjecture of its elements, and to these we may safely refer.

There are three distinct series of phenomena, traceable to solar influence, to which we invite the attention of the inquiring cultivator; namely, 1st, those of attraction—2nd, those of temperature—and 3rd, those of colouration.

The principle of attraction is manifested in the position assumed by leaves under the several angles of sunlight at different hours of the day. Thus, in *Erythrina*, we see the leaflets brought into first the *horizontal*, and then the *upright* position, at about eight or nine o'clock of the forenoon, and thence to mid-day—declining in proportion as the sun advances to the west. *Attraction*, whatever be its medium, is demonstrative of electric agency; this, at all events, will not be disputed when it is attended with luminous appearances.

But then it may be contended, that the phenomena of magnetism and of chemical attraction do not generally, or of necessity, develop light. This is true, but as respects magnetism—which is induced by the electric current, and therefore dependent upon it; so much so, as all but to prove that electricity and magnetism are one in essence. And as to the latter, when chemical attraction takes place, as between acids and alkalis, the combining powers unite, and thus

neutralize each other. In conformity with these chemical phenomena, light may be considered as exerting an invisible attraction upon the points and foliage of vegetables, which induces the flow of the sap in an *upward* direction, and also the *lateral* courses of the fluids through the tissue of the cells, and that of the medullary processes, thus producing the laboration and concoction of the proper specific juices of each individual plant.

There must be a governing agent,—and therefore we repudiate that maudlin language which ascribes volition and choice to inanimate structures.

2. *Temperature*, its rise and fall, are discerned as measured by our very imperfect instruments. In nine cases of ten, temperature is only a result of excited chemical action, of which combustion is one form; but as referred to the sun, the manifestation of direct heat is generally ascribed to the red rays, while those of magnetism are found in the blue and violet. Still the entire solar, or *white* ray, diffuses heat and light, without communicating heat to the transparent medium through which it passes, unless that medium be susceptible of electro-chemical changes.

This leads us to the consideration of that substitute for glass which was announced some time since, under the title of Whitney's composition. It is now perhaps fortunate, that Drake's sheet-glass may soon be obtained at comparatively small cost; but still, the varnished canvass was a great acquisition, because the direct light of the full solar rays might thus be diffused throughout a house, or pit, communicating its softened, genial temperature, without danger of scalding by lenticular action. But the cloth decays, cracks, perishes; and not only so, it becomes patchy, discoloured, and offensive to the eye. What are the causes of these disagreeable concomitants, which threaten to deprive the forcing gardener of one of his best appliances?

It will be found, that if a frame of varnished linen, or calico, be kept in a dwelling, unexposed to the evaporation of the soil underneath, and to the action of moisture from above, the decay will rarely occur. Whereas, when employed as a horticultural covering, it will speedily become blotched or stained all over with fungus, lichen, or some such cryptogamous vegetation. Here then we perceive the agents of decay, and hence, if some ingenious person could incorporate *with* the varnish, or superpose *upon* it, when applied, a certain antidote, or repellent of the invader, the varnished screen

might last for years, sound and in a decent condition. We have thought of creasote, and bichloride of mercury (corrosive sublimate,) both inimical to mouldiness; but it does not as yet appear how either of them could be satisfactorily applied, because the former, if blended with the bulk of varnish, might be so masked as to lose its protective qualities; and the sublimate, if merely laid over the varnish as a wash, would be carried away by rain from the upper surface, and by watery vapour from the under surface. Perhaps a thin varnish of caoutchouc (India rubber) dissolved in pale naphtha, would be found to act efficiently in every way.

We have said that the sun does not heat the glass through which it passes—and glass is an electric; but it does not heat the linen screen: hence, chemical action is induced, and strange to say, under these circumstances cryptogamous vegetation preys upon the tissue: we have much to learn in circumstances of every-day occurrence.

The late president, Mr. Knight, was exceedingly curious in his endeavours to discover the causes of particular phenomena. He thought that *gravitation* had a very important influence on the growth of plants; and Professor Davy, with whom he was intimate, recounts one of Mr. Knight's experiments, which led him to presume that they owe the peculiar direction of their roots and branches entirely to this force. We refer to Davy's Second Agricultural Lecture for the following particulars:

Mr. Knight "fixed some seeds of the garden-bean on the circumference of a wheel, which in one instance was placed vertically, and in the other horizontally, and made to revolve by means of another wheel worked by water, in such a manner, that the number of the revolutions could be regulated; the beans were supplied with moisture, and were placed under circumstances favourable to germination. The beans all grew, notwithstanding the violence of the revolution, which was sometimes as much as 250 revolutions a minute on the vertical wheel—which always revolved rapidly—and with little variation of velocity; the radicles, or roots, pointed precisely in the direction of *radii* in whatever direction they were placed. The germs took precisely the opposite direction, and pointed to the centre of the wheel, where they soon met each other. Upon the horizontal wheel the conflicting operation of gravitation and centrifugal force, occasioned the germs to form a cone more or less obtuse, according to the velocity of the wheel, the radicles always taking a course diametrically opposite to that taken by the germs,

and, consequently, pointing as much below as the germs pointed above the plane of the wheel's motion."

Mr. Knight, by this ingenious experiment, failed to prove the agency of gravitation, for, to say nothing of the effects of mere mechanical force upon the germinating beans, by a velocity so great, he overlooked the presence of excited electricity. The attempt, at best, was very artificial, and would tend to no natural conclusions; but as to *gravitation* in the abstract, what is it? and what does the term express? A body gravitates when it falls to the earth; but when we consider that the earth is a globe, and that all bodies above its surface fall towards that surface, and therefore at every angle converging towards a central point which the globular figure admits of, it becomes plain that the act which we call descent, or falling, must be produced by attraction; and thus we are inevitably led to the exciting cause, the *light of the sun*, which by its beams electrifies or magnetizes all the revolving worlds belonging to its system, and renders them mutually co-attractive.

Thus, also, we interpret the phenomena of vegetable developements, as the direct solar light appears to effect the induction of those electrical currents which regulate the flow of the sap, the laboration of the proper juice and compound secretions, and the separation and fixation of the colouring principle.

Colour is the ornamental dress of the vegetable kingdom. Whence is it derived—what its source? We know that in the dark some plants acquire rich and deep tints: thus, the red giant Rhubarb, if placed in a warmish, close cellar, develops leaves, the stalks being of a most brilliant crimson, while the plate is of a rich lemon-colour. In the light, growing naturally, the stalk would be a dark ochreous red, and the leaf-plate a full green. Light, therefore, influences, by inducing chemical action in peculiar juices.

The solar ray is decomposable into four defined colours, and into three degrees of blue. By combination, these tints may be rendered productive of every shade of colour. It becomes, therefore, an inquiry of lively interest whether each ray fixes or deposits its own simple tints, or whether it acts electro-chemically upon certain fluids, which are destined to be the colouring media. In the absence of proof, we may still appeal to a few facts adduced by several authorities.

*Influence upon leaves—developing Chlorophyll.*—It frequently happens in America that clouds and rain obscure the atmosphere for several days together, and that, during

this time, buds of entire forests expand themselves into leaves. "These leaves assume a pallid hue till the sun appears, when, within the short period of six hours of a clear sky and bright sun, their colour is changed to a beautiful green."

In Silliman's Journal a circumstance of this kind is recorded, whereby it appears that in six hours the tinting of several miles of a forest went through all the grades, from that of a greenish-white to full spring verdure.

Every gardener is conversant with the variations of colour which flowers assume under artificial treatment: thus, *Andrōmeda polifolia*, and *Kalmia latifolia*, are purple or pink when growing in the open air, but become nearly white when made to flower under glass. Now, it is not the heat altogether that influences the flower, but light, modified by passing through glass. Hence, we should study the effects of all those degrees of heat in which any tender or half-hardy plant can thrive, and adapt them to the actual volume of clear sunlight, because a heated atmosphere is not a substitute,—or, at least, a very defective one—for the clear ray, inasmuch as it (heat) produces no chemical effect upon the fluids of either leaf or flower.

Light acts beneficially upon the upper surface of the leaves, and hence great caution is indicated in allowing space sufficient for full play and action; it also promotes the transpiration of superfluous moisture and gases; and these appear to transude chiefly through the stomates of the under surfaces.

We begin to acquire fresh evidence of electric action in the new experiments upon corn-growing when exposed to the agency of electric circuits. All nature, air, water, earth, are replete with masked light, and this can be derived only from the sun: if then it become a well established fact, that the growth of plants can be doubly stimulated by electricity derived from the atmosphere, we establish that most important point—the electrizing principle of the sun's rays. In a few months we hope to collect, and be enabled to adduce, facts in proof of the theory thus cursorily hinted at.

For the Farmers' Cabinet.

#### Philadelphia Agricultural Society--Its Premiums.

Your correspondent, I. U., in your last No., who doubtless means to give wholesome advice to the Philadelphia Agricultural Society, has ventured some assertions and statements which should not pass unnoticed. He is not singular in the opinion that the

Society devotes a large portion of its premiums to what "it is pleased to term the improved breed of cattle;" and without affirming or denying that these are the Durhams "par excellence," let us for a moment turn to the facts of the case, and see whether they have overstepped the limits of prudence, and bestowed more attention on improved breeds than they merit. Had Mr. I. U. examined with attention the long lists of premiums which the Society annually presents to the public, he would have found that it offers premiums for other improved breeds to a far greater extent, in proportion to their numbers, than for Durhams, and also makes liberal provision for native stock. If your correspondent had been an attentive observer of their proceedings, he would have seen that almost every animal of the cow kind, other than Durham, that was not an absolute scrub, has been awarded a premium, while the great number of Durhams on the ground create active competition, and exclude many fine animals from obtaining premiums. I would ask why are not more native cattle exhibited? the Society would gladly distribute rewards for all that merit them. But the answer is obvious—our farmers have too much self-respect and sense of propriety to exhibit such *native* animals as grace their barn yards! And have the exertions of the Philadelphia Agricultural Society been of no avail in improving the breeds of cattle? A few years since the only handsome stock known here, were a few remains of Col. Powel's importation and the cattle driven from New England. Now, maugre the assertion of Mr. U., there are many dairies in the vicinity of Philadelphia, largely intermixed with Durhams and other improved breeds, of which allow me the liberty of naming:—Henry Chorley, Samuel Rogers, William Warner Roberts, George Martin, R. T. Potts, William Robinson, Garret Williamson, and George W. Blight, besides the more extensive breeders, Dennis Kelly, I. W. Roberts, and James Gowen. Several of these gentlemen have large milk and butter dairies, and they prefer the improved stock, not only because their yield is greater, but also because they mature earlier, and are far more valuable when turned off to the butcher.

These gentlemen, and many others who take an interest in the Society, are so thoroughly convinced of the advantage of good stock, that they raise their own to a considerable extent; but I apprehend few of them even dream of training up a *mountain runt* to usefulness and profit, in this latitude.

What has been the yield of Mr. Gowen's young stock as milkers, I am not particu-

larly informed; but I do know that the general result of his dairy is encouraging, and the unkind sting at his readiness to "inform the agricultural community," might well have been spared. Would that farmers generally possessed a tithe of his readiness to impart information to their co-labourers! Mr. Chorley and others known to the writer, have been entirely successful in raising Durhams for the pail and the shambles. Can this be said of an individual among the thousands who depasture their fields with "native animals of unimproved breeds?"

That this and most other societies fail to interest and excite the farmers to active and ambitious zeal, is a melancholy fact; a farmer myself, and brought up among them, I can speak with freedom of their failings. It is no easy matter to conquer their apathy and indifference,—I had almost said selfishness; yet this Society, by the well directed energy and perseverance of a few, has accomplished much, and I hope will continue its laudable exertions. Repeated efforts have been used to induce the exhibition of agricultural implements and the productions of the soil. More discretionary premiums have been awarded to these, than to any other branches of the exhibitions, and a general disposition is and has been evinced to increase the display of both implements and the produce of farms.

Having dealt thus freely with your correspondent's advice, let me give him and his brother farmers a little in return—"Take the plough by the handle," that is, become members of the Society; attend its meetings, and lend a helping hand to "make all its furrows clean."—I confidently engage that every worthy tiller of the soil will be welcomed within its walls.

A. S. R.

Philadelphia, March 26th, 1846.

Yes—we would say, take the plough by the handle—join the Society, and if its movements are not the best they might be, lend a helping hand to put them so:—if too large a proportion of its premiums are devoted to one branch of the farming interest, have the matter rectified. If the Society places too high a value upon Durhams, or upon any other breed of cattle, we would say to I. U., and others, produce your *natives*, and let them speak for themselves on the ground, or through the still more irresistible evidences of the *pail*. Facts are like straight lines, they sometimes lead where you do not wish to go. It would require no small amount of *hard* writing to prove that the introduction of Durham and other improved breeds, has not vastly benefited the country.—Ed.

WHEN things tire you at the head, take them by the tail.

**To make Fruit Trees Thrifty.**

IN the month of March, wash them as high as a man can reach with one quart whale oil soap, diluted in fifteen gallons of water; and if in April there are caterpillars, give them another dose; then put round the roots of the apple and pear trees, two or three shovels of charcoal or anthracite ashes; to the peach, plum and nectarine trees, I have tried various experiments, yet have hitherto been most pleased with tobacco stems, which are purchased at two cents per bushel. Half a peck of stems around each tree is sufficient. The roots are first laid bare; the tobacco is then placed over them and covered with soil. To this three or four shovels full of anthracite ashes may be added with advantage. The past spring I have tried on all, save peach and nectarine trees—which were so diseased with worms that I ordered them cut up—an application of warm (not hot) coal tar from the gas house. We first removed the earth from the roots, picked out the worms, and then, with a painter's brush, covered the trunk of the tree eight inches up from the roots. After this the soil was immediately replaced around the tree. The effect was astonishing. In May we applied half a pint of guano as a top-dressing to each tree, and thriftier trees, fuller of fruit, and with a deeper, richer, green foliage, cannot be seen. I mean to treat all my peaches this way, as the cheapest and best manner of protecting them. Two peach trees I gave up last fall as past hope of saving. On these I tried an experiment of putting to each fifteen gallons of urine, neutralized with a peck of plaster of Paris. The trees are now living, and the leaves are green; but whether they will thrive well remains to be seen. I think, however, the dose will effect a cure; and if so, it is worth knowing.

R. L. COLT.

Patterson, N. J., June 5th, 1845.

For the Farmers' Cabinet.

**Mildew or Blight in the Grape.**

MR. EDITOR,—In your February No. I notice a communication on the above subject, signed "T.," and among your editorial remarks you say you would be glad if the author of that communication, or some one else, would give more extended information in the premises. In the hope that your very reasonable request would be attended to, so that you might publish the information in your succeeding No., I refrained from giving you my views on the subject. Such information, however, was not published, and probably not furnished, and therefore I feel

called upon to give a few of my own ideas, which may perhaps be of some service.

The blight or mildew, is the operation of fungi, and the cause of the fungi is a surplus of carbonic acid gas; which carbonic acid gas would not exist as such, were there a sufficient supply of potash.

The grape-vine needs a large quantity of potash. Dr. Lee, a scientific gentleman of New York, says, that "a sugar maple, a grape-vine, an apple-tree, and a potatoe plant, need a soil that *abounds in potash.*" In the appendix of Dr. Liebig's great work on Agricultural Chemistry, second American edition, by J. W. Webster, you will find that while speaking of the mode of manuring grape-vines, they say, "Under ordinary circumstances, a manure containing *potash* must be used, otherwise the fertility of a soil will decrease. This is done in all wine countries." Again, they say, "One thousand parts of the pruned branches contain fifty-six to sixty parts of carbonate, or *thirty-eight to forty parts of pure potash.*"

We may now easily account for the fact mentioned by your correspondent, that "old vines are much more subject to mildew than young." They have exhausted the potash from the soil, and when their leaves absorb carbonic acid, the plant has no potash with which to form a healthy salt by union with it; and the diseased plant invites the fungi. A humid summer is favourable for the generation of carbonic acid, and hence the reason why "T." found his young vines attacked during such a season. "T." is correct when he says "the soap-suds is always beneficial, and can be used freely." The reason is, soap-suds contain potash. I should recommend very strongly the use of wood-ashes about grape-vines, particularly in "cold graperies," where the vital power of the plant is not so strong, and consequently it has not the ability to expel the cause of the disease.

Yours, &amp;c., CHEMICO.

Wilkesbarre, March 26th, 1846.

THE cultivation of the grape vine for the making of wine, has received great attention for some years past in the neighbourhood of Cincinnati, and many new vineyards are yearly formed for that purpose, as it is found to yield a handsome profit for the investment. We expect in a few years to see the cultivation of the grape under glass extensively carried on, as we have no doubt our fine climate and clear sunny weather in the months of February and March, will prove highly favourable to that object.—*Magazine of Horticulture.*

**Forsyth's Composition.**

THE name of Forsyth is so well known to fruit growers, and his composition, his pruning, training, and mode of renovating fruit trees, so frequently referred to, without much knowledge of their merit, that it may be gratifying to our readers to know something more of the man; and also useful to be made acquainted with the leading features of his practice.

Forsyth was a Scotchman, employed for several years by Miller, in the Chelsea Botanic Garden, whom he ultimately succeeded as curator. This situation he held about fourteen years, and was then chosen to superintend the Royal Gardens of Kensington and St. James's. Whilst so engaged he received a pecuniary grant from Parliament, for his improved mode of renovating fruit trees, by the excision of diseased parts, heading down weak and decrepit trees, and the application of his composition to all wounds thereby occasioned. Much of Forsyth's practice has been approved by his successors; and every one that is interested in the growth of fruit should be acquainted with his composition, the preparation of which, for several years, was not disclosed to the public. This composition may truly be said to have been, at the time it was made known, as much esteemed for curing the cuts and bruises of maimed trees, as Marshall's Cerate ever was for its healing virtues on the human body. It having been considered by the Commissioners of the Land Revenue, that Forsyth's composition could be advantageously applied to broken trees in the Royal Forests, a representation to that effect was made to the House of Commons, and twelve gentlemen, headed by the Marquis of Abercorn, were appointed as commissioners to make inquiry whether the composition in question was efficacious for the purpose of restoring the bark to injured oak trees; and preventing or curing injuries and defects in timber, arising from the cutting or breaking off of limbs or branches. Forsyth had, for several years, employed it in the Royal Gardens at Kensington, where its effects were shown to the commissioners; this proved satisfactory; and a recompense was granted by Parliament to Forsyth, for making known the preparation and mode of application of his celebrated composition. The document which unfolded Forsyth's secret was dated from Kensington Gardens, May 11th, 1791; and having been esteemed of so much importance, we give it verbatim, as follows:

"Take one bushel of fresh cow-dung, half a bushel of lime-rubbish of old build-

ings—that from the ceilings of rooms is preferable—half a bushel of wood ashes, and a sixteenth part of a bushel of pit or river sand; the three last articles are to be sifted fine before they are mixed; then work them well together with a spade, and afterwards with a wooden beater, until the stuff is very smooth, like fine plaster used for the ceilings of rooms.

"The Composition being thus made, care must be taken to prepare the tree properly for its application, by cutting away all the dead, decayed, and injured part, till you come to the fresh sound wood, leaving the surface of the wood very smooth, and rounding off the edges of the bark with a draw-knife, or other instrument, perfectly smooth, which must be particularly attended to; then lay on the plaster about one-eighth of an inch thick, all over the part where the wood or bark has been so cut away, finishing off the edges as thin as possible: then take a quantity of powder of dry wood ashes, mixed with a sixth part of the same quantity of the ashes of burnt bones; put it into a tin box, with holes in the top, and shake the powder on the surface of the plaster, till the whole is covered over with it, letting it remain for half an hour, to absorb the moisture; then apply more powder, rubbing it on gently with the hand, and repeating the application of the powder, till the whole plaster becomes a dry smooth surface.

"All trees cut down near the ground should have the surface made quite smooth, rounding it off in a small degree, as before mentioned; and the dry powder directed to be used afterwards should have an equal quantity of powder of alabaster mixed with it, in order the better to resist the dripping of trees and heavy rains.

"If any of the Composition be left for a future occasion, it should be kept in a tub, or other vessel, and urine of any kind poured on it, so as to cover the surface; otherwise the atmosphere will greatly hurt the efficacy of the application."—*Maund's Botanic Garden.*

**Api Petit; or American Lady Apple.**

Of all the apples that grace the dessert, this is confessedly the most beautiful; and its tiny dimensions rather increase than diminish its attractions. It is not its glossy brilliant crimson alone that induces the eye to rest on it with pleasure, but it is the melting of this into ivory tints—sometimes as gradual as daybreak—sometimes with brighter abruptness, just as the ruddy cloud bounds the softened light of the setting sun. Residents of London, during the last winter,

could but be struck with the appearance of this brilliant fruit decorating the windows of the metropolitan fruiterers. In productive seasons, like the last, it has been extensively imported into England from America, although it is probable that England knew the Lady Apple before it knew America—before Columbus had looked on the waters of the Orinoco. It is, doubtless, of very ancient origin, and is said to have been introduced to France from the Peloponnesus. This may possibly be the original apple referred to in French dictionaries under the name *Api*, and described as a small delicate apple, white and red. It also bears the name *Api rouge*, and *Etoilée*.

In flavour the Lady Apple is less remarkable than for beauty. It is sufficiently sweet, with very little acid; pleasant, but devoid of any peculiar aroma. It keeps well till April; but it is desirable that it should hang as long on the tree as the season will permit.—*Maund's Fruitist*.

**SILK IN TURKEY.**—The original manufactures of silk were established before the conquest of Constantinople, at Broussa, from whence most of the raw silk is still obtained, the abundance of mulberry trees in its neighbourhood being favourable to the nurture of the silk-worm. Little Broussa silk is however now sold in the silk bazaar of Constantinople. Within the last ten or fifteen years since the several treaties made with the Sublime Porte, the home silk trade has diminished fifty per cent. A large supply of imitation goods is received from England, France and Italy, and the richer articles, principally manufactured at Lyons, have completely superseded those formerly received from Broussa, or manufactured at Scoutari and Constantinople.—*White's Three Years in Constantinople*.

**HOW TO LAY PLANKS ON BRIDGES.**—The common mode of planking, placing the planks across the travelled way, is liable to great objections. The planks will not last so long, they make a very rough way when partly worn, and when their central parts are worn thin the planks must all be taken up and new ones supplied.

Lay your planks lengthwise, in the line of travel, and the horses' shoes will not cut them out half so fast as when you lay them crosswise; the way will continue comparatively smooth as long as the planks last; and when those that are most travelled on are worn thin, they may be replaced without meddling with the side planks that are not

half so much worn, and that may last as long as the new ones where the principal travel is.—*Mass. Ploughman*.

### Fine Crops of Corn.

THE following extract is made from a letter received from Ebenezer J. Dickey, of Hopewell Cotton Works, Chester county, Pa., dated Feb. 21st. The farmer who is accustomed to poor or indifferent crops, can hardly conceive the difference there is between his, and those which may be called good ones. If by chance he happens to get a large crop of hay or corn, his mow, or his crib, fills up so fast that he hardly understands it, and he finds his heart palpitating with a kind of undefined satisfaction, and it may be with gratitude, for the success of his management. Twenty-nine hundred and fifty-nine bushels of corn thrown into a man's crib, from thirty-nine and a quarter of his acres, are very well calculated to give him a good opinion of his farming, or his land, or both: and it gives us no trifling pleasure to record the fact.—*Ed.*

I PLANTED three fields in corn last season, the first containing twelve acres, off of which I took last fall ten hundred and seventy-three bushels; the second contained fourteen acres and three-quarters—on this field I had one thousand and forty-three bushels; and on the third, of twelve acres and a half, I had eight hundred and forty-three bushels. About two-thirds of the first field were manured last spring on the sod and ploughed down; and the other third and the other two fields had no manure. This does not come up to the premium crops that we have accounts of, but when we consider the number of acres that were planted, I think it was a pretty fair crop.

Yours respectfully,

EBENEZER J. DICKEY.

**KEEPING COWS IN WINTER.**—Farmers prejudice very greatly their own interest in suffering their milch cows to come out in the spring in low condition. During the time they are dry, they think it enough to give them the coarsest fodder, and that in limited quantities; this, too, at a time of pregnancy, when they require the kindest treatment and the most nourishing food. The calf itself, under this treatment of the cow, is small and feeble. He finds comparatively insufficient support from his exhausted dam: and the return which the cow makes in milk during the summer, is much less than it would be, if she came into the spring in good health and flesh. It requires the whole summer to recover what she has lost. The animal constitution cannot be trifled with in this way.—*Colman*.

### To Make Pear Trees Fruitful.

As we proceed with the Fruitist, the subjects of which it is destined to treat, branch out and exhibit more and more the importance of increased attention on the part of the fruit grower. Although it may be but a single tree that he has to manage, even this, in proportion to his knowledge and attention, will be made matter of pleasure and profit. The following paper, submitted to the Horticultural Society by its late president, T. A. Knight, Esq., indicates principles, of the advantages of which the cultivator may avail himself in other ways than those to which they are applied in the experiments detailed.

"The pear-tree exercises the patience of the planter during a longer period before it affords fruit, than any other grafted tree which finds a place in our gardens; and though it is subsequently very long-lived, it generally, when trained to a wall, becomes in a few years unproductive of fruit, except at the extremities of its lateral branches. Both these defects are, however, I have good reason to believe, the result of improper management; for I have lately succeeded most perfectly in rendering my old trees very productive in every part; and my young trees have almost always afforded fruit the second year after being grafted; and none have remained barren beyond the third year.

"In detailing the mode of pruning and culture I have adopted, I shall probably more easily render myself intelligible, by describing accurately the management of a single tree each.

"An old St. Germain pear-tree, of the spurious kind, had been trained in the fan form, against a north-west wall in my garden, and the central branches, as usually happens in old trees thus trained, had long reached the top of the wall, and had become wholly unproductive. The other branches afforded but very little fruit, and that never acquiring maturity, was consequently of no value; so that it was necessary to change the variety, as well as to render the tree productive.

"To attain these purposes, every branch which did not want at least twenty degrees of being perpendicular, was taken out at its base; and the spurs upon every other branch, which I intended to retain, were taken off closely with the saw and chisel. Into these branches, at their subdivisions, grafts were inserted at different distances from the root, and some so near the extremities of the branches, that the tree extended as widely

in the autumn, after it was grafted, as it did in the preceding year. The grafts were also so disposed, that every part of the space the tree previously covered, was equally well supplied with young wood.

"As soon in the succeeding summer as the young shoots had attained sufficient length, they were trained almost perpendicularly downwards, between the larger branches and the wall, to which they were nailed. The most perpendicular remaining branch upon each side, was grafted about four feet below the top of the wall, which is twelve feet high; and the young shoots which the grafts upon these afforded, were trained inwards, and bent down to occupy the space from which the old central branches had been taken away; and therefore very little vacant space anywhere remained in the end of the first autumn. A few blossoms, but not any fruit, were produced by several of the grafts in the succeeding spring; but in the following year, and subsequently, I have had abundant crops, equally dispersed over every part of the tree; and I have scarcely ever seen such an exuberance of blossom as this tree presents in the present spring. Grafts of eight different kinds of pears had been inserted, and all afforded fruit, and almost in equal abundance. By this mode of training, the bearing branches being small and short, may be changed every three or four years, till the tree is a century old, without the loss of a single crop; and the central part, which is unproductive in every other mode of training, becomes the most fruitful. I proceed to the management of young trees.

"A young pear stock, which had two lateral branches upon each side, and was about six feet high, was planted against a wall early in the spring; and it was grafted in each of its lateral branches, two of which sprang out of the stem about four feet from the ground, and the others at its summit, in the following year. The shoots these grafts produced, when about a foot long, were trained downwards, as in the preceding experiment, the undermost nearly perpendicularly, and the uppermost just below the horizontal line, placing them at such distances, that the leaves of one shoot did not at all shade those of another. In the next year the same mode of training was continued, and in the following I obtained an abundant crop of fruit, and the tree is again heavily loaded with blossoms.

"This mode of training was first applied to the Aston-town pear, which rarely produces fruit till six or seven years after the trees have been grafted; and from this va-

riety and the Colmar, I have not obtained fruit till the grafts have been three years old.

"In the future treatment of my young pear-trees, it is my intention to give them very nearly the form of the old tree I have described, in every respect, except that these will necessarily stand upon larger stems, which I think advantageous; and I shall not permit the existence of so great a number of large lateral branches. In both cases the bearing wood will depend wholly beneath the large branches which feed it; for it is the influence of gravitation upon the sap which occasions the early and exuberant produce of fruit.

"I scarcely need add, that where, in old trees, it is not meant to change the variety, nothing more will be necessary than to take off wholly the spurs and supernumerary large branches, leaving every blossom which grows near the end of the remaining branches, or that the length of the dependent bearing wood must be different in different varieties. The Crassane, the Colmar, and Aston-town, will require the greatest, and the St. Germain probably the least length."  
—*Maudslow's Botanic Garden.*

#### Transplantation of Trees.

THERE is a degree of misconception on this subject that is truly astonishing, when the exercise of a moderate portion of common sense is all that is requisite to form a correct judgment. In the first place, all trees, and even the most delicate plants of the temperate zone, can be sent from our country to Europe with perfect safety, and even to cities in the interior, such as Warsaw, Vienna, &c., to which there are several hundred miles of land carriage after arrival in Europe, and yet there are frequent inquiries made, whether trees and plants will bear transportation to the different States of our Union. All that any applicant for trees, &c., has to do, is to inform the nursery proprietor the best route for transmission, and what portion is land carriage, and he will manage the details accordingly. Many persons, residing in States south of us, have also very erroneous notions as to the suitable seasons for transmitting trees and plants to them. The months of January and February are perfectly safe for forwarding trees and shrubbery as far south as Charleston, and November to January, to New Orleans. The period for transplantation commences here the 1st of October, and extends to the 1st of May, for the different sections of our country. Trees do not advance materially in vegetation here

until the middle of April, and it matters not how far advanced they may be at the places where they are planted, even if it were mid-summer, provided they are sent from a place where vegetation is dormant, and the voyage not so long as to start their growth on the passage. Grape vines being very late in vegetating, may be safely transported a month later than the period named for trees. Roses are very retentive of life, and may be transported in safety during the whole period that they are in a dormant state; and potted plants may be transported in the pots, or turned out and well mossed around the roots, at all seasons of the year. Greenhouse plants can be sent safely throughout the year. Dahlias, bulbous roots, and herbaceous plants, from October to May, inclusive.—*Magazine of Horticulture.*

From the American Agriculturist.

#### An Orange County Milk Farm.

WHILE on a visit at Newburgh last summer, I made the acquaintance of Mr. J. R. Colwell, who lives on a farm of 280 acres, two and a half miles from the river, and upon which he keeps fifty cows, four oxen, five horses, and varying numbers of young stock. About 60 acres are in grain cultivation; the other in pasture, mowing, and woodland, which latter, however, is pastured. The average crops on this, as well as adjoining farms, may be fairly stated as follows:—Corn, 40 bushels to the acre; rye, 20; oats, 40; and hay, one and a half tons. Of course the great reliance for profit is upon the milk sent to the city market. This is sold at an average through the year of two cents per quart, delivered on board of steam-boats at Newburgh. Mr. Colwell expects his cows to average five or six quarts of milk per day through the year, which will be in a year, at five and a half quarts per day, 2,007½ quarts, at two cents, \$40 15, which is a little below what is generally calculated for the average produce of cows in Orange county.

Last year Mr. Colwell only kept sixteen cows, from which he sold milk to the amount of \$890, making an average of \$55 62½ to each cow; a very pretty little item for some of us out West, who brag of our great prairie pastures, to set down opposite our account of profit, where cow-keeping costs nothing, and the profit is in exact proportion.

But I must tell how Mr. Colwell's cows are kept. In summer, upon good pasture, watered by such springs and rills as are always found trickling through a mountain-

ous country such as this is. At six o'clock, regularly through the summer, they are brought from the pasture to the yards, and milked, and then turned out in a different pasture during the night. This change of pasture every night, Mr. Colwell looks upon as an item of great importance. When the pasture begins to fail, say 1st of October, he commences feeding half a bushel per head per day, of brewer's grains, which are hauled each day from Newburgh, and fed to the cows in heaps laid upon the clean sod. The winter feeding commences on an average the middle of November, and ends about the 10th of May. The cows are all stabled through the winter, and at present turned out to water; but Mr. Colwell intends to fix his stable so as to water them as they stand in the stalls. For winter feed, everything of straw, hay, or stubble kind, is cut up, and corn and cobs, and occasionally oats ground, and two quarts of this meal, with three pecks of brewer's grains to each cow, are mixed up with the chopped straw, &c., twelve hours before feeding, and given in quantities to satisfy each appetite—not forgetting a daily allowance of salt. This feed, and a warm stable, give him almost as much milk in winter as in summer. When I was there in October last, the price of grains was four cents per bushel, and I think I understood Mr. Colwell, that was his contract price through the year. If you will add the present prices of hay and grain, it will be interesting to some of us "outside barbarians," and enable us to "calculate" the cost of milk. Mr. Colwell could give you many other items worth your notice, I dare say, and I engage you a most hearty welcome, if you will give him a call.

*Quantity of grass seed sown to the acre.*

—In my own neighbourhood, and many other places in which I am acquainted, four quarts to the acre of timothy seed are thought to be a good seeding; and I am laughed at for talking about putting on half a bushel. If such men ever read, I should like to have them learn how they seed land in Orange county. Noticing while on a visit to Mr. Charles Downing last fall, that he was seeding down a piece of ground—dry gravelly loam upon a side hill, I had the curiosity to see how much seed he put on to the acre, and found it was half a bushel of clean timothy, one-fourth of a bushel of orchard grass, and one-eighth of a bushel of clover. Now, if four quarts are enough, what a waste of seed is here! And equally wasteful was he in the labour bestowed upon the land. Not contented with ploughing and throwing on the seed in a windy day, he

harrowed the ground until smooth. And what is more, picked up the roots, stones, and trash, besides the waste of putting on manure.

"Well, no wonder such folks can make \$55 from a cow in one season—we can't do it out West, that is a fact, stranger; but then we can live without it."

That is the answer—"we can live"—yes, we can and do live, but who knows how; you never will till you come and see. "One half the world don't know how the other half live." No; if they did, they would try to live better. If some of "your folks" "down East," only knew how some of "our folks" "out West," lived, or pretended to live by farming, they would be more contented; and if Western land spoilers knew how Eastern land skimmers had skinned their land to death, they would not go on doing just the same thing. But they won't know, and of course, won't do.

SOLON ROBINSON.

Lake Court House, Ind., Dec. 6th, 1845.

**Hoare's Mode of Planting the Vine.**

A FEW months ago, Mr. Hoare, the well known writer on the Vine, published a new system of managing the roots of that plant, which if not applicable in its widest sense to many climbing plants, may be applied in a modified degree with a reasonable assurance of success; and to the consideration of this, we would now direct attention.

Mr. Hoare's method for the Vine is to construct compartments for each plant of bricks cemented together, and with a flooring of the same material, so as to prevent the roots from penetrating beyond them. These are filled entirely with equal proportions, well mingled together, of broken bricks, charcoal, lumps of mortar and bones, the three former generally in fragments about the size of a hen's egg, and well soaked in liquid manure for some time previous to use. Smaller or larger pieces may also be added; this should be in some measure regulated by the size of the compartment; and it is necessary that the whole be very compactly placed together. When this work is accomplished, they are covered up with bricks as before set in cement, with the exception of a space where they are left loose for the insertion of the plant, and the administration of fluid.

The advantages claimed for this method, are, that it presents a continual source of food which is never in excess, or, at least, is so conditioned that the plants can rarely obtain an overabundant supply. The substances which afford it are always moist, but

never wet, a state which necessarily renders them a much warmer medium than ordinary earths; and whilst the roots of a plant are thus placed in a warmer temperature, they are also less liable to be affected by any occasional depression of the atmospheric temperature.

The extensive absorbent powers, and the capability of retaining moisture possessed by brick and charcoal, must be well known to every scientific cultivator. The same powers are also in a large degree common to old decayed mortar; hence when those materials have laid in urine, and are mixed together with a proportion of bones—which are in themselves a manure of the most lasting character,—a fund of nourishment is stored up which is almost exhaustless, and is represented to furnish means of nourishment and facilities for growth, beyond that which can be obtained from a much larger bulk of mere soil.

Although this method is expressly intended by Mr. Hoare for the management of the vine, we entertain little fear of the success of its application to many climbing plants with strong roots, which have hitherto been found very difficult to flower, or to restrain within moderate limits; but we apprehend it will be necessary to employ a larger number of smaller fragments than is recommended for the vine.

Perhaps, however, the utility of these substances may be greater and more general when used in conjunction with a small proportion of loose earth, wood-ashes, rotten wood, and leaves in a partial state of decomposition. And in this respect we can speak more advisedly, as our remarks are not merely speculative, but founded on past experience. In adopting it, the earth need not be mingled with the entire mass, but merely incorporated with the upper portion of it, to assist the plant in its earliest efforts to establish itself; for it is then that a portion of earth seems most essential, and it will through time by the continual ramification of roots, and occasional waterings, be carried in small quantities amongst the lower part of the mass. It is better, too, that it should be primarily employed only in the upper stratum, in order that a larger amount of the finer fibres may be encouraged in the vicinity of the surface.—*Paxton's Magazine of Botany.*

For the Farmers' Cabinet.

#### A Suggestion.

MR. EDITOR,—While the more intelligent part of our agriculturists are turning their attention to the use of guano as a fertilizer,

and our merchants are sending their ships thousands of miles to the islands of the ocean, for that highly valuable substance, it appears to me that they should not overlook another article valuable for agricultural purposes—an article, too, that is, I am inclined to believe, more valuable than even the guano, for calcareous soils; and soils that have had sixty, eighty, an hundred, or an hundred and fifty bushels of lime per acre thrown upon them.

Our whalers, after they have obtained the oil from the blubber, throw what remains overboard: this refuse is composed almost entirely of carbon and nitrogen, and hence would be very valuable to grain raisers as a manure. It is an easy matter to pack this refuse away in casks, and I have every reason to think that if the farming population of our country would properly appreciate its value, it might be brought home by the whalers, and sold at a price that would largely increase the profits of a whaling voyage. There might probably be some expense attending the packing and preserving of it, such as the purchasing of salt—but this salt would render it still more useful, as it is also a fertilizer, and the increased value of the refuse would perhaps balance the cost of the salt; especially as salt for this purpose need not be of the best kind, and might be purchased very cheaply where salt is manufactured—say at Turk's Island, or somewhere else in the track of whale ships. The ashes made by the fires while trying out the oil—and I believe the whalers use hickory and oak wood principally, which produce good ashes for the purpose—might be thrown into the casks with the refuse, and would assist in preserving it, and be thereby turned to a good purpose.

This refuse cut into small pieces and scattered over a wheat field about the time the wheat is in blossom, would largely increase the crop; and if the soil was supplied with lime sufficient to make good strong stalks that would be able to hold up the heavy heads, the farmer, by the increased value of the crop, would be enabled to pay a good price per pound, for the refuse blubber. Will our grain growers and whaling companies look into this matter?

CHEMICO.

TO PREVENT THE SMOKING OF A LAMP.—Soak the wick in strong vinegar, and dry it well before you use it: it will then burn sweet and pleasant, and give much satisfaction for the trifling trouble in preparing it. Lamp smoke is not only disagreeable to the smell, but hurtful to the lungs.

For the Farmers' Cabinet.

### James Gowen's System of Farming.

MR. EDITOR,—In your last No. Mr. Gowen insinuates, if he does not directly make the charge, that maliciousness or mischievousness has been at the bottom of the observations I made on his letter to Gen. Richardson—as if he thought it treason against right, for one to differ from himself in opinion, or as if no one could so differ, and be honest. Other people, nevertheless, will venture to differ from him when they think proper, as will also your humble servant; and I beg leave even to suggest, that we may by possibility do so, and be as honest at heart, and as patriotic in purpose, as himself: and by your permission, Mr. Editor, I may sometimes take the liberty of expressing this difference of opinion in your paper, though with this communication I mean to leave the present subject. I am more accustomed to handling the plough than the pen, and like to confine myself to a plain statement of facts. I feel compelled to go over the whole ground, but I will be as brief and condensed as possible.

I have spoken of Gen. Richardson being led from the frying-pan into the fire, when advised to raise exclusively, his own stock of cattle, and of the Durham breed. I pointed out what I considered a better plan, in the following words: "If Mr. Gowen will step over to his neighbours, the intelligent farmers of Chester county, he will find what I have asserted; they carry out his plan in part, leaving three-fourths of the arable land in grass for four or five years." This shows that I agreed with Mr. Gowen, in his views as to the advantage of cultivating more grass than grain. And here I must also invite Gen. Richardson—who has brought the name of H. S. not so very advantageously from the South—if he should visit Pennsylvania again, to pass along among the Chester county farmers, when, it may be, he will not judge so severely of me. Mr. Gowen, who has only a few years ago stepped from his store on to his farm, will, I trust, admit that the Chester county farmers have more experience than himself, and their practice, I can assure him, is worthy his attention.

He has made a successful speculation with the Durham cattle; his *Dairy Maid*, has brought him *golden calves*; but it does not follow, that these have proved *golden* to their purchasers. So long as he can sell his young heifers and bulls at \$100 or \$150, it is indeed a good plan to raise cattle. But the Durham delusion, like all other delusions, will end. The old Maid, even will

be neglected—the Durham breed will be worth no more than our good domestic Genesee cattle: but I need not repeat what I have said in my former communication on this subject. What will then be the situation of Mount Airy farm? A soil in its primitive state, naturally poor, requiring annually strong manuring and expensive manual labour, can hardly compete in raising cattle, which consume hay worth \$18 a ton, and are pastured on land worth from \$100 to \$200 per acre, and those cattle be sold for little, or no more than Western cattle, raised on the fertile plains I have described, which have an inexhaustible alluvial soil, particularly adapted to raising cattle—requiring but little manuring—no manual labour but to make the hay, worth on the spot, \$6 to \$8 per ton—pastured on land richer than Mr. Gowen can make his land, and worth from \$25 to \$35 per acre. Now let me ask, does not the Chester county grazier act much more wisely to buy his stock from the Western drover, than to raise it himself?

Mr. Gowen in his last communication, complains that I have placed him in the category of those who abandon their cattle to straw and the winter winds. To quote his own language, "I never said such a thing." How could he have so understood me? Let any one read my paragraph commencing on the 225th page of your seventh No., and judge if I have so placed him—or whether this *category* be not merely one of his own conjuring up. On the contrary, I said his farm was in the highest state of cultivation; and so it is; but whether it affords a profit, is quite another question. What I said, was plainly in reference to those who purchase Durhams at high prices, expecting every thing from them, while, at the same time, by shameful neglect, they have reduced their domestic cattle to scrubs, which are a disgrace to themselves and their management.

Mr. Gowen further says, "If I make much or little by farming, that is my own affair." Certainly—it is highly impertinent to pry into any man's private matters: but Mr. Gowen presents his farm as a pattern; he comes before the public with an improved system; of course we all feel an interest, and have a right to submit that system to a close investigation, both as to the manner of operation, expenses, profits, &c.

Of Mr. Gowen's most singular account of the produce of his farm, given in your last No., page 254, all which he sets down as the result of his \$1000 outlay for labour, I leave the reflecting readers of your Cabinet to judge. He sets down \$2160 as the value

of his hay. Of one hundred and twenty tons, how much hay will be left to send to market to sell for cash, after having wintered seven horses and fifty head of cattle? To produce the extraordinary quantity of milk and butter that will realize \$1400, how many of his roots will it be necessary to give to his cows? and how many will be left for sale, after they are satisfied? yet they are all set down as profit! Twenty head of swine cannot be kept from squealing on homœopathic doses, and fifteen hogs weighing 4,500 lbs. cannot be fattened as Mr. Gowen fattens his stock, altogether on corn-cobs. Yet \$600 are set down as value for 1000 bushels of corn, and full price added for the pork afterward. Up here, Mr. Editor, in this rough country, where we have but a rough plan of book-keeping, we should call this a system of *double entry*. Mr. Gowen's horses receive neither corn nor oats, but are fed on ship-stuff and cut timothy hay. Now suppose the ship-stuff that is bought, should cost more than the corn brings, that is sold, I give it to some of your juvenile readers to cypher out the amount of profit. By the way, I am a miller; and I know that in a well regulated mill, very little farinaceous matter is left in ship-stuff, and consequently it can contain but little nutriment. It would be an important discovery, if hard-working farm-horses can be kept in proper order on ship-stuff.

Now I dismiss the subject,—spring is at hand, and I have to attend to my farm.

H. S.

Bethel, Berks co., Pa., March 28th, 1846.

For the Farmers' Cabinet.

### Preparation of Seed Wheat.

MR. EDITOR,—I have noticed several communications in your valuable paper, upon the preparation of seed wheat; as they all differ some what from the method I have adopted for the last three years with much success, I beg leave to give you my mode of preparation.

I place a half hogshhead nearly full of water in my barn—add glauber salts until the water ceases to dissolve them; then take a half bushel of wheat in a bale basket, sink it gradually, stirring it with a paddle until every particle of filth is washed out, which will float on the brine; raise the basket suddenly to throw off the filth, let the brine drain from it, place the wheat on the floor and roll it in newly slacked lime, then run it aside to let it dry a few hours before seeding—skim the floating filth from the brine and strain it through a colander or fine sieve. By this

mode one hand can wash as fast as ten ploughs can put it in.

In 1843, I received 100 bushels of seed wheat from the Western shore; after seeding more than one half I discovered smut in it, and prepared 30 bushels as stated, washing out a quantity of smut and other filth. In 1844 I found the smut much increased in the wheat not prepared; in that prepared, after a careful examination, I found only one smut head; I then examined the grain, and thought I could see a perceptible difference in favour of the prepared wheat.

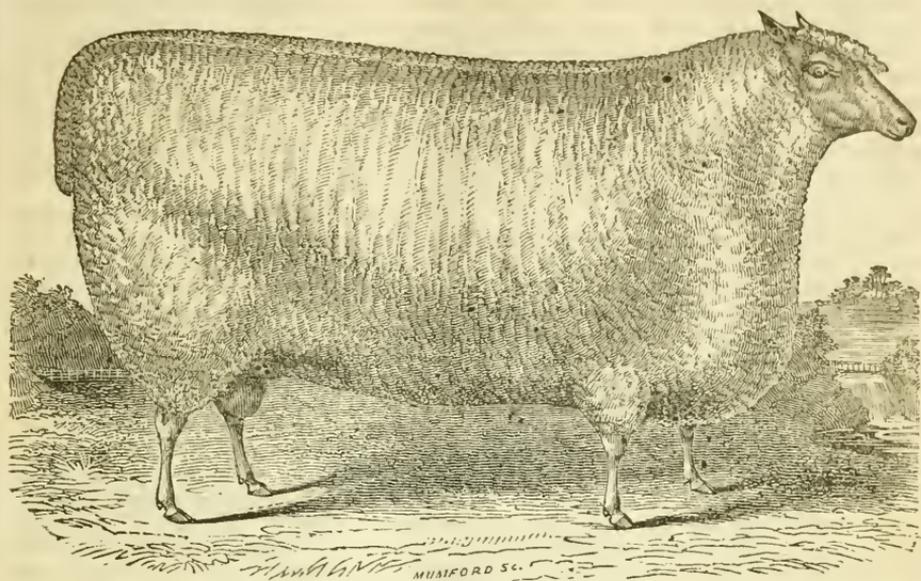
In the fall I seeded 75 bushels of that wheat, washing only 12 bushels. In 1845 I examined carefully the 12 bushels seeding, and found no smut; I did not examine that not prepared, but found none in cleansing it for market. I again compared the grain, and observed if any thing, a greater difference in favour of the prepared wheat. I also discovered a like difference in a white wheat that I was seeding.

Last fall I prepared my entire crop, 162 bushels, using 200 lbs. salts, and nearly six barrels of slacked lime. I seeded two small parcels of wheat, one from Pennsylvania, the other from the southern part of this state, both containing a large portion of smut; if these prove clean the coming harvest I shall consider this preparation proof against smut. As we have discovered an antidote for this pest, I now no longer fear it, and will recommend to your subscribers in this part of the country, the change their seed wheat at last every two or three years, for I am fully satisfied from experiments I have made, that great gains will result from it.

A SUBSCRIBER.

Eastern Shore, Md., March 30, 1846.

VEVAY VINEYARD.—The Indiana Farmer and Gardener contains a notice of this vineyard. It was commenced by Swiss emigrants in 1801, at Vevay, on the banks of the Ohio. Congress granted them land on long credit. They brought their own native vines, and after struggling for years, they gave up the culture of the foreign vine. They turned attention to our native vine, first to the Cape grape, and subsequently to the Isabella and Catawba. After forty years of experience, they consider our climate and soil inferior to those of Switzerland for producing saccharine matter, and consequently wine. They say that, in this country, twelve pounds of grapes are required to make a gallon of wine, and, in the old country, ten pounds. At one time they had forty acres under cultivation; now only five. They say they can cultivate other products to greater profit.



### NEW OXFORDSHIRE BUCK,

*Twenty-three months old,—Live weight, 320 lbs.*

To the Editor of the Farmers' Cabinet:

SIR,—This splendid animal, the property of Clayton Reybold, Esq., son and successor to Major Philip Reybold, of Delaware, selected by him in England, and imported without regard to expense, is a fine specimen of a breed that now carries the highest premiums for long woolled sheep at the meetings of the Royal Agricultural Society of England. The breeder of the subject of our engraving having won the following prizes at their late exhibitions, defying all competition, viz:

At Oxford, £30 for the best Buck of any age; £30 for the best shearing Buck; and £10 for the best pen of Theaves, in the long woolled class of sheep, not Leicesters.

At Cambridge, £30 for the best Buck of any age; £30 for the best shearing Buck; and a bounty of £5 for a fat Ewe, shown as extra stock.

At Liverpool, £30 for the best shearing Buck; and \$15 for the best pair of Ewes and Lambs.

At Bristol, £15, being the second prize for the best Buck of any age; £30 for the best shearing Buck; £15 for the second best shearing Buck; and £5, the second prize, for Theaves.

At Derby, £10 for the five best Theaves.

At Southampton, £30 for the best shearing Buck,—the sire of the subject of our

engraving—£15 for the second best Buck; and £10 for a fat Ewe.

At the Smithfield Club Cattle Shows, for three years, the silver medal for the best sheep in extra stock, besides numerous prizes in the counties of Oxfordshire, Gloucestershire and Berkshire.

We call attention to the finely engraved portrait above, by Mumford, of "The New Oxfordshire Buck," lately imported by Major Philip Reybold, of Delaware, whose life has been spent in the accomplishment of good undertakings—witness his peach orchards of more than 1000 acres, with a daily sale of 5000 baskets of that delicious fruit; his fine flock of pure Leicesters, numbering many hundreds of the choicest animals; and the feeding of sheep of 147 lbs. dead weight, cutting five inches thick of fat on the rib! But not content with a flock that he had brought by judicious management to such size and perfection, he conceived the idea, that by importation, he might be able to add still more to the weight of his already unrivalled stock. Accordingly, Mr. Clayton Reybold proceeded to England the last summer, and after examining many of the finest flocks in that country, selected two Bucks of the *New Oxfordshire* breed, and eight of the purest New Leices-

ter Ewes; returning with them in time to place the Bucks with these Ewes, and about 230 of the finest of the Reybold flock; and the lambs from this cross, which are now dropping, give proof of the success of the undertaking. The subject of our engraving weighs 320 lbs. live weight, and is rapidly increasing in size; his fleece, in the estimation of the best judges, promising to attain the weight of 20 lbs. by shearing time.

Major Reybold retires from the farm, and his son, Mr. Clayton Reybold, succeeds him, with the intention of making the rearing of improved sheep his chief business. He will be happy to exhibit his flock to gentlemen desirous of introducing on their estates this valuable and increasingly important species of stock, flattering himself, that from Ewes confessedly unrivalled in this country, aided by further importations of the best sheep that can be obtained for money, he will be able to supply Bucks, both for sale and for letting for the season, that shall meet the approbation of his friends, be a credit to himself, and an honour to his country. P.

#### Prepared Manures and their effects on Crops.

THE substance of the following remarks was lately delivered at the meeting of the American Agricultural Association in New York, by R. L. Pell. We copy from the American Agriculturist.

MR. PELL rose and said: By analysis it is known that all cereal grains, cruciferous and leguminous plants, trees, and shrubs, require in the soil the same chemical substances, but in different quantities. These are eleven, viz: potash, soda, lime, magnesia, alumina, oxide of iron, oxide of manganese, silica, sulphuric acid, phosphoric acid, and chlorine. If one be absent, the soil will not grow any cultivated plant. Hence analysis of soils is necessary for a proper and economical application of manure. In a barren soil one necessary ingredient alone might be absent. If, then, ten ingredients be added and the eleventh kept back, the soil is still barren. Hence, the reason why so much of New York will not grow wheat, and yet will grow other grain: the requisite quantity of some one or more chemical ingredients necessary for wheat is absent, but in sufficient quantity for rye, &c. When, at last, cultivated plants cease to grow, the five-finger vine appears, as it requires still less of them. In such a stage it is not rare that an expense of three dollars per acre, will enable the soil to produce 30 bushels of wheat. I produced 78½ bushels of wheat on a piece of worn out ground, by fifty cents

worth of two ingredients. Like produces like; and hence if straw of wheat be given to the ground it will produce wheat: indeed, wheat may be grown on a pane of glass, if the seed be covered with wheat straw in a decomposing state. Hence the farmer may sell the grain but not the straw. The farmer who sells straw becomes poor; he who buys it, grows rich.

I apply straw to the cattle-yard; it absorbs the liquid excrement, and rots. What is long or partly unrotted I apply to hoed crops; what is fine I mix with the eleven requisites and apply as a top-dressing. It may be advisable to apply the straw to the ground and plough it in when unrotted. To grow grains, give the soil straw of its kind; for potatoes, their vines; grapes, their vines; to apples, their branches; and so of all. The droppings of cattle are the best manure to grow grasses, as they feed on grass; those of horses fed on grain for the growth of cereals. Onions are grown year after year, by only returning the tops to the ground. In Virginia, had the refuse of the tobacco plant been returned to the soil, she would not now be barren. The bad farmer is injured by the vicinity of well manured land, as manure has an affinity for oxygen, hydrogen, ammonia, &c., floating in the air, and attracts them to the provident farmer's land.

Formerly, I applied composts of various things, and had wonderful results; I dared not omit any one, as I knew not which had produced the result. Now, science by analysis shows what is necessary. By these composts, I grew a squash to weigh 201 lbs., the heaviest on record; and a cabbage to weigh 44 lbs. By it I grew wheat to weigh 64 lbs., rye 60 lbs., oats 44½ lbs. When Sprengel made known his analysis, showing that eleven substances are necessary to all good soils, I found that my compost by chance had them all, and twenty other enriching ingredients.

Previous to 1840, my orchards bore only every other year. Since then I make them bear every year: and this year, a bad one for fruit, found my manured trees full, and those not manured barren. The drought of this year was fatal to fruit; yet my manured trees had abundant moisture and were fruitful. I prefer the manure of decayed vegetable matter to the excrement of cattle, as the material that makes and supports the animal has been extracted, and the excrement is not so rich on that account. If the vegetable matter be rotted and its ammonia fixed by charcoal dust, all the chemical substances are present. Thus rotted vegetable

matter is more beneficial than the dung of cattle, quantity and quantity alike.

A most valuable manure is the liquid remaining after the boiling of bones. It is very offensive unless disinfected. When hot it is not offensive, but becomes so when cold. It is a jelly when cold. By the application of charcoal dust to the hot liquid, the jelly when cold is not offensive. In this state it may be made into compost with other substances. In that condition it is a most valuable manure. At present large amounts of the liquid are thrown into the rivers. I prevailed upon a grinder of bones to save his liquid by charcoal, and he now sells what formerly he hired carried away. I have used it with great advantage, both on arable and meadow land.

Charcoal is one of the most valuable manures. It is the most powerful absorbent known. It takes from the atmosphere oxygen, hydrogen, nitrogen, ammonia, &c., and holds them while the weather is dry. During rain it absorbs 80 per cent. of water, and releases the gases to descend to the earth to fertilize it. When the weather becomes dry it parts with the water, and absorbs from the air the gases again. This it continues almost perpetually, and it is nearly indestructible. When applied to the earth, the trees, plants, and grasses are found to have it adhering to their roots ready to impart gases and moisture as wanted. Trees packed in it have remained green for eighty days, while others without it have died in like circumstances. Hams and salt meats are preserved perfectly when packed in it. I preserved apples in perfect condition for one year in it. If spread over compost heaps, barn-yards, stable floors, in privies, it absorbs the ammonia, prevents offensive smells, fixes the volatile gases, and thus makes a valuable compost.

Ashes applied to sandy soils are valuable; and on some soils leached are as good as unleached. I have known land too poor to grow eight bushels of corn, made to produce forty-five bushels by ashes alone; and they are more valuable on a sandy soil than any other manure except marly clay. They enable the sandy soil to retain its moisture,—a great point. They are used to great advantage on Long Island and in New Jersey. They stimulate growth as does plaster. Sown broad-cast on grass, the effect is perceptible at a great distance. The yield the first year on sandy soils in grass, will pay the expense of applying forty bushels to the acre. They give to the soil silicate of potash, which is needed to form stems.

Ashes have two actions on soils, viz: chemically by alkali they neutralize acids;

and mechanically by rendering sandy soils more tenacious. Muck is made valuable by them, when mixed in compost; the acid of the muck is destroyed by the alkali, and fermentation follows.

Lime has been used by me to great advantage. I prefer oyster shell lime, as it contains no magnesia, which most stone lime does. I think oyster shell lime has a tendency to lessen in growth the stem and leaves, and increase the fruit and seeds. I put on barren or worn out land 300 bushels of oyster shell lime, and it grew wheat to a weight of 64 lbs. per bushel; with the wheat I sowed one bushel of clover seed and half a bushel of timothy seed per acre, and the next year cut two and a half tons, and the second year three tons of hay per acre. I have found it of great advantage in potatoe culture; the potatoes do not rot in the ground, while neighbouring unlimed ones *all* do. They are mealy and fine, and do not rot after gathering, and have been free of rot in dry, wet and average seasons. I think it destroys the fungus or insect, if either be the cause of rot.

Bone dust I have used and find it most valuable, and advise its use, especially on soils long cultivated, destitute of phosphate of lime; it is the most efficacious manure that can be used on an exhausted soil, but will do better on dry calcareous soil than on such as contain alumina. It should be mixed with earth to ferment before spreading. There should be used from 12 to 20 bushels to the acre. It seems best on turnips. In compost it is valuable, as it yields phosphates largely. It is said that in England, where on lands it had been applied twenty years before, its effect could be seen to a yard. I trust the exportation of bones from our country will soon cease.

I have used guano successfully and unsuccessfully. Mixed with earth and applied to plants in close contact, it was injurious; applied in weak solution to grass land and green-house plants, its effect was wonderful. My experience shows that *its method* of use will determine *its value*. In composts I have found it very effective.

Night soil is one of the most valuable manures. In this country, as well as in England, great prejudice prevails against its use in agriculture or gardening. For ages it has been used in Asia, and particularly in China. In France, in Belgium, Bohemia, Saxony, all the German confederacy, and Sweden, its destruction or waste is prohibited by law. In England and America it is thrown into the rivers to befoul them, and the fish which devour it are eaten instead of vegetables grown by it. As manure, six

loads of it have been found to produce 650 bushels per acre of potatoes, while, on the same ground, 120 loads of horse manure yielded only 480 bushels.

In conclusion, I have to remark that the main stay of the farmer is his barn-yard manure. Yet this varies in quality, according to the material of which it is made, and the manner of making. Thus the droppings of cattle fed on straw and turnips, are far less valuable than those of cattle fed on hay and oil cake; and it is economy to feed hay and oil cake rather than straw and turnips. So in manuring; that which is leached by rains and volatilized by the sun, is less valuable than the unleached and unsunned. But this is too extensive a subject to take up, and is so well understood by good farmers, that it is unnecessary to say more on the subject.

### Fellenberg School at Hofwyl.

It is not very likely that a school similar to the one described below, would succeed in this country, nor is it probable the attempt will soon be made, yet as much has been said about the Hofwyl Manual Labour School, and as valuable hints to the farmer may be gathered from the communication, we make the following extracts from a letter in the *Cultivator* of last month, from E. N. Horsford, dated at Geissen, the residence of Liebig, the celebrated Agricultural Chemist, in the Tenth mo. last, entertaining no doubt our readers will be pleased with them.—Eb.

EMANUEL VON FELLEBERG was descended from one of the oldest families of the nobility of Switzerland. Early dissatisfied with political life, he became a pupil of Pestolozzi. Inspired with the ideas of that great man, he resolved to devote his life and fortune to their development. Superior to his master in the refinements of life and in wealth, he was scarcely second to him in zeal and firmness of purpose.

He consumed ten years in visiting schools, and otherwise fitting himself for the execution of his plans. Having sought through Switzerland a location uniting all the essentials to his conception of a site for a school, he fixed upon Hofwyl, an estate in Canton Berne, about five miles from the capital. It is a large irregular mound, embracing about two hundred acres. In the distance, on the east, are the Bernese Alps. On the west is the Jura chain. Lesser elevations between, crowned with forests of different ages, meadows rich in verdure, grain fields, and cottages embosomed in shade trees, greet the eye on every side as one looks out from the grounds upon which the group of buildings is situated.

The school was commenced with poor

children, whose education not only, but whose food and clothing were provided. I cannot follow the history in its detail, showing how unwilling for a long time the humbler classes were to receive education as a gift—how from these little beginnings the institution has gone forward, till it now numbers some twenty-five professors and teachers, with pupils from every quarter of Europe—how M. Fellenberg was condemned for his enthusiasm—how his holy purpose to temper the keenness and lessen the pressure of want, stood, like the granite peaks in his land,—all unchanged, amid the shock of elements around—and how, full of years and of happiness, he has just closed his mission.

There were three schools founded by M. Fellenberg—two at Hofwyl, and a third at Kutti, another estate near. The latter is the school for agriculture. The higher school at Hofwyl, receives pupils from the more wealthy families, of whom there are about forty from England—the lower is for the poor. The courses of instruction are totally different.

The English Professor was kind enough to present my name and mention my wishes to M. Fellenberg early in the morning after my arrival.

September 29th, at ten o'clock, I announced myself at M. Fellenberg's office. He begged to be excused for a few moments, that he might complete a letter in progress. I walked up and down a little park or play-ground, looking out upon the grounds of the estate, and enjoying the dress now gradually being taken on by the forests—the yellow and red, with all intermediate shades between them and green, in such harmony and depth of colouring.

Connected with the school are eight or ten buildings, all of them large, constructed in a kind of Swiss style. The roofs are pointed and projecting, and from two of these, towers or spires run up, giving a singular and not unpleasant expression to the whole. Northward, at the distance of half a mile, and some fifty feet lower, are two small lakes. Beyond, on the right, a high range of wood-land, dotted with farm houses, orchards, groves, and in all directions, grass and grain fields, showing a soil of thorough cultivation, and a high degree of fertility.

At the close of a half hour M. Fellenberg joined me. He is about five feet eleven in height, large and fleshy. His eyes and complexion dark—his forehead far encroached upon by the hair from above. The features are rather heavy, though the countenance beams with earnestness, benevolence, and intelligence. His movements are rapid—in a word, his bearing throughout, is that of a

thorough-bred gentleman, upon a ground-work of well-balanced mind and christian principle.

He had been made acquainted with my purposes by the English acquaintance of last evening, and took me, without proposition, at once away upon a walk of a mile and three quarters, to the Agricultural school. On our way, he occupied my time with the subject of education, his father's peculiarities, Pestolozzi's great ideas, and all matters relating thereto, in a style of great clearness and simplicity, and with all the sincerity of expression that might be expected from an honest man, who knew the truth of what he was stating, and felt its importance. He does not pursue precisely the course of his father in instruction, because, he says, "I have not precisely the same constitution of mind; yet I arrive at the same result, though following another plan."

At length we came upon the farm-grounds, in the midst of which are erected two enormous stone edifices; one appropriated to the purposes of a barn, and consisting of mows, granaries, stalls for cattle, horses, swine, &c., and the other a boarding-house or farm-house with study-rooms, work-shops, store-rooms, and apartments for all purposes that could be connected with the domestic economy of the farm. Before us were the young men from sixteen to eighteen years of age, digging potatoes. They numbered eleven—three of the whole number were absent, or employed upon other duty. Many of them were bare-headed, and all of them in the peasant's *kittel*, (blue over-frock.) The potatoes were assorted as dug—the lesser from the larger, and the sound from the decaying. The little crop had been planted, hoed, and now harvested, throughout, by the scholars. In these labours, and in all the others of the farm, carried forward almost exclusively by the pupils, there is no play-work. M. Fellenberg intends they shall have a deep-seated conviction of what perspiration and fatigue are, and of how much ought to be expected from a day-labourer. Leaving them, we went to the meadow where they had been mowing—and to the garden where each had a little sub-division for himself, devoted to growing what he pleased. The larger kitchen garden was appropriated to cabbages, cauliflowers, beets, turnips, &c.

The barn being situated upon an inclination, was entered by wagons upon a bridge above, and the hay and grain discharged with little labour into the mows and bays below. On the first floor were the stalls; one series for calves,—fine looking creatures—another or two others for cows—all spot-

ted, well-bred cattle, not large, but finely formed, in good condition, sleek, and good milkers—another series for swine, in which I recognized some Berkshires. The stalls were paved with small cobble-stones, and so inclined that the urine could be conducted to a reservoir without. Each cow was secured before a little trough and rack above, by a chain. No partitions of any description between them. On the same floor were broad apartments, for threshing, drying potatoes and beets, beside all the usual conveniences of a stock and grain barn.

In the cellar, which extends under a large portion of the barn, I was shown a quantity of potatoes—some two thousand bushels I should judge—which were all threatened with destruction from the almost every where prevailing potatoe sickness. All were ordered to be taken up again and dried. At my suggestion we took some specimens of the diseased roots to be examined with the microscope; but its power was too feeble to reveal anything satisfactory. The theories of this fearful malady, seem none of them suited to all the facts of the case. It has fallen upon the plant in dry soils and wet—and in other soils equally dry and wet it has not appeared. It has occurred in the shade, and again has left such a location unvisited. Soils highly manured have escaped, and have not escaped. It is not in Switzerland alone, nor in Germany—but in France and Austria, and England, and in America. Not this year only, but in previous years. To particular soils, degrees of moisture, exposure to sun, peculiar situations, or presence of unusual quantities of manure—to each and all it cannot be attributed. But I have almost forgotten Kutti and the farm-school.

From the barn we went to a room in the farm-house, where the register is kept. This apartment is furnished with a double row of inclined desks, back to back—all in a single frame-work, a few chairs, some shelves, and a board for some forty keys. Here the scholars write in their day-books all that has been accomplished, and all they have learned during the day, between seven and nine o'clock in the evening. M. Fellenberg showed me the day-book, journal, and inventory of the farm. The detail seemed almost immeasurable, but the system is so perfect that there is nothing like confusion in any of the accounts, or like difficulty in learning from them the exact condition of outlay and income. The milk-book, for example, had a record of all the cows' names, their ages, the amount and what kinds of food they eat, and the average amount of milk given daily, determined by admeasure-

ment at the close of each month; the amount sold, the amount fed to calves, the butter and cheese made, amount consumed, and quantity sold, &c. The day-book contained a record of each day's work, with what, and by whom. The other books, and there were several, were not less interesting, or the system of record less perfect. All purchases, outlays, productions, and losses, were displayed in the inventory sheet, and the absolute condition of the establishment shown by the balancing.

After inspecting these things we went to dine. A spacious hall with high ceilings, lighted on three sides, contains a table, chair, and a sliding cupboard, communicating with the kitchen below. Instead of a single cupboard carried up by cords and weights, this is double, one ascending and the other descending, the movement being effected by a cog wheel revolving in a chain connected at the extremes with the cupboards. A simple sentence of prayer for blessing upon the repast, and we were seated, M. Fellenberg at the head. The young gentlemen served the soup, rich boiled beef, cabbage, potatoes and bread, which constituted the whole dinner. At its close there was half an hour of relaxation; then all the young gentlemen assembled in the drawing-room, to receive an hour's instruction from their noble teacher. They were seated about two long tables, with their note-books, and in the apparel in which the potatoes had been dug.

It seems that the little republic of pupils had by an election of their own, appointed individuals of their number to the charge of each particular department of the matters to be cared for about the farm. One to the cow stables, one to the working cattle, another to the swine, another to the horses, another to the fruit, another to the rooms of study—the sleeping apartments—each a specific trust. One was elected to be leader in all kinds of work. Each had been required to draw up a scheme for conducting his own department of supervision. These schemes were successively called for, read and discussed; and here it was I felt the real greatness of M. Fellenberg. He elicited the warm but honest discussion of all the little points to be considered in these schemes, and found means to introduce a plain, easily to be comprehended, but deep and sound lecture upon the political economy, if I may so call it, of an agricultural community.

The first scheme was that of the leader in all work. It was well drawn up for a lad. Each article was read and discussed, or assented to without inquiry, as it seemed

to impress the infant council. One topic I recollect particularly. "Should each member of a party engaged in the same labour, judge of the excellence of the mode employed? and should he express his judgment? and if so, before the work was commenced, while going forward, or when concluded?" At first there was a little reserve; then came a variety of opinions. All thought that each should exercise his faculties to discover the best mode. Some thought that if a different mode would be better it should be made known before the work was commenced, as after its conclusion the discovery would be of little service. Others, again, that after its commencement, one would be better able to judge of the relative excellence of the employed and proposed plans, and that the time for expressing an opinion, would be in the progress of the labour. Others still had different views, all of which showed that they have learned to *think*. The various opinions gave M. Fellenberg an opportunity to present the prominent features of a republican government—the necessity of obedience to some head, and confidence therein—the duty of investigation, and the proper time, as men and as gentlemen, for the expression of differing opinions when deliberately formed. His extempore alternate inquiry, reply, and dissertation, was one of the finest exhibitions of what a teacher may attain, I have ever known.

Each officer in the republic holds his place fourteen days, and each has the strong stimulus of M. Fellenberg's approbation, of personal review, and of the consciousness that he will be succeeded by one whose highest wish will be to excel his predecessor, to make him perform his service faithfully.

At the close of this exercise, which continued about an hour and a half, a storm had set in, and the labour out of doors could not be resumed. The study was continued. A book of agricultural problems was taken down, and several estimates for the consumption of fodder, fattening of cattle, &c., made. At length a problem to determine the number of cows they should be able to winter, feeding them so many pounds of roots, so much hay, and so much clover, per day. Last of all, how much land they would be obliged to devote for the whole coming year, in order to the requisite supply of grass, hay, potatoes, beets, &c., necessary to the *maintenance* of the stock, i. e., keeping in their present flesh, and how much more to furnish them with all they can eat—allowing each cow to weigh eight hundred pounds, so much hay, clover, and roots being

given, according to established data, and so much produce from an acre—being taken as the result of experiment. All went to work, and in about fifteen minutes the problem was solved. M. Fellenberg was with them, seeing that the operations were correctly performed, and taking all measurable interest in their work. There was certainly nothing very profound in the question as a mathematical task, but it was eminently practical, and has moreover one of the essentials to progress and success in agriculture, viz., *quantity*.

The rain continuing, the whole party went to another room, and remained two hours in cutting and coring apples to be dried. During this time I visited the sleeping-rooms, where each has a bed for himself—as is the case everywhere, so far as I have observed, on the continent—the room for drying seeds, the work-shops, and a variety of other rooms, and finally terminating in the apartment where all the scholars, with M. Fellenberg, were seated on benches, working at the apples. He had employed the time in such conversation as was adapted to fit them for the duties of men, discussing the little points of what I have called political economy of agriculture, for want of a better name. For this he is eminently fitted, for as one of the early poets says of his hero, “he has seen much of cities and of men.” In a few moments we left.

While awaiting the solution of the fodder problem, I copied the following study plan for the summer term; 5—6, breakfast; 6—11, work; 11—12, study, (chemistry, mathematics, botany, and book-keeping, alternating with each other;) 12—1, dinner; 1—2, free hour, drawing, &c.; 2—5, work; 5—6, chores; 6—7, supper; 7—8, singing and garden work, alternately; 8—9, writing out notes and day-book; 9, gathering in assembly-room, and retiring.

Sunday; 5—6, breakfast; 6—10, free-time; drawing, sketching, and models; 10—1, church at Hofwyl; 5—6, excursion visit to peasant farmers, recreation.

The whole labour, and each and every kind of labour, is gone through with by the scholars. M. Fellenberg quoted Napoleon's maxim—that every soldier had a *maréchal's* commission in his pocket. So, I suppose, as they needed but the necessary experience and effort to win the epaulettes and command, each one of the pupils may attain to the most profitable farm direction, if he comes through the course of ploughing, hoeing, harvesting, and all the toil of his calling to this position.

The grounds are ploughed, the seed sown and harrowed in, the harvest gathered, and

threshed with their own hands. Their day-books show how much horse-labour, man-labour, seed, and manure, have been given to each crop. They also show how much grain has been harvested, and sold; and a rainy day will enable them yet to bring the several quantities in the relations of investment, income, and profit or loss.

The milking of the cows is performed by the scholars in succession, each serving fourteen days. All the charge of the stock is entirely given up to them, and M. Fellenberg assured me there is awakened that regard for the domestic animals, which is so essential to their good preservation, and which, while it makes the scholars feel that they are confided in, relieves the day-labourer from an important responsibility. There is indeed on this beautiful and highly cultivated farm of more than two hundred acres, only a director, and at times a few day-labourers, the labour being nearly all performed by the pupils.

The agricultural employment—in other words, the labour—is made delightful, partly, I think, by there being just enough of it, but chiefly by the botany, physics, chemistry, mathematics, and drawing, with which it is all made in a measure scientific.

On our return, M. Fellenberg expressed his intention to teach, or have so much of chemistry taught, as would enable his pupils to analyze soils, manures, and ashes. This he will have done in winter, when the number of study hours will, in proportion, be greatly increased, and when all the pupils will return to Hofwyl. He would have them, hereafter, occupy the leisure of their winters with little laboratory investigations. He seems to think the result not of difficult attainment.

Parting with my noble acquaintance at the higher school-house, I received two volumes on Agricultural Education, one by himself, directed to the *Landwirthschaftverein* of Prussia, and the other by a pupil of his father, now at the head, M. Fellenberg assures me, of the best school of this kind in his acquaintance, situated in canton Appenzill.

**RICE CAKES.**—Boil a cup full of rice until it becomes a jelly, while it is warm mix a large lump of butter with it and a little salt. Add as much milk to a small tea-cupful of flour as will make a tolerably stiff batter—stir it until it is quite smooth, and then mix it with the rice. Beat six eggs as light as possible, and add them to the rice.

Serve them with powdered sugar and nutmeg. They should be served as hot as possible, or they will become heavy.

## Notes on the Vine.

BY JOHN McDONALD.

DR. LINDLEY, a received authority at the present time, says, "the system of English grape-growing requires to be changed." As I have for some years thought so too, and acted conformably to the idea, I may, perhaps, be allowed to say a few words on what I have in practice found to be a simple and sure method of growing the Vine well and profitably. If we may judge from the commotion making by the Polmaise system, and Hoare's new work, the Vine culture, like the Pine culture, is destined to be revolutionized, and made, in the first place, a nine days' wonder to the mere looker-on, and perhaps many years' annoyance to the practical man.

The Vine is undoubtedly accommodating and ductile in its nature, beyond, perhaps, any fruit-bearing plant we possess, otherwise it would never do so well under such and so many various treatments. Still there is undoubtedly a right way. My own experience, combined with fourteen years' observation, puts it in my power to say that *deep* borders of *retentive* or *highly manured* soils are *not*, as is often maintained, the most suitable medium, nor the most profitable, in which to grow the Vine. It must be obvious to all who may give themselves the trouble to think or observe, that grapes growing on vines in such borders, are in general, and in cold, wet seasons, particularly, apt to be ill-coloured, of indifferent flavour, and with a strong tendency to shrivel prematurely, while the young wood, in all but the earliest forced house—which under such circumstances, will be small and long-jointed—will require much firing to ripen it; which artificial heating, if accomplished by the medium of smoke-flues, will be sure to encourage the generating and ravages of red spiders and such pests.

Therefore, seeing such to be the produce and consequences of *deep rich borders*, and a *high dry atmosphere*, theory would lead us to conclude that *shallow* borders of *light porous* soil would be the most fit and proper medium into which to plant, and that a *high* day temperature, with *abundance of air*, and a *low* night temperature, with *abundance of moisture*, and a close, calm atmosphere, would be the most proper climate in which to grow the vine; theory, I say, would lead, and did lead me to conclude thus years ago; and in practice I have had ample proof of the correctness of such surmises.

When I entered into the charge of the gardens at Riccarton, in May, 1842, I found the vines growing in wide and very deep

borders of rich, heavy, and retentive soil; where, notwithstanding the drought and warmth of that summer, they made wood, the best cane of which was scarcely the thickness of an ordinary goose-quill; and leaves, the largest of which would scarcely cover the palm of the open hand; and fruit small, with a great tendency to shrivel, the very best of which was but ill-coloured and of indifferent flavour. I certainly felt vexed and annoyed at the circumstance, but had the consolation—if so it may be called—of being informed by my employers, that such, *and no better*, had been the crops and appearances of the vineries for many previous and successive years. Next autumn I pruned the vines severely, and early in spring, 1843, I lifted their roots, excavated out the soil in which they were planted, to the depth of thirty inches, then trod and beat into a pretty firm floor, with a good slope outwards, the surface at which I had then arrived, and upon which I laid a stratum, one foot in depth, of old peas sticks; above which I placed a stratum of decaying tree leaves, and some partly decomposed herbaceous refuse, mixed with light, rich, but very sandy soil. On this stratum I laid the roots, and over these I put about a foot of the original soil, made lighter by the addition of a considerable quantity of lime rubbish, sand, and thoroughly decayed leaves—indeed, upwards of one-third part of the one foot thick stratum over the roots was composed of these light, poor materials. The consequence has been that now, in autumn, 1844,—eighteen months after the operation—the canes all over the houses are round, firm, short-jointed, plump-eyed, having leaves from eighteen to upwards of twenty inches direct across, and fruit of first-rate quality. My employers, and many others who have tasted of it, say so. Some canes of the last year's growth, have this season borne twelve pounds' weight of fruit; and some canes of this year's growth will, next year, easily, and well, bear and mature twenty pounds of fruit.

Making this assertion of the capabilities of an annual cane, leads me, in conclusion, to attempt to give you a sketch of my mode of training and pruning the vine, as it is different from the modes practised in this locality.

During the first year—it matters not whether the plant be a young one, or a cut-over old plant—one shoot, and only one, is trained up direct under the rafter; one, of course, from a *different* root being trained up under the centre of the sash; and so on, one under each rafter, and one under each sash, all over the house, and all trained and treated

alike; which shoot is allowed to grow unchecked until it has attained a length of six to eight feet, when, having it well grown, from fifteen to twenty eyes or buds formed, it is stopped then, and repeatedly afterwards, during the season. When the pruning arrives—which, with me, is the end of autumn,—all the indifferent eyes or buds are scooped out from the shoot, until ten or twelve only are left. These will next season produce strong shoots, having, some three bunches of fruit, some two, and all at least one bunch; which bunches must be cut away, or thinned, until only what will mature to ten or twelve pounds of fruit are left. All the shoots, of course excepting the mother, or leader shoot, and one from the base of the plant, are stopped one eye beyond the fruit, while the leader and base shoots are each allowed and encouraged to perfect their ten or twelve good eyes, for next or third year; on which year the original cane, same as second year, bears fruit only on the shoots proceeding from the twelve eyes on previous year's growth, the twelve shoots on the under part of it being cut close away after bearing first and only crop, and no others allowed to emanate from their parent stem in their place, which place will be occupied on this, the third year, by the shoots proceeding from the young, or base shoot, of previous year's growth. On fourth year a third young or base shoot is allowed to perfect its twelve or fifteen eyes, and the original cane, after bearing a crop on its twelve upper eyes, is cut clear away as near the ground as possible; and so on, year by year, a young cane is started, and an old one cut away. Thus, bunches of fruit, numerous as by the open system, and much heavier, may be had regularly all over the house, without old or weak wood, or confusion of training.

Here I have said nothing of planting, as I take for granted that gardeners in general, would have grown the roots of their vines outside the house, and the stem introduced under the surface of the soil into the house.  
—*London Horticultural Magazine.*

#### Agricultural Meeting.

At a stated monthly meeting of the Philadelphia Society for promoting Agriculture, held on the 1st of April, Kenderton Smith, Esq., Vice-president, in the chair. The minutes of last meeting were read and adopted.

James R. Wilson, of Philadelphia, and Nathan Rambo, of Montgomery county, were elected members. A committee appointed at last meeting to prepare a list of crops, for which premiums would be offered the approaching season, reported the follow-

ing articles, which on motion was agreed to, and ordered to be published, to wit:

For the best field of wheat, not less than three acres, \$10.

For the best field of rye, not less than three acres, \$10.

For the best field of corn, not less than three acres, \$10.

For the best field of barley, not less than three acres, \$10.

For the best field of oats, not less than three acres, \$8.

For the best field of potatoes, not less than one acre, \$8.

For the best patch of sugar beets, not less than half an acre, \$8.

For the best patch of carrots, not less than one-quarter of an acre, \$8.

For the best patch of parsnips, not less than one-quarter of an acre, \$8.

For the best patch of ruta-baga, not less than half an acre, \$8.

For the best patch of flat turnips, not less than one acre, \$8.

For the best patch of turnips, excellent new variety, not less than one quarter of an acre, \$8.

For the second-best crop of either of the above, a copy of Colman's Journal.

An account of the expense and manner of cultivation will be required of competitors, and also satisfactory evidence of the products of each crop. Application can be made to the following named gentlemen, who were appointed a committee on crops, viz: George Blight, Isaac W. Roberts, David George, Samuel Williams, and S. S. Richie.

On motion of A. S. Roberts, a committee of five persons was appointed to prepare a list of animals, produce, farming utensils, machinery, &c., &c., for which premiums would be offered. Also to fix the rate of premium, and the time of holding the Annual Exhibition of the Society, and make report to the next monthly meeting. The committee consists of A. S. Roberts, R. T. Potts, Dr. Elwyn, S. C. Ford, and Aaron Clement. On motion adjourned.

Extract from the minutes.

AARON CLEMENT, *Rec. Sec.*

Philadelphia, April 4th, 1846.

#### Benson's Patent Water Ram.

We find in the last American Farmer, the following letter on the subject of raising water, about which numerous enquiries have been made, since the publication of J. H. B. Latrobe's letter, in No. 2 of our last volume, and Reeve and Brother's communication two months ago. The cost of Benson's Ram delivered in Baltimore is \$30. A half inch leaden pipe will dis-

charge 25 bbls. in twenty four hours, the cost of which is six cents a foot. Printed directions accompany the Machine. "In one instance," says the *American Farmer*, "a gentleman having a spring of water in a meadow 1000 feet from his house, and 65 feet perpendicular depth below it, by the power of a small branch of impure water, that affords five gallons per minute, with a fall of eight feet, has 720 gallons of pure spring water per day, delivered into a reservoir in his kitchen by means of this simple apparatus. From this reservoir, by a lead pipe, all the water not used in the family, is conveyed from the reservoir into a trough in the barn yard, where the coldest weather never freezes it, and where his cattle have a copious supply of water during the whole year. In another instance, with a stream of water with nine feet fall, the water is elevated to a height of 156 feet."

Several Chester County farmers have been successful in raising water, at a small cost. The address of *B. S. Benson*, the Patentee, is Jerusalem Mills, Harford Co., Maryland.—Ed.

Harford Co. Md. March 19th, 1846.

DEAR FRIEND:—Your request relative to the usefulness of the improved Ram of *B. S. Benson* for raising water, shall be complied with.

I had one of them put up on my farm, and I pronounce it to be the best mode of raising water that I have ever seen or heard of; it is simple in its construction, and of course not so liable to get out of order as more complicated machinery, doing more work than can be done in any other way yet invented with the power.

I have a fine spring on my farm, which passes through a one and a quarter inch lead pipe, making the power for driving the machine, with a fall of about eight and a half feet—a part of this water is thrown up to my house, through a half inch lead pipe, and furnishes us with a sufficiency of water for our stock, as well as the household purposes. The distance that the water is thrown is 445 feet, the perpendicular height about 75 feet; all done by the power of a good spring; where springs are not sufficiently strong of themselves to afford power to drive, and water for the use of farm buildings, a small stream of branch water may be used for the power, whilst the spring water can be introduced and driven to the buildings without mixing with the branch water—giving at all times clean, cool, spring water for the various uses about the house. And I do not hesitate to say, that he who has once seen in operation, one of these machines, and loves a clean house, will not fail to place within the power of the female, that element most needed for that purpose. There might be a great deal said about the convenience afforded, but it is sufficient when I say, that I can have water from the garret to the cellar.

Yours, &c. CHEYNEY HOSKINS.

### Disease of Plum Trees.

*JOHN OWEN*, of Cambridge, Mass., believes he has discovered a remedy for the wart in the Plum tree. In a late number of the *New England Farmer*, we find a letter from him to Th. Wm. Harris, from which we make the following extracts. The editor has found in New Jersey the diseases of this tree so annoying as almost to amount to a prohibition to planting it. If Plum trees are planted in hog pastures, and properly protected for three or four years, till the rubbing of these animals against them will not injure them, it will be found advantageous. In planting fruit trees, farmers should persevere. If disease overtakes their trees, let them reflect, and search for a remedy. What greater, and yet cheaper luxury does the farmer and his household enjoy, than that of fruit? How little time is required, to plant a tree? But the bare planting, let it be remembered, is but part of the duty; subsequent care and protection are requisite; and he who plants and protects, will hardly miss the time or the expense, and may enjoy in cheap and wholesome luxuries, the reward of his care. When within reach of a market, what product of his field or garden is more profitable than good fruit?—Ed.

Cambridge, March 6th, 1846.

In the spring of 1841, I had a Washington plum tree badly affected by a wart upon the main stem, commencing a little above the lower branches, exactly in a fork formed by the stem and one of the principal limbs, extending about three inches on the limb and about ten inches up the stem, and covering quite one-half of the bark for that distance. Amputation seemed the only thing to be done, and had it been merely a limb which was diseased, I should have cut it off without hesitation. But the part most affected was the trunk itself. While considering what I had better do, the appetency of the plum tree for salt, occurred to me, and I reasoned thus: if the plum tree was found to flourish best in those soils in which the muriate of soda (common salt) abounded, which appears to be a well established fact, then, disease of this tree might arise from the absence, or an insufficient supply of the salt, and if so, the tree could only be restored to a healthy state by furnishing to the soil what it so essentially lacked. I accordingly salted the earth about the tree. But here a serious difficulty presented itself. The case is that of a valuable tree, and the disease is upon the very trunk, and may soon girdle it. The question arose, cannot the canker be arrested and possibly cured, by a direct application of the brine to the part affected, while the permanent remedy is provided by the slower operation of dry salt applied at the roots? I resolved to make the experiment, which I did in the following manner: Having cut out the excrescence with some care, I washed the wound with a strong solution of salt and

water, and awaited the result with not a little anxiety; for I confess I had my fears that the lotion might have been too powerful, and by absorption, prove injurious instead of being beneficial to the tree. All apprehensions of this sort, however, were speedily removed. The wound began to heal, and the canker, though not entirely cured, was materially checked. As the wound continued to heal, the wash was freely applied several times during the summer.

In the spring of 1842, I again used the knife, cutting out whatever canker had appeared since the first operation, and applied the same wash as before. During that season, the new wounds gradually closed over without any further appearance of the wart, and the part was thus restored to a perfectly healthy condition. From that time to the present, the tree has shown not the slightest symptom of the old disease. It has been regularly washed with some solution of salt, once or twice every year, in 1844 and since; salt-ley (the liquid remaining in the soap-boiler's kettle after the removal of the soap,) being substituted for the pure brine.

In the spring of 1844, the wart again made its appearance on several of my young Damson trees. The disease being confined to small limbs, and having nearly girdled them before I discovered it, I should at once have cut them off, but for the desire to pursue my experiment with salt in a different way. I proposed to ascertain its effect upon the wart itself, while still connected with the tree. For this purpose, I fastened a porous substance around each wart, and kept it filled with ley, which was completely saturated with salt. Here the effect was even more remarkable than in the first experiment. In a few weeks, the warts were completely destroyed, and cracked so as to be easily picked off, leaving the adjoining bark and wood perfectly sound. Such are the facts, let careful and assiduous cultivators continue to record and publish their observations. Let amateurs, especially, be invited to make all their experiments with a strict regard to science, not always having an eye to the immediate profit of a garden, but more frequently to the discovery of truth and the good of posterity.

### Philadelphia Butter:

*Its high flavour, and the source whence this is derived.*

THE following letter of Dr. Emerson deserves attention; and while Philadelphia is celebrated for her good butter, we have heretofore more than once felt it our duty to make the enquiry, Why we have so much indifferent butter in our market. It is not easy

in the winter to procure perfectly sweet and delicious *tub* and *keg* butter, and this, we believe, is greatly attributable to lack of skill and care in its preparation for market. It is a great loss to the farmer, and cause of vexation to the purchaser.—Ed.

To the Editor of the Farmers' Library:—

MY DEAR SIR,—During one of your late visits to Philadelphia, we had some conversation relative to the rare qualities of Philadelphia butter, which, though good at all times, is at one season distinguished by a peculiarly high and delightful flavor not to be found in the same degree, so far as I can learn, in butter made in any other part of the Union. I told you that I thought I had discovered the source of this peculiarly grateful flavor, and now undertake to redeem a promise made to write you on the subject.

In the first place, I wish you to bear in mind, that the original settlers in the old counties adjacent to Philadelphia, were chiefly from Wales, and hence may claim a legitimate right to excel in the processes of the dairy. They took up their abodes among the hills, and as indispensable appendages of their farm houses, built what they call "Spring houses," over the natural fountains flowing out of the hill sides. These are shaded by wide spreading trees tending to preserve the coolness imparted by the water surrounding the vessels containing the milk, cream and other dairy products. A temperature is thus secured for the cream established by experiments as the most favorable to the perfect operation of churning, namely, the range from 50° to 65°—beginning with the cream at or near the first named degree, and terminating the process with the temperature at 65°. It is only after the butter has "come," that warm water is to be added so as to raise the warmth to 70° or 75°. This is to facilitate the separation of the butter from the milk. No one who has ever visited Pennsylvania spring houses and observed the coolness and cleanliness they usually display, can doubt the great advantages afforded by them for dairy purposes.

But, though these circumstances may serve to improve the general qualities of Philadelphia butter, still they are by no means concerned in producing that delightful flavor, the immediate cause of which is the main point to which I now wish to call your attention. As before intimated, it is only at one season that the flavor is in greatest perfection, and hence our housekeepers call it "May butter," and sometimes "grass butter." The limits of the season of highest flavor may be set from about the middle of April to the middle of June. Now it is precisely during this time that the old,

unploughed meadows and pasture fields in the vicinity of Philadelphia abound with a species of grass so highly odoriferous as to have obtained the name of *Sweet-scented Vernal Grass*. Botanists call it *Anthoxanthum odoratum*. The scent somewhat resembles that of vanilla. It grows about a foot or eighteen inches high, rising above the surrounding grass. Its stem is very small and round, with a few long and slender leaves. Its odor will alone be sufficient to distinguish it from all other grasses found in our pastures. When in blossom, the air is often highly charged with its scent, and at this time I seldom ride into the country without gathering a handful of the grass to enjoy its rich perfumes at leisure, and perhaps store it away in a drawer. As it is so very forward in its growth, so does it show the earliest signs of decay. About the middle of June the fields and meadows where it abounds assume a yellowish appearance from the dying of the stems of the first growth. The cattle press these aside to get a greener herbage, and now the high flavor of our butter declines.

The Sweet-scented Vernal Grass is a native of Europe, whence it has doubtless been introduced into the vicinity of Philadelphia, blended probably with other grass seeds. It has long become naturalized, and now occurs among other spontaneous herbage, disputing the right of soil with the common green grass, and never yielding possession till turned under by the plough, after which it clings to the unbroken fence and head-rows. Though seldom, if ever regularly sown here, it constitutes a part of the growth of most English pastures, thriving in nearly every kind of soil. The sweet odor for which English meadow hay is so noted, comes from the admixture of this grass. It is, however, seldom, if ever sown by itself, but usually mixes with the seeds of other grasses adapted to the formation of permanent pastures. It ranks rather low on account of nutritious properties, but is principally esteemed for its early growth, and continuing to throw up fresh shoots till the end of autumn. Indeed, the aftermath, or second growth, is particularly prized for grazing purposes.

A chemical examination of the Sweet-scented Vernal Grass, shows that while its nutritious properties are less than those of most other grasses, it is distinguished from these by containing *benzoic acid*, or *flowers of benzoin*, a substance possessing a peculiarly agreeable aromatic odor. An essential oil in which this resides can be distilled from the grass, affording a pleasant perfume. It is undoubtedly this aromatic ingredient that imparts to the milky secretion of the

cow, the flavour so pleasantly manifested in Philadelphia Spring-grass butter. When we find milk so readily imbued with the peculiar flavors of garlic, turnips, and other substances upon which cows often feed, there can be no room to doubt that a fragrant grass freely eaten by cows, should likewise impart its particular flavor to the milky secretion.

If this very simple solution of the cause of the high flavor of Philadelphia Spring butter be true—and I have not the least doubt upon the subject, you can at once perceive that a pasture grass may be introduced almost everywhere, which will communicate an exquisite flavor to butter.

In London, Epping and Cambridge butter are both greatly extolled for their high and delicate flavor. The cows producing the former, which is most esteemed, graze during summer in the wild pastures of Epping Forest, and the high flavor of their butter has been commonly ascribed to the wild shrubs, plants, and leaves of trees which they feed upon. The Cambridge butter is also produced from cows that graze upon natural pastures, one part of the year on uplands, and the other in rich meadows. As the Sweet-scented Vernal Grass is common to the natural pastures of England, I doubt not it may be found most abundant in those of Epping, Cambridge, and other places most celebrated for high-flavored butter. So far as I can find by inquiry and research in English books, the particular grass which contributes the greater part, if not all the fine high flavor to the best and most costly butter, has never, as yet been identified. Without such exact knowledge, this flavor of butter must necessarily remain beyond the control of the agriculturist, wherever nature or accident has not provided the pastures with the aromatic agent.

I remain very respectfully yours, &c.,  
G. EMERSON.

#### The Potatoe Disease.

The following is an extract from a letter from Professor Liebig to Walter Crun, of Thornliebank, dated Giessen, 5th November, 1845.

"The researches I have undertaken upon the sound and diseased potatoes of the present year, have disclosed to me the remarkable fact, that they contain in the sap a considerable quantity of vegetable casin (cheese) precipitable by acids. This constituent I did not observe in my previous researches. It thus appears, that from the influence of the weather, or, generally speaking, from atmospheric causes, a part of the albumen which prevails in the potatoe has become converted into vegetable casin. The great instability

of this latter substance is well known—hence the facility with which the potatoe containing it undergoes putrefaction. Any injury to health from the use of these potatoes is out of the question; and nowhere in Germany has such an effect been observed. In the diseased potatoe no solanin can be discovered. It may be of some use to call attention to the fact, that diseased potatoes may easily, and at little expense, be preserved for a length of time, and afterwards employed in various ways, by cutting them into slices of about a quarter of an inch, and immersing them in water, containing from two to three per cent of sulphuric acid. After 24 to 36 hours the acid liquor may be drawn off, and all remains of it washed away by steeping in successive portions of fresh water. Treated in this manner, the potatoes are easily dried. The pieces are white, and of little weight, and can be ground to flour, and baked into bread along with the flour of wheat. I think it probable that the diseased potatoes, after being sliced and kept for some time in contact with weak sulphuric acid, so as to be penetrated by the acid, may be preserved in that state in pits. But further experiments are necessary to determine this. It is certain, however, that the dilute sulphuric acid stops the progress of putrefaction.”—*Glus-gow Herald*.

**THE FARMERS' CABINET,**  
AND  
**AMERICAN HERD-BOOK.**

PHILADELPHIA, FOURTH MONTH, 1846.

A VALUED friend at Gettysburg, in a letter speaking of the Cabinet, “begs leave to suggest the propriety of giving us more practical facts, rather than filling the paper with speeches at agricultural fairs, and controversies about ploughs, which are only known to particular sections of country. What we want to know, is how to raise the greatest amount from a certain quantity of ground, with the least labour and expense. Give us the facts, my dear sir, with the *modus operandi*.” Now this is all very well—and looks particularly well on paper; and we have more than once solicited our friends to furnish us with statements of facts, and we acknowledge many obligations to them. We would query with our Gettysburg friend, whether *he* has done his part in relation to *facts* and *operations*? It should not be forgotten, that the editor cannot sit in his office, and *make* facts. He asks that they may be given him;—he asks, in short, the hearty co-operation of his friends in this matter,—and every subscriber he is in the habit of considering a personal friend, for there is growing out of this connection, a pleasant kind of acquaintanceship, which may mutually attach and interest. As was lately said by another correspondent in Maryland, “the work is a good one, let us go ahead.”

A MEETING was held at Rockville, Montgomery Co., Md., on the 4th ult., for the purpose of forming an Agricultural Society, for that county. A committee was appointed to prepare a Constitution to be reported at a subsequent meeting.

THE name of *Mahlon* Gillingham, on p. 256 of last number of the Cabinet, is an error:—It should be *Chalkley*.

WE received some time ago, through the kindness of a friend—we presume of the Recording Sec., Asa Fitch,—“The Washington County Post,” published at Salem, N. Y., containing an account of the spirited proceedings at the Annual Fair of the Agricultural Society of that county, in the tenth month last. It should have been earlier referred to, but was mislaid, and escaped notice.—How does it happen that these Northerners beat us so much in raising corn? Ought not we in this State, our summers being a little longer—at least to equal them? And ought not our good farmers of Burlington, Gloucester and Salem, on their delightful Jersey soils, to surpass all others in the corn crop? And Delaware and Maryland too, where are they? Calvin Skinner of Cambridge reports 131 bush. 26 qts. of corn to the acre; and John McNaughton of Salem, N. Y., takes the second premium for 128½ bushels. Eighty-six and a half bushels of oats were raised by Andrew Thompson. The efforts of this society really seem to have stirred up its members to good purpose. “Who thought five years ago,” says the Report, “that 46 bushels of wheat—40 bushels of rye—100 bushels of oats—120, and 130 bushels of corn, could be produced upon an acre in this county? The most fertile districts of the vaunted west, would be proud of such crops as these. Some of them fall but little short of the largest yields that are upon record; they conclusively show that the worn out hills of old Washington can successfully compete with any section of our country.”

The kindness of L. Ledyard, the Recording Secretary, has placed also on our table, the Transactions of the Madison County Agricultural Society, N. Y., containing an article on the Geology of the county, and also the addresses of L. Ledyard, and Prof. Conant. These annual publications of the doings of agricultural societies, are indicative of the strong interest felt in the proper development of our agricultural means, and cannot fail to give a stimulus to improvement.

THE quantity of rain which fell in the 3rd. month, 1846, was a little more than four inches and a half.  
.....4.6 inches.  
*Penn. Hospital, 4th mo. 1st, 1846.*

THIS is the season,—and we trust the generality of farmers do not need to be reminded of it—to provide for a plenteous supply of vegetables. They make cheap living, as well as wholesome and good, and greatly add to the luxuries of diet. Some farmers are apt to think labor spent in the vegetable garden almost thrown away:—The very contrary, we think is the fact. Plant plentifully, nurse carefully, and the whole season, enjoy richly.

The patentee, Dr. Geib of this city, has placed on our table, a little *Manual* for the writing master; a practical and critical Treatise on Penmanship. We some time ago referred to his *Chirographast*, as an ingenious aid for the aspirant to the accomplishments of the pen. To those, who like the editor, have long been accustomed to making crooked and ugly marks, which run in all directions but the right, and which few can decypher but themselves,—and sometimes not even they—all these increased facilities and mechanical helps, will be valued.

In the Cabinet, two months ago, we noticed a "Treatise on Milch Cows," by *Monsieur Guenon*, which was in course of translation by *N. P. Trist*, of the *Farmer's Library*. Since that time, Greely & McElrath have published the work separately at thirty seven and a half cents a copy.

### New York Agricultural Warehouse.

Farmers, Planters, and Gardeners will find the LARGEST AND MOST COMPLETE assortment of Agricultural Implements of all kinds at this establishment, ever offered in the New York Market. Most of these implements are of new and highly improved patterns, warranted to be made of the best materials, put together in the strongest manner, of a very superior finish, and offered at the lowest cash price.

Among these implements are upwards of FIFTY different kinds of Ploughs manufactured by Ruggles, Nourse and Mason, of Worcester, Mass., also in New York—for the South as well as for the North; Harrows of different patterns and sizes; Rollers of wood and cast iron on a new principle; Seed sowers for all kinds of seeds, a recent invention; Cultivators, with different kinds of teeth; Horse Powers of wood or of cast iron, very strong and superior; Grain Thrashers: Fanning Mills; Mills for grinding corn, &c., a new invention; Corn Sheller for hand or horse power, the latter shelling 200 bushels of ears per hour; Vegetable Cutters, will cut a bushel of roots for cattle in two minutes; Hay, Straw, and Corn stalk Cutters; Scythes, Rakes, Shovels, Spades, Hoes—indeed Field and Garden Tools of all kinds.

*Castings* for the various kinds of Ploughs manufactured in Worcester and New York.

*Seeds for the Farmer and Gardener.*—A choice assortment of the various kinds, such as improved Winter and Spring Wheat, Rye, Barley, Oats, Corn, Beans, Peas, Rutabagas, Turnip, Cabbage, Beet, Carrot, Parsnip, Clover and Grass Seeds, and improved varieties of Potatoes.

*Wire-Cloths and Sieves.*—Different kinds and sizes constantly on hand.

*Fertilizers.*—Peruvian and African Guano, Bonedust, Lime, Plaster of Paris, &c.

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JOSIAH TATUM.

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IS PUBLISHED MONTHLY BY

JOSIAH TATUM, No. 50 NORTH FOURTH STREET, PHILADELPHIA.

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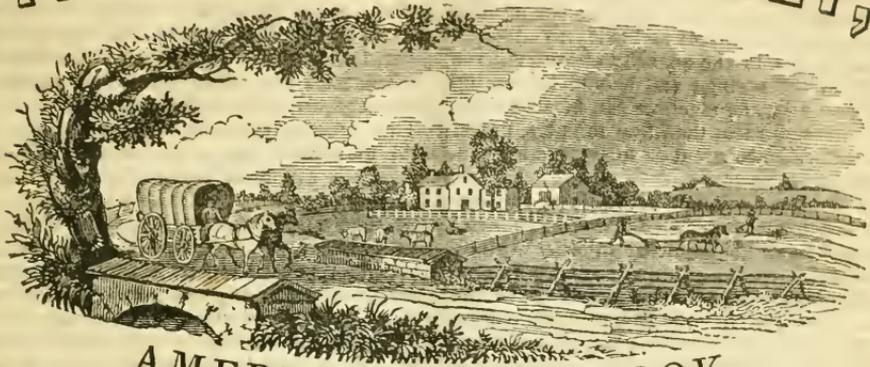
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5th mo. (May) 15th, 1846.

[Whole No. 136.]

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EDITOR AND PROPRIETOR,

No. 50 North Fourth Street,

PHILADELPHIA.

Price one dollar per year.—For conditions see last page

For the Farmers' Cabinet.

### Montgolfier's "Hydraulic Ram" for Raising Water.

THIS machine is mentioned by J. H. B. Latrobe, in the second No., Vol. IX., of the Cabinet, and the operation or effect of it is somewhat obscurely described by Reeve & Brothers in the No. for Second month, 1846. My attention was first drawn to this very valuable, simple and cheap method of raising water, by reading the communication of J. H. B. Latrobe, and during the last autumn one of them was made and put into successful operation on my premises; the result was completely satisfactory. This machine is now in operation on Lewis Thompson's farm, in Millcreek Hundred, in this county, giving an ample supply of good water for house use and for stock in his barn-yard, from so weak a spring that, at its distance, no attempt would have been made to obtain it by any other known power. This machine forces about one-eighth of the stream

seven times the height of the fall used, or in other words, with a fall of about eight feet for the power, he gets one-eighth of the water, which is forced a distance nearly two hundred yards, rising about fifty-six feet in that distance. It has been visited by a large number of persons, being the first one known in this part of the country; and the probability is, that hundreds of them will be put into operation in this and adjoining counties in a few months. One of my family has just returned from putting one up for Stephen Webb, in Chester county, which, having a strong spring for the power, and seven and a half feet fall, forces about thirteen barrels in twenty-four hours, through lead pipe nearly or quite one thousand feet, rising seventy feet in that distance, giving a full supply of water for family purposes, and to water from thirty to forty head of stock in his barn-yard:—personal observation will satisfy the most incredulous. One of them is in operation on my premises at this time, merely to exhibit to inquirers, but will shortly be put to permanent use at a new house, to save the expense of a well and pump, which it is competent to do in very many situations. The Hydraulic Ram, when properly constructed, is not liable to get out of order, or to require repairs; lapse of time, or muddy water passing through them, may give occasion for trifling repairs, and when these become necessary the machine can be easily detached from the pipes and carried in one hand for convenient repairing. The

same one, by altering a screw-nut, can be adapted to a stream running one gallon per minute, or to one of five gallons per minute, the sizes of the supply and carrying-off pipes being suited to the quantity of water given forth by the spring; and should the spring fail partially, the machine can be adapted to the change in less than five minutes, unless the failure be so great as to deprive the machine of its power.

It is understood that the inventor or discoverer of this power, (Montgolfier, of France,) did not bring his discovery into use for any practical purpose;—I think it was perfected in England. The writer would refer the curious to Parker and Delaplainé's edition of the *New Edinburgh Encyclopedia*, under the head *Hydraulics*, the publication of which edition was commenced in this country about the year 1812, in which will be found a drawing or plate representing this machine, and a description of it; also of another on the same principle, differently applied, by which a common or muddy stream may be used for the power, and spring water forced up for culinary and other cleanly purposes, provided the two kinds of water are conveniently located contiguous to each other. It is said that there has been a patent taken out in this country connected with this latter machine, whether for the whole of it, or only for something which many patentees call an *improvement*, I know not, but this I do know, that the plates representing, and descriptions of, both these machines, have been laying dormant in my house, and probably in the houses of many other subscribers to the *Encyclopedia* before mentioned, for some twenty-five or thirty years. Those interested can judge how valuable a patent right can be under such circumstances.

JACOB PUSEY.

Christiana Hundred, Newcastle Co., Del.

### On Manure.

WE have been in the habit of considering as *manure* every decomposable or putrescent material which exists naturally in, or is artificially added to, the earths. Thus, the fibrous masses left in the ground, green vegetable substances chopped to pieces and dug in, and the black vegetable portions of heath or moor-soil are in reality, manures. Earths proper, namely—alumine and clay, silix or sand, chalk, phosphate of lime, and metallic oxides are themselves almost insoluble; and can act only, or chiefly, as the bed, or fundamental support of plants: or, to speak more philosophically—the laboratory—wherein the interchange between the

laborated products of decomposition and the roots of the plant is carried on. These general truths are equally applicable to garden and pot-culture—there is no distinction so far, between the processes of the florist, the amateur, the nurseryman, and market-gardener—all are included therein.

Our present remarks will not apply to solid manures; the subject which claims immediate attention being the application of liquid manure; a practice which appears to extend with great rapidity. In looking over the weekly publications on horticulture, we cannot but be struck with the earnest recommendations of *fluid manures*; and as it is more than probable that they who look for correct information in such publications, will attach faith to the advice they there meet with, it becomes a duty to investigate the principles upon which this practice is founded.

Mr. Knight, of Downton, was perhaps the first person of authority to whose advocacy we may ascribe the introduction of liquid manure: he employed pigeons' dung steeped in water till the fluid acquired a brown tint nearly as deep as that of porter; and he remained firmly of opinion, that pines, melons, and grapes, were much assisted by a copious use of this aliment. Being prepared from recent dung of the dovecote, he obtained at once a solution of the bile, the urea, and all the saline ingredients of the excreta. Gardeners in general may be presumed to have recourse, of necessity, to the brown drainage of old dunghills; but here the result is a widely different affair, because the mass having undergone fermentation, the gaseous and fluid products have been interchangeably attracted and *re-formed* into new chemical combinations: thus, the urea has developed ammonia during the first active stage of the heat, the chief part of which passed into the air; a portion, however, as the mass cools, would sink into the lower parts of the heap or be carried down by rain, and become united with the black, carbonized substance, which is termed humic acid, and gradually ooze through the bulk, forming that brown fluid which is seen in the waste drains and puddles of farm-yards.

The chemical elements disturbed during the fermentation of a manure heap are numerous: the oxygen and hydrogen combine to produce water; other portions uniting with carbon yield acetic acid; and certain saline and hydrocarbonaceous substances filtrate away; leaving a cold, blackened mass, which constitutes the spit-dung of the gardener; a substance composed chiefly of carbon and humus, in a condition fitted to evolve a considerable quantity of carbonic acid.

The *liquid drainage* is then a weak compound of salts of potash, soda, and ammonia; the last being united with so much of the humus as to give a deep brown tint to the whole. To appreciate the operation of this liquid, the chemical reader should test a variety of decayed vegetable matters; such, for instance, as old leaf-mould, very black humous manure, and the brown peat of moors and bogs, by adding a little alkali to each of them. If an ounce of peat-bog or black manure be digested in boiling rain-water more than sufficient to cover the material, little colour will, in general, be extracted; but upon adding, drop by drop, some strong *caustic ammonia*, stirring with a strip of glass after each addition, the fluid will gradually become of a deep full brown; the pungent odor of the ammonia being destroyed till it be added to saturation.

Again, a very little of the brown heath-soil from some parts of Surrey, being so treated, will give intense color to an ounce or two of water. Pearl-ash and soda will produce similar effects, but ammonia is to be preferred. Persons are apt to conclude, that to this brown coloring matter we must ascribe the nutritive qualities of liquid manures; whereas, in fact, it is quite certain that not one particle of it can enter the spongiolæ of sound, *undisturbed* roots.

Now, if manure-water be weighed, and then gradually evaporated at a gentle heat, to dryness, the weight of coloring matter will be found to be very trifling; and yet gardeners are in the habit of adding much water to this liquid, considering it too strong for plants growing in pots. Having thus, by dilution, reduced the tint to that of pale malt liquor, what activity can be expected from it? Or if such liquid manure be of any avail at all, to what material can we refer its nutritive effects, since it is admitted that the particles of color, minute as they must be, are still too gross to enter the pores of the roots?

To answer these queries by farther experiment, and thus gain a little more light upon the subject,—let a few grains of powdered quicklime be stirred into the colored fluid and suffered to subside; after a few minutes it will be seen that the color of the liquid is lost; that it has become quite pale; while the sediment itself has acquired a dingy brown tinge and a flocculent texture. As a converse of this experiment, let brown peat or black manure be worked up with one-third the quantity of quicklime, and diluted with hot water sufficient to allow of free subsidence. After stirring from time to time, the compound matter will subside, leaving the super-natant liquor nearly de-

void of color:—and now caustic ammonia may be added to excess, without effecting any change of tint, the lime acting by more powerful affinity, and fixing the humic extractive in the form of an insoluble humate of lime.

In this way it is that lime acts as the specific reclaimer of waste and barren peat-bogs, rendering them fertile by the *abstraction* and *fixation* of that inert and deleterious vegetable matter which is an antagonist to vegetation. And thus, by an induction from undeniable chemical facts, we begin to perceive that we have long been misled by crude theories and empirical practice.

*Liquid manures* therefore act by the salts which they contain, not by the coloring solution of humus; and thus, also, we may be permitted to sanction the cautious application of artificially prepared fluids, as for instance “Potter’s Liquid Guano,” “Humphreys’ Inodoros Compound,” and other fertilizers, which are neither more nor less than solutions of chemical salts; among the safest and most effectual of which are the sulphate of ammonia, nitrate of potassa (salt-petre,) and sulphate of soda.

Lime is the interpreter of this new and most intelligible theory; for by it the important fact has been ascertained, that, for all the poisonous vegetable extract in peat-bogs, in old pastures, in gardens and soils over-glutted with manure, it exerts the most powerful affinity, attracting the humic acid, not only from alkaline solutions, but from the body of the soil itself, fixing it in a condition of absolute insolubility, and thereby rendering the poison quite innocuous.

Let us not be misunderstood, however; for when pure turfy loam without dry manure is used in pot-culture, the slight tinge of color in the liquid superadded cannot be productive of injury. What we wish to combat, is the false notion, *that the coloring matter is the manure*. The truth must prevail, in proportion as science and faithful analysis extend their influence; yet, while we assert that the chemical salts of steeped manures are the fertilizers, and that if the coloring matter of drainage from the mixture were perfectly discharged by lime not used in excess, the clear fluid would retain its efficiency, we still give the preference to these agents, the products of natural fermentation, over any salts prepared by art in the laboratory.

As an analogy, we would cite the well-authenticated facts of the rapid germination of seeds which have passed through the viscera of birds. The Pimento trees which furnish the allspice of commerce, are quickly raised by berries, thus impregnated by animal

juices. Nature presents numerous similar examples, which art cannot imitate; and therefore we arrive at the inference, that as the naturally prepared liquid manures are the products of a species of slow combustion by which vegetable and animal matters are resolved into their elements, they must be most congenial to plants, as in fact they derive their origin from them.

While thus sanctioning the use of animal liquid manure, we must protest against a dirty and injurious method which we have seen freely practised; namely, by applying fresh cow-dung, stirred up in a tub of water, till it can be poured through the nozzle of a water-pot. The water passes down and conveys to the soil the dissolved salts and liquefied gall of the manure; but a cake of dry, effete matter is deposited on the surface, which prevents the ingress of air and of water. The reason assigned is, that the manure keeps the plant cool! This is a vulgar error which may lead to much mischief.—*Paxton's Magazine of Botany.*

### The Caoutchouc or Indian Rubber Tree.

(*Ficus Elastica.*)

THE tree from which the Elastic Gum or Caoutchouc is principally obtained, is a native of India and South America. Its leaves are of a bright shining green colour, thick, oval, and pointed, and its fruit somewhat resembling the olive in size and shape, which, however, is altogether uneatable. It grows very rapidly, and is said to attain the height of about twenty-five feet, with a trunk of one foot in diameter. Its usual size when full grown, is about that of the European Sycamore, and it seems to prefer mountainous and rocky situations, being frequently found in chasms and cliffs of the rocks on steep and abrupt declivities of mountainous regions, particularly in the province of Silhet, and in the lofty regions of Pundua and Jantipoor.

The sap or milk constituting the gum is obtained from incisions made through the bark in various parts of the trunk, and is said to flow in greater abundance from those which are made nearest the top of the tree. This fluid which is at first of a yellow white color, without either taste or smell, soon assumes a darker hue on exposure to the atmosphere, and thickens until it becomes solidified and forms about one-third of its weight of the India Rubber, or Gum Elastic, now so extensively employed in the arts and manufactures of our country.

This article was first introduced into Europe a little more than a century ago, and was then only imported in the form of bot-

ties, which were moulded over a form of clay, and afterwards having been dried and blackened in the smoke of the fires over which they were suspended, the clay moulds were crushed and shaken out, and the article ready for export.

The genus of which this tree is a species, is possessed of very diversified and opposite qualities. Some of the species yield a delightfully cool and refreshing beverage resembling milk, as the American Cow-tree, and others the most fatal poison as the deadly Upas of Java; the leaves of one kind being found to be a tonic, others acting as an emetic, while others still are caustic, and all through the various range of different qualities, yielding very profusely caoutchouc.

This gum is of great and growing importance in our manufactures and the useful arts, and may be applied to almost an indefinite variety of useful purposes, being eminently elastic and impervious to water; and on this account is largely employed in the manufacture of sundry elastic and water-proof goods, as elastic bands, braces, galoches, portmanteaus, bottles, catheters, bougies, probes, boots, shoes, coats, carriage-tops, bands for machinery, life-preservers, beds, cushions, chair-seats, door-springs, &c., &c.

It is used in the manufacture of various water-proof varnishes—for the removal of pencil marks from paper, and for numerous other purposes. It has lately been used, with apparent success, as an article for pavements and floorings, after the manner of asphalt. Tubes are formed of this substance, by cutting it into uniform slips of a proper thickness, and winding it around rods of glass or metal, so that the edges shall be in close contact; a piece of tape is then wound round outside it, and in this state it is boiled for two or three hours in water, when the edges will be found to be sufficiently adherent. Pieces of India rubber may be joined by moistening their edges with a solution of it in ether, turpentine, or naphtha; or they may be softened by simply boiling them in water, or touching them with either of the above solvents. The parts being, in each case, immediately pressed tightly together, will be found to unite very firmly. India rubber is very soluble in ether, mineral naphtha, and turpentine, and in the fixed and many of the volatile oils. It may be procured from the ethereal solution in an unaltered state.

The celebrated patent mackintoshes are made by dissolving Indian rubber in hot naphtha, distilled from native petroleum, or coal tar. The jelly-like paste so formed is

then triturated until it becomes quite smooth, when it is pressed through a sieve, and forms a homogeneous varnish, which is applied by a flat edge of metal or wood to the cloth or fabric, properly stretched to receive it. Several successive coats are applied, and when the last is partially dry, the surfaces are brought evenly together, and passed between rollers, by which process they are made to adhere firmly together. The prepared cloth is then dried in a stove room. Next to ether, naphtha is the best solvent of caoutchouc. Oil of turpentine dissolves it very readily, or at least forms a sort of jelly therewith, but it dries with difficulty: the solutions made with the fixed oils always remain glutinous. Indian rubber melts at a heat of about 248 degrees, and does not again solidify.—*Farmer and Mechanic.*

### Dead Animals.

At all seasons of the year dead animals are to be seen hung up on fences and on trees; and especially is this the case in spring. On every farm where sheep are kept, dead lambs are suspended in the beautiful, blooming, and fruit-bearing orchards—how shocking!—to annoy the sight and smell, and waste the farmer's means. Dogs and cats too are frequently hoisted into view in the same annoying and disgusting manner. If horses, cattle, sheep, or hogs die, they are drawn out of sight, but not out of smell, and are still sources of disgust. Why is all this? If the farmer be so unfortunate or so negligent as to lose an animal, should he be so wasteful as to permit the carcase to decay uselessly in the open air, to the great annoyance of his family and every passer by? Does he not know that animal matter is the best and richest of manure? Animal matter contains every element that is necessary to grow every plant known. In it are phosphate and carbonate of lime, ammonia, carbon, in short, in the best form, all the essentials of vegetable growth. Its putrid power is great, and if added to the compost heap hastens fermentation, and adds greatly to its richness. Whenever a fowl, cat, dog, sheep, pig, horse, or cow dies, let the carcase be cut up and the bones broken, and the whole added to the manure heap. The carcase of a single horse will turn loads of useless muck or peat into manure, richer than any ordinary barn-yard dung. Why then suffer it to decay uselessly and annoyingly? It is true it is not lost, for the gases that taint the air are appropriated by plants; but the farmer who owned the animal gets but a small portion of what should be all his own. Why, then, will he waste

the *dead energies* of the horse, when he has lost the *living ones*? If our readers will heed what we say, they will not suffer dead animals to annoy the eye and disgust the nose hereafter. Bury them in the manure heap, add some lime to quicken decay, and charcoal dust or plaster to absorb the gases, and much will be gained to the good appearance of the farm, the quality of the manure, and the quantity of the crops grown; and much to the purse of the farmer. If your neighbour be so improvident as to waste a dead animal, beg it of him, that it may not be detrimental to health and useless to vegetation. Laws should be passed to compel the saving and use of this most powerful of fertilizers, when common sense and decency fail to do it.

Whenever it is desirable to hasten decay, and rapidly turn animal matter into manure, sulphuric acid may be used. This would be too expensive—although the acid is cheap—for farm purposes, but may be employed for the garden, where expense is not so important. It is frequently desirable to have a rich manure in the garden, and it is not at hand. Animal matter put into sulphuric acid will in a few hours furnish it. Every house will supply much refuse animal matter. To this rats, mice, moles, feathers, hair, bones, horns, &c., may be added. If the garbage of a slaughter-house can be got, it should be. All these will soon be reduced to an available state, be inoffensive, and will add great fertility to the soil where used. The requisite quantity of acid may be ascertained by experiment—about 10 or 15 lbs. are usually allowed for 100 lbs. of animal matter.—*American Agriculturist.*

ANECDOTE OF A ROSE.—Lee's Crimson Perpetual, or *Rose du Roi*, was one of the many splendid Roses introduced by Mr. Calvert, the nurseryman of Rouen, who has before now made sales to the Hammersmith Nursery of £1200 worth in a single journey. Lelieur, the gardener at St. Cloud, was the raiser, and wished to name the Rose after himself, *Lelieur*. The then minister of the *Maison du Roi*, desired to name it *Rose du Roi*, for the perfection of the Rose was in those days a matter of notoriety. The gardener and the minister were alike obstinate, and the matter was actually referred to Louis XVIII., who decided that the minister was right. Lelieur instantly threw up his situation.

THE farms of Belgium rarely exceed five acres, and they support a family comfortably.

### Prospects in Virginia for new Settlers.

#### *Proposed settlement of New Jersey farmers in the vicinity of Petersburg.*

THE following letter to the editor of the *Farmers' Library*, a work which we have repeatedly taken occasion to recommend for its sterling worth, and the April No. of which is perhaps more than usually stored with valuable matter, we think contains many wholesome truths, which can scarcely be too thoroughly looked into by particular sections of our country. With the warm and sunny *South*, are associated in our minds all that is exuberant in nature and delightful to animal enjoyment. How greatly then does it behove those who are located in the midst of these privileges, to inquire with earnestness into the real causes of the comparatively slow progress which has been made—the comparatively small account to which these privileges have been turned within the last quarter of a century. Let the matter be looked into fearlessly and dispassionately, and with a determination not only to discover the true nature of the evil, but also to remedy it, if possible. A knowledge of a disease, is said to be half a cure. Posterity will bless the head and the hand that may contrive and bring into effectual operation the means by which public sentiment shall be so corrected and regenerated, that *labour* shall be viewed as honourable in whole communities, where now it is regarded as beneath the dignity of a gentleman. “*No idle white population can prosper.*”—ED.

Hicksford, Greenville Co., Va., Feb. 12th, 1846.

#### *To the Editor of the Farmers' Library:—*

THIS place takes its name from the circumstance of its being a “*fording*” place on the “*Meherrin*” river, and is the seat of government of the county above named. The surrounding country is flat, and the growth of timber is pine and oak. I did not expect so soon to strike the *cotton* region, but that plant constitutes, here at the end of a day's rail-road journey from Washington, one of the chief staples of the county; hence it is carried by rail-road to the factories at Petersburg, and the surplus thence to the North, where capital, greater industry, and superior intelligence, assisted by the legislation of the country, are levying, and will forever levy contributions on sloth and ignorance. By superior intelligence, I do not mean that there are not, in the slaveholding States, men, very many men, of bright and cultivated intellect, excelling in vivacity and force, men of the same relative standing toward the masses, to be found in the North—not at all! When I speak of the superior intelligence of the North, I refer to the *masses*, to the great body of voters, who *prevail at elections and control the legislation and shape the policy of the country!*

Suppose it were possible, by some magic power, to lift up this whole county, and place it in the midst of Pennsylvania, or

New York, or Connecticut, or Massachusetts! Imagination can scarcely conceive a greater transformation than it would undergo, in the course of a few years. The portraits of Hecate and of Hebe present no greater contrast than would the pictures of what it *is* and what it *would be*. The land is naturally good and easily tilled, with a rail-road for transportation of produce at the rate of five cents a bushel for corn, and eight for wheat, with great water power, which in New England would give employment to many more people than now inhabit this county, all of whom would be *non-producing consumers of agricultural produce*.

Oak wood is cut and brought and delivered in the village for \$1 50 per cord, and pine wood is delivered at the rail-road depot for *seventy-five cents!* You may judge, therefore, of the cost of labour. The land around sells from \$1 to \$3 or \$4 an acre. A gentleman residing here has lately offered 1500 acres, within two miles of the rail-road, for \$4 an acre, on one, two, and three years' credit, with all necessary buildings, even an ice-house, and a great quantity of wood, and oak and ash timber. River low grounds, that with indifferent cultivation will yield from forty to fifty bushels of Indian corn, sell for \$12 to \$15. Surely it behoves those who are invested with power to rule over the destinies of this naturally glorious region of country, to renounce the miserable blighting spirit of *party*, and to strive with one heart to discover and banish the moral incubus, whatever that may be, which sheds its withering blight over the face of this land. You would imagine that in a country where houses are going to ruin, where fields once arable and fertile are abandoned to wood, and the wild tenants of the woods coming back to reinhabit them, you would see every man at work, struggling night and day to resist the progress of dilapidation, as “a brave man struggling with the storms of fate;” but instead of that, it is a rare thing to see a white man labouring systematically at the plough, through the whole country. The taverns and country stores are filled with young men, apparently half educated, and altogether unused to personal labour—not brought up in a fondness for books, and with no means at hand to indulge it, apparently the genteel but impoverished descendants of opulent and honourable ancestors—men of high cultivation and chivalry, with whom these old States so abounded before and at the time of the Revolution.

A difference in estimating the *value of time* seems to constitute the great distinction between Northern and Southern men.

Here time seems to press like a burden, and the question is, not how it shall be turned to account, and how much can be made out of it, by the most incessant and sagacious exercise of all our faculties, but how the burden shall be thrown off, or made to sit lighter? For that purpose recourse is had to small gatherings in stores and taverns, and to frivolous amusements. There they soon form the *habit* of smoking and of drinking, without at first perceiving the destiny to which they lead, until at last they are caught like the *fly in the spider's web!* Then, alas! when too late, their fate is revealed—their doom is sealed, and there remain no possible means of escape. This is the result of defective education. Be it your duty, then, Mr. Editor, to inculcate upon every farmer's son, that nothing is more honourable than *labour*, and nothing so precious as *time*. How much more honourable would it be to a young man whose family has been reduced from affluence to poverty, to seize the handles of the plough by day, and devote some hours at night to increasing his *store of knowledge*, than to be riding about the country, running away from himself and from listlessness! Talk of labour, either of the body or the mind, as degrading or dishonourable! Is it degrading to be able "to adorn the earth and to bring its productive power into action—to apply the material substances of the earth to reasonable use, convenience and ornament—to expand and improve the human mind—to cultivate and strengthen the moral power? No product of the vineyard, the field, or the sea, however aided by inventive art, will furnish a welcome repast to one who sits in listless idleness on a downy cushion, from breakfast time till dinner. The day labourer who sits down to his coarse meal, has a pleasure to which the listless idler is a stranger."

Virginia can never be regenerated until *these principles are taught in the schools*. Education must have a practical direction. Farmers must force legislators to look less to party objects, and more to the bearing of the laws on the formation of the character and the development of the capacity of the rising generation for practical purposes. Is it not self-evident that *no idle white population can prosper?* To induce white men to labour, you must cause labour to be esteemed honourable. *The public sentiment must so pronounce it*—that public sentiment is formed by education. "As the twig is bent, the tree is inclined." Moreover, though labour may be esteemed honourable, that is not all: to make it profitable, you must give it *intelligence*. True, the labour of the ox

is profitable, but what would it avail if man were not at the handles of the plough? But how much depends on the man's *mind*, whether it be rude and boorish, or spiritual and cultivated! For an illustration of the difference, see the difference between the houses, the tools, implements of war, and the means of conveyance used and enjoyed by the savage and the civilized man. There is something of all this difference in the growth and efficiency observable between the people of different States. In Massachusetts, where the whole mass of the population is educated, and where *not* to labour usefully, and efficiently, and steadily, is deemed *dishonourable*, the land which here is worth \$3 an acre, would be worth \$100 an acre. Look at the progress of population, and of actual power in the Government as between Virginia and Pennsylvania! In Virginia, education and the circumstances under which they are reared—which may truly be said to constitute one's education—lead young men, naturally and without any fault of their own, to be ashamed of personal labour in the fields. In Pennsylvania, a young man who does not labour at something useful loses caste. Well, with these opposite moral systems, these two commonwealths start together in the great race of development and growth, say in 1790—Virginia with her broad territory, her fine climate, her water-power, her mines, her numerous and long navigable rivers, her fine scholars, her brilliant orators, her ardent patriots, her gentlemen of truest chivalry, and ladies with their fine silk stockings and charms that would melt the heart of stoicism itself! And where do we find these two States at the expiration of half a century? They *begin*—Virginia with a population of 748,308, and Pennsylvania with 434,373, and in fifty years they end with, Virginia 1,239,797, and Pennsylvania with 1,724,033—where will they be in half a century more, unless by some more enlightened system of legislation, Virginia should do something to bring her immense resources into play!

These resources are not unknown to the people of other States, but there is obviously something which resists the force of her natural attractions. What is it? *A sign, however, has arisen in the East: New Jersey farmers are inquiring for lands in Virginia, in the neighbourhood of Petersburg, a place which possesses great advantages in its water power and its vicinity to the Chesapeake.* The Agricultural Society of Petersburg, animated by a few enlightened spirits, have taken the subject in hand. I send you their Report, which it may be well to pre-

serve, as it may, in time to come, form an interesting starting point in the history of an agricultural settlement that could not fail, by the influence of its example, to produce the happiest effects on the agricultural interests of that neighbourhood. Who, in fact, can tell the benign results to which these incipient measures may lead?

Let me close this hasty letter by a few lines from one who spoke in parables of wisdom:

“Remember that time is money. He that can earn ten shillings a day by his labour, and goes abroad, or sits idle one-half that day, though he spend but sixpence during that diversion or idleness, ought not to reckon that the only expense. He has really spent, or rather thrown away, five shillings besides.”

It is but fair to add, that this village and vicinity enjoy the benefit of cultivated society. The presence of such as Dr. Scott, the President of the Senate of this State, O. A. Browne, Merritt, and others who live here and hereabout, would be sufficient to give it that claim and advantage. The owners of land do not sufficiently reflect how much the value of their property, as well as their own enjoyment and the welfare of their families depend on good schools and good society—in a word, on the *reputation of a neighbourhood*—for it may have its reputation as well as an individual. If infested with thieves, or what is as bad, made up in good part, of men of licentious and dissipated habits, no matter what may be the fertility of the land or the advantages of markets, or of health; prudent men who are looking about for places to settle themselves or their sons, will eschew such neighbourhoods. They may do for what are in the slave States called “quarters,” to employ surplus force, but will never attract gentlemen who wish to secure enjoyment and happiness for their families. He remembers the proverb, that “*A rotten apple injures its companions.*”

VIATOR.

#### *Report in relation to the probable immigration into lower Virginia.*

The committee to which was referred the Resolution of the Petersburg Agricultural Society, adopted on the 27th of December last, in relation to the probable immigration into Lower Virginia of a number of farmers from New Jersey, offer the following Report:

That they have regarded the subject as well worthy the attention, not only of this Society, but of Lower Virginia at large, whose prosperity could not fail to be pro-

motated by the settlement of industrious Northern farmers within its limits. From the knowledge possessed by the committee, of the tide-water portion of the State, they believe it to be unsurpassed in natural advantages. The climate is mild and genial, and generally salubrious; the soil is easy of culture, for the most part of good quality and susceptible of rapid improvement, and in many places even of extraordinary fertility, with the means of its restoration, when exhausted, nearly always at hand; the surface of the country is penetrated by a number of large, navigable streams; and the best markets in the Union are accessible with but little inconvenience; the various agricultural products of the middle States are capable of being grown to the greatest advantage, and all the fruits of our country attain the highest perfection. Throughout this portion of the State good lands may be bought at the cheapest rates, according to their situation—say from three to ten or fifteen dollars per acre—much less than the prices of lands above tide-water, especially in the counties lying along the base of the Blue Ridge, and at a still greater disproportion to the prices of lands further north.

Your committee would be rejoiced to be able to offer sufficient inducements in our own immediate section of the State—that is to say, in the counties contiguous to Petersburg—to the consideration of those farmers of New Jersey who propose to emigrate to Virginia. The committee have made a number of inquiries, and have heard of many farms, and in some instances of large bodies of lands in Chesterfield, Prince George, Charles City, &c., which would be disposed of by the proprietors on reasonable terms. Some of these lands possess distinguished advantages. The price varies, of course, according to the locality and the state of improvement to which they have been brought; but inconsiderable in every instance, your committee believe, when compared to their intrinsic value, and to the prices of lands in New Jersey and Pennsylvania. The committee have received a particular description of that part of Prince George bordering on the Appomattox river, between Petersburg and City Point, in which its advantages are believed to be by no means overrated. The City Point railroad on the south side of the river, and the rail-road from Port Walthall to Richmond on the opposite side—to say nothing of the river itself—afford facilities for the transportation of all marketable produce almost from the farmers' doors. Your committee, however, have not deemed it necessary to submit any minute descriptions of the several localities

which have been brought to their notice, and conclude by recommending to the meeting the adoption of the following Resolution:

*Resolved*, That the Agent of the New Jersey farmers be respectfully invited to call at Petersburg on his visit to Virginia, and that the members of this Society be requested, individually, to offer him the attentions due to a brother farmer, and to render him such aid as may enable him in the best manner to accomplish the object of his mission.

Petersburg, Feb. 6th, 1846.

### Fruits.

ACCORDING to my observation horticulturists have experienced as much or more trouble and disappointment with *pears* and *plums* than with any other fruit. Slow to grow, the pear tree seems to lead a precarious life, subject to blight and barrenness, which it is as difficult to account for as to prevent or cure. Yet what fruit have we to excel the seckle pear. From some facts which I have seen but lately, apparently on good authority, I am inclined to think that, like some animals, the pear tree becomes hide-bound, and that like them also good scrubbing and cleaning, to open the pores and promote free perspiration, would greatly contribute to their health. I have lately met with the following statement, which seems highly worthy of attention. It is known to all who know any thing of botany, that the bark of a tree when divided horizontally, presents three parts; the *liber* or inner bark, which lies next to the wood; the cellular tissue or *parenchyma*, distinguished in the bark of a tree by its fine green colour, but colourless in the bark of the root; and lastly, the *epidermis*, or outward bark, which is the universal covering of every part of a tree. Now the experiment to which I refer, to ascertain the effect of removing this rough hardened *epidermis* or outside coating from the trunk and limbs of a very large and aged pear tree, was this: the limbs or branches of the tree, as is often the case in Europe, were trained espalier fashion, or horizontally along the west wall, the branches extending in the most perfect order on each side of the large trunk. The stem or body of the tree was cleared of the *rough epidermis* entirely, and the branches on *one* side also were treated in like manner. The branches which extended on the other side of the stem, had only every alternate branch stripped of the rough hardened epidermis. Previously to this the tree had for many years ceased to bear fruit, except occasionally one or two

at the extremity of the upper branches. The first season after the above operation the foliage assumed a more healthy appearance on the decorticated branches, and in the course of the second year many fruit buds were formed, which afterwards produced fruit of very good quality, while the branches which were suffered to remain with their hardened epidermis, continued barren. Adjoining this tree was another of the same age, which was sickly and barren. From this every alternate branch was cut off and their places supplied by grafts of different kinds of pears, all of which bore well, while the original branches continued barren. Frequent applications of soap-suds would doubtless have secured a yet higher degree of health and fertility. I have observed in the garden of the late John Willis, at Oxford, in Maryland—one of the best practical horticulturists I ever knew—that the bodies of his bearing pear trees were—to use almost the strongest figure I can employ—as smooth, as clean, as polished, and as fresh-looking as the arm of a beautiful young bride when just stripped of its glove to receive the wedding-ring. The truth is, disguise or shy it as we may, young trees require as much watching and cleaning, washing and nursing, and to undergo as many vermifugent operations as young children do; and those who cannot make up their minds to bestow strict and careful attention upon both, had better make up their minds not to get either the one or the other; for in both cases they well deserve the stigma which should always be affixed to cruel and unnatural parents who wilfully neglect their young ones.

J. S. SKINNER.

### Hay and Fodder Crops.

HAY is now quoted in New Orleans at \$26 per ton. In the river towns above, it is still higher. The hay crops in the North and West were very light this past season; so light were they, in many places, that distress amongst the stock must have ensued, had not their agricultural journals pointed out to the farmers the means of remedying the evil—by sowing corn and oats mixed; drilling corn alone, so thickly as to cover the ground; sowing millet, and other fodder crops; and by cutting up all the fodder they feed out, by running it through a cutting-box. Until the next year's crop comes in, hay will continue to rise in our markets.

We can do much to regulate the price, by doing as our Northern neighbours have done—sowing oats, millet, &c. It is the extreme of folly in any planter to buy hay,

or even corn. Bermuda grass will cut double the weight of hay to the acre that any grass in the North or West will. Crab-grass makes excellent hay, and a great deal of it; and a good crop can be had after cutting a crop of oats or millet. Even bitter coco makes good hay. In no part of the world do oats succeed better than in Mississippi; the Egyptian (winter) oats, when sowed in September, afford capital grazing all winter, and will yield, if the ground is suitable, and they have been well put in, forty to sixty bushels per acre\* of oats, weighing thirty-eight to forty-two pounds per bushel. Millet is an excellent fodder crop.—*New Orleans Commercial Times.*

For the Farmers' Cabinet.

### James Gowen's System of Farming.

MR. EDITOR,—It is with some reluctance I again trouble you on this subject, especially in view of having already treated it as far as my sense of delicacy would permit, it having assumed through the interference of your correspondent, H. S., somewhat an affair of my own, in which light did it really stand, I should be the last man to appeal to your readers for justice or approval—I feel too secure and independent in my own position to trouble the public with any affair of mine. But this is a matter which concerns the public—I mean the farming interest. It was for its promotion in general, and for Virginia farming in particular, in my chapter on Farming, addressed to General Richardson, that I incurred the animadversions of H. S.—how candidly and fairly he dealt with the subject, is of no consequence to me personally, but to the cause of agriculture it is, to my thinking, a grave and serious question. How lamentable it is, that there are to be found at this day among the tillers of the soil, some who with their eyes open to the improvements in other departments of art and industry, not only obstinately refuse all aid or instruction tending to lighten their toil and advance their prosperity, but positively wage offensive warfare against every man and everything that exhibit an enlightened practice or a novel improvement.

Superadded to the disinclination I feel to notice H. S. further, I have other causes of excuse, growing out of a recent deep affliction, and a continuous severe illness—which with most men would justify a total indifference to everything save their own afflictions and infirmities—I have to grieve the loss of a most lovely and interesting boy, who in a few hours illness, in the very bloom and freshness of health, was by a sudden stroke of that inscrutable Providence, which we

are made to fear and magnify, translated to the abodes of angels, who while living, seemed fitting in beauty and loveliness for such associations without the preparatory hand of death. This severe trial deepening the channels of a disease that has for a long time baffled all medical treatment, unfits me for the task of following up an anonymous writer, such as H. S., and who, had I been less zealous in the cause of agriculture, I should through a sense of self-respect, not have noticed—his first article bearing on its face sufficient evidence of its being unworthy my consideration.

H. S. assumes that my report to the Committee on Farms, as published in your June No. for 1845, was thrown out by me to the public, and therefore he had a right to take exceptions to the management on my farm. If this was so, had he the right to garble and quote only my outlayings, without showing the work and produce consequent upon the expenditure? But I did not in fact place that paper gratuitously before the public, no more than I did the communication addressed to General Richardson. The report on my farm was elicited by the Committee on Farms, appointed by the "Philadelphia Society for promoting Agriculture," by whom it was published. As a member of the Society, I complied with its requisition, and in accordance with a sincere desire to withhold nothing that might subserve the cause, contributing, as I ever have done, my humble mite to the general agricultural fund. But if I and others shall be treated so unfairly—as may with much force be charged against H. S.—then am I free to say that the Cabinet will in future exhibit fewer Reports on improved farming.

Another egregious error has been perpetrated by H. S., that is, that the amount in dollars and cents, say \$6,724.50 is claimed by me as profits on the produce of my farm in 1845. This is a perversion of the plainest meaning. I neither hinted at this item as being profit, nor claimed it to be. I did not in summing it up, subtract even the wages, lest it might give the semblance of net proceeds in the view of profits. When H. S. paraded my annual outlay for wages in one year, without showing corresponding work that might justify the outlay, I took occasion to show, and did it in all truth and sincerity, the crops I raised and housed, with their value, in the same given time, so as every farmer could judge for himself whether the outlay was extravagant or wasteful, in view of the work and hands it would take to raise and gather so much hay, grain, corn, potatoes, and other roots, with the care of such a herd of cattle, and the management of a

dairy that produced over \$1400 worth of milk and butter in one year, and challenged him to show what he had done proportionably in the same given time; but this he has not shown, nor has he had the courtesy to tell me his name or ask me to view his farm, stock, and management; a privilege I accorded to him.

I said that in feeding, I had neither used corn nor oats, nor did I throughout the year 1845, and this I can prove by such testimony as would obtain in a court of law—I bought Middlings of Messrs. Joseph Lea & Co. that year for 45 to 50 cents per double bushel; this feed with finely cut timothy hay, was fed to my horses, and part mixed with the slop for the hogs, which had also when fattening imperfect ears of corn and small potatoes steamed for them, and out of this account of my manner of feeding, H. S. has manufactured his remark, that "*Mr. Gowen fattens his stock altogether on corn cobs.*"\* This year I feed chopt corn and sometimes oats and rye; as mill feed became exceedingly scarce and high. I do however feed cobs also, but not in the sense as H. S. has it, by way of deriding me—I have a machine for grinding the corn and cob together, which I have used very freely throughout the last winter, and up to this present time.

In conclusion, Mr. Editor, I would take occasion with your permission to state here, to such of my agricultural correspondents as are among your readers, that if I have neglected them of late, my excuse will be found in the bereavement I have to mourn, and the feeble state of my health.

Respectfully, JAMES GOWEN.

Mount Airy, 1st of May, 1846.

**MILKING COWS.**—A late English paper says that Mr. Harrison, a farmer at St Helen's, Barnsley, having had his cows regularly milked in what he conceived to be rather a mysterious way—was not a little surprised, upon going into his farm-yard the other day, to find two of his pigs, sixteen weeks old, standing on their hind legs, and sucking one of the cows, which stood as quietly as if one of the domestics had been performing the operation in the usual way.

#### Newcastle County Agricultural Society.

THE following Report of a Committee to prepare a list of Premiums, has been handed us for insertion in the Cabinet. They have evidently given a good deal of reflection to the subject.—Ed.

THE Committee appointed to make out the premium list for the ensuing fall exhibition, have added several premiums to those formerly offered by the Society, and deem it

proper that they should briefly state the reasons that have influenced them in this course.

The objects of these Societies are, or should be, not only to advance the cause of agriculture generally, but at the same time to exert a favourable influence, morally and socially, on all those engaged in rural pursuits. Merely to increase the profits of agriculture in dollars and cents, falls far short of what should be the aim of these Associations. It is not enough that the improvement of stock or the increase of crops should alone be the result—that some fine cattle, horses and sheep, should be assembled at the Annual Exhibition, or that the Committee on crops should be able to report large products as the yield of a few carefully cultivated acres. However laudable and desirable the improvement of the different breeds of stock, it is but *one* object out of many deserving encouragement, and it may be doubted whether it has not generally attracted an undue portion of interest, and been allowed to share too largely in the premiums offered by Agricultural Societies.

We see in the history of many Societies, and we think generally, because of the limited sphere of their action—year after year a diminished and diminishing interest—a want of zeal in the cause even on the part of those who admit it to be a good cause, and finally in many instances they are only sustained by the labour and trouble—the tax on the time and the pockets of a few, who struggle on year after year to get up the Annual Exhibition, or lacking such steadfast and zealous friends, the Society is allowed to go down altogether.

The first object, in the opinion of the Committee, in order to success and general usefulness, should be to interest all the industrial rural classes in the objects of the Society; let it embrace in its action objects that appeal directly to all these—that will naturally call them out and bring them forth—no matter whether they be the owners of a single head of stock—no matter whether they have big crops to report, or an acre of ground to grow any crop on—still as connected with rural life, as engaged in some capacity in agricultural pursuits, they should be present; should be allowed to participate and take a part. Independent too, of the objects of giving these Societies a popular form in order to the greatest good, it is but *justice* to extend the premiums to objects that bring them within the reach of all.

The Society has heretofore offered a premium for the best farm in the county: your Committee has offered, in addition, one for the best garden cultivated by a farm labourer and his family, having also reference to the

neatness and comfort of his abode. As premiums are given to farmers who produce great crops or raise good stock, and which do not come within the reach of those who may have the situation of manager upon the farm, and by whose skill and industry the result may have been in great measure produced, they have offered a premium to the best farm manager. They have given another premium to the best farm labourer, having reference to his skill in ploughing, sowing, mowing, &c., and his general industrious and good habits. As the relation of tenant is one occupied by many of our best practical farmers, and as many young men coming forward are likely to enter—before becoming freeholders themselves—under this description of tenure, and as good examples should be pointed out as well as rewarded, the Committee have proposed a premium to be given to the best farm tenant.

Small as are the sums the Society has been able to offer, can it be doubted they will be desired and sought for? that a generous emulation will be created to bear off the Society's diplomas, designating the successful candidate as excelling all others for the particular merit for which he receives the diploma? Can any doubt that a young man, for instance, receiving such a mark of distinction, as the best farm labourer, might not with such evidence in his possession as furnished by the Agricultural Society of Newcastle County, obtain the best situation and the highest wages to be had, or perhaps the situation of a manager of a farm, or possibly be enabled to command assistance to start him at once as a tenant.

If the owner of the best cultivated farm should have cause to be proud of the compliment of a premium, even though assisted in gaining his end by ample means and resources, would not he who gained it in his little garden patch and the comforts that with daily toil he had made to surround his humble dwelling, unaided by any means save his own strong arm and faithful heart, have equal and indeed much greater cause to be proud of his triumph?

Your Committee has also proposed, having the same objects in view, important changes in the manner of the Exhibition. That is, they propose the Exhibition and Ploughing Match shall both occupy but one day, instead of two—that all the exercises, including the reports, the address, the dinner, &c., shall take place on the Exhibition ground, in the open air, in the presence of all who may be congregated there—that the day may be passed by all those having a common pursuit in social intercourse in giving and receiving information, in examining farm

stock and farm implements, in witnessing the Ploughing Match, and in listening to reports and addresses, not forgetting the free collation, which, however plain, yet in abundance, must be sufficient for all. Nor must the expense of the humble repast come out of the funds of the Society—these must all be given to the last cent in the way of premiums; a small voluntary contribution on the part of members—a draft on the larders and orchards will furnish all that will be required in this way.

It is proposed that immediately after the stock, &c. is assembled, the Committees shall at once examine and begin to make their reports, which shall be read from the stand, that a short address occupying a few minutes, shall be made after each report, calling attention to the object reported on, and the merit of excelling; thus while the eye is delighted with the rural beauty and animation of the scene, the mind may receive instruction, and the heart be made to sympathise yet more warmly with virtuous actions. It is proposed, with the above view, that several gentlemen of the clergy, members of our judiciary and bar, distinguished strangers, connected with agricultural pursuits, and others, be invited to be present.

The Committee cannot doubt that the exercises of the day will be such as to make it one of great and general interest, and that all in the end will redound to the honour, happiness, and dignity of our calling; and as "men cannot work always," it is a fit occasion for a holiday, an agricultural anniversary, in which looking back upon the past, the sons of toil, who have so well borne the heat and burthen of the day, may find cause to encourage their hopes and stimulate their energies to further efforts.

It is sincerely to be hoped that our brother farmers in every part of the county, will bring forward their stock, the products of their orchards, dairy and garden—that they will feel themselves called on to do so—for there are few among the farmers of Newcastle county who urge at this time the poor and selfish reason, that "they have no time for such things," or that "they have ploughing enough to do at home." On the contrary, the feeling with the intelligent agriculturists of our county is decidedly favourable and friendly to the objects of the Society, even among those of them who have so far refrained from taking an active part. But let them give more support by their acts, by their deeds, and let not such worthy citizens be content with looking on—they are men for action, prompt, energetic and efficient action, in their own private affairs—let them not be content by merely en-

sure the profits of their profession; let them seek its honour and advancement, and to extend to their children, and to the rising generation generally, the favourable influences to be derived from such associations.

JAMES CANBY,  
C. P. HOLCOMB,  
BRYAN JACKSON,  
JOHN JONES,  
WILLIAM TATNALL,  
*Committee.*

### Examples of Improvement.

I HAVE spoken of the preparation of the land, by culture, for the deposit of the seed, under the heads of ploughing, subsoiling, paring, deep-stirring, scarifying, and harrowing; but there were two processes going on in Cornwall of so peculiar a character, that I deem it proper to detail them.

1. *Tehidy*.—The first was at Tehidy, the residence of Lady Bassett, under the direction of an intelligent and accomplished agriculturist, a gentleman well established in the principles, and familiar with the practices of agriculture, in the best cultivated districts of Scotland, and who was employed not merely to put the home-estate under a proper course of management, but, by example, counsel, advice, encouragement, and rewards, to assist and induce the tenants on the property to abandon the objectionable and profitless modes of husbandry which they had long followed, and introduce a better system, which the experience of the most improving and best farmers in the country had sanctioned.

An extensive tract of land on the sea-coast was underlaid, about three inches below the surface, with a compact bed of flint stones, of four and six inches in depth, and might indeed be very properly called macadamized. Vegetation on such land was almost hopeless, for the mould, or vegetable matter, on the surface, had little depth, and no plough or cultivator could penetrate this obstinate mass of stones. But this farmer undertook to remove with pickaxes this entire mass of stones, and had accomplished a considerable tract when I had the pleasure to visit it. The piles of stones lay as thick, and very much larger, than cocks of hay, upon the field, preparatory to their being carted away, for the making or repairing of roads. Under this layer of stones was found a soil which could be brought into, and under proper manuring, would liberally reward, good cultivation. The Cornish men, who, in the capacity of miners, are accustomed to face difficulties of no ordinary magnitude, and will march up against the brazen walls

of a copper mine, where they may pick and hammer away for weeks and months without reward, with as much indifference as they would cut away upon a loaf of stale bread, performed this service with a labour and perseverance worthy of all praise. Under this layer of stones was a soil capable of productive cultivation, and the reward was found in the crops which were growing on a portion of the recovered land. After the stones were removed, the land was subsoiled, and a crop of turnips, manured with guano, was taken. The effects of guano, when the land manured by it was compared with a part of the field manured only with the ashes of the furze, were here most remarkable. The experiment was a brave, and though labour was at a low rate, it was an expensive one; but as the land was comparatively without value in its former state, the only question in the case was, whether the land, after being redeemed in this way, would be worth the expense of the recovery. Heavy as this expense was, the land became worth a great deal more than it cost. In fact, it was so much land literally created by the process; and its situation, where it was easily accessible, greatly enhanced the value.

2. *Scobell's Farm*.—The other experiment to which I referred, was going on between Penzance and Land's End, on the farm of Colonel Scobell—a farm, in respect to parts of which the culture would seem like going upon a forlorn hope, the land presenting a most forbidding aspect; and yet in its results exhibiting a conclusive test of the best husbandry, by its permanent improvements, and its ample returns for the labour and expense bestowed upon it.

Some parts of Cornwall—where the hospitality of the inhabitants is in an inverse ratio to the quality of the soil—reminded me of a tract of country very well known to many persons in the United States, through which the turnpike-road passes between Lynn and Salem, in Massachusetts, which some one facetiously called the “abomination of desolation.” There is this remarkable difference, however, in favour of Cornwall, that, like some old miser, who seeks to conceal his riches under an appearance of extreme squalidness and destitution, it is underlaid with inexhaustible mineral treasures, as I myself, in a dress befitting the occasion, with a lighted torch in my hand, descending by the slippery rounds of a ladder seven hundred feet, and traversing two miles under ground, had the gratification—for so I may call it, since I am once more on the surface—to witness. In this part of the country there is little wood, and

no coal, and for fuel, the inhabitants pare the surface of the land, which seems covered with a thick matted moss and heather, and which, when taken off, leaves under it a mixture of white gravel, and black, peaty mould. This being taken off in spots, the country resembles the face of a man reduced to a skeleton, with his skin pitted and blotched all over with the small-pox. It will be understood that I am speaking only of a part of Cornwall, and in particular, the mining districts; for in some parts there are spots of eminent fertility, of which the culture is singularly skilful, and the productiveness nowhere exceeded.

Some of the land owned by Colonel Scobell, is of the description of which I have spoken. He sells the moss and heather—taken off by what a native American may properly call this *scalping* process—at £24 per acre; and then by deep and brave cultivation, and by most ample manuring, at an expense of £10 an acre, he brings this very land into productive cultivation. This is what, in New England, we should call adroitly, and certainly, most honestly and creditably, “turning a penny;” here it is evident it might be designated by a denomination two hundred and forty times larger. After this land is in this way brought to, it would readily let at thirty or forty shillings per acre. After the land has been pared, his process is to drain, subsoil, and manure it, and then he gets excellent crops of turnips, barley, and wheat.

All circumstances considered, the whole management of this farm seemed to me excellent, and it will not be deemed out of place if I now speak of it, since the subject is before me.

The farm embraces an extent of some hundreds of acres, of a gravelly soil, and much of it composed of rotten and decomposed granite rock. It required no small resolution and courage to take such a tract of country in hand, with a determination to make its cultivation profitable; for though I have referred to some cases in which the returns from the sale of the furze and heather upon it were very large, it could scarcely be expected that such a process of profit was applicable to a large extent.

The farm is not in what would be called “pink style,” and nothing is done for show. The fixtures, though very convenient, are of a plain and inexpensive character. He keeps 150 head of neat stock; he raises all his calves; he fats a large number of swine, of which he has an excellent breed, being a mixture and cross of the Essex, the Neapolitan, and a boar procured from the United States, which appeared to be a chance ani-

mal with excellent points. His cattle are of the improved Durham, which seemed not the kind best adapted to the short pastures of the country, and were not in good condition, having, as he said, suffered from the extreme drought which had prevailed during the summer, and of which it was quite evident the stock in all that country had felt the severity.

His stock are kept in the house the greater part of the year, and fed upon steamed food. His swine are generally killed at one year old, and weigh from fifteen to seventeen scores of pounds; and when kept until two years old, he calculates them to weigh about thirty-five scores of pounds. He has killed those which weighed thirty-six score. They run in the pasture upon grass only, “with no meat,”—that is, no grain or meal—from April until October. They are then put up and fed with steamed potatoes, mixed with barley meal, and given to them while warm; and twelve gallons of barley meal are deemed sufficient for the fattening of a hog. His swine, when put up for fattening, are fed several times a day. Indeed, the hind watches them constantly, and supplies them with food as often as their troughs are emptied.

The cattle are tied in stalls with chains. Provision is made, by a movable trough, to let in water to them, so that they are not turned out except for occasional airing. The stable and barns are upon the side of a hill, and the cattle are kept upon a lower story.

The upper part of the barn is devoted to the washing and steaming of the food; for all of it, the chaff as well as the vegetables, are steamed for the stock. The turnips and potatoes are placed in a large trough or tub, directly under a full current of water, coming from a drained field, which falls some short distance directly upon them, and immediately passes off, carrying the dirt with it. The potatoes are steamed in barrels. The barrels are suspended in an iron half-hoop, and are swung back and forward by a crane. They turn upon a pivot, and have but one head in. They are easily swung round to the trough, where the potatoes are washed, and then filled. A movable bottom, full of holes, is then placed in the open head to prevent the potatoes from falling out, and they are again swung round and dropped upon a platform, and a steam-pipe, opened by a cock, introduced under the bottom, which effectually steams them in fifteen minutes. They are then again attached to the lever, swung round, inverted, the movable head taken out, again inverted, and the cooked contents poured into a trough, and the barrel again filled and cooked as before;

so that from the beginning to the end of the process, they can scarcely be said to be touched with the hand.

The turnips with their tops on, are dropped from the cart into the washing trough, and when washed, are shoved along, and thrown into steaming boxes level with the floor, on which they are washed. These boxes have a false bottom, or grating of iron, under which the steam is introduced by a pipe, and after being sufficiently cooked, the end of the box is dropped, and they are easily shovelled into a cooling box, set still lower than the other, for their reception. The chaff is steamed in a large closet. All the hay for the cattle is cut by a machine, on an upper floor, and easily shovelled into this closet, where it is steamed by a pipe introduced from the common steam machine. Every thing is contrived to simplify and relieve labour. The food is then put into barrows, and wheeled through the passages to the different stock to be fed. The water which comes from the turnips when steamed, is always saved, and being mixed with a small quantity of barley meal, is given to the store hogs. It will ferment if left to stand, and is deemed quite nutritious. Oatmeal is used for the stock when barley meal cannot be obtained, and is deemed much better.

The potatoes and turnips are all washed, and shovelled, and steamed, by a single young woman, stout, healthy, active, and energetic, not in appearance much to my taste, as "a fine gentleman," but entitled to respect for her cheerfulness and good humor, and for the spirit and fidelity with which she performed her humble duty. Her master spoke of her in the kindest manner, and in looking at her in her laborious service, I could not help thinking of that noble line,—

"Act well your part; there all the honour lies,"

The manure of the stock is thrown into the yards. Different kinds are mixed, and some hogs kept among it, who, by stirring it constantly, prevent its fermentation. The liquid manure is all saved in tanks, and in some cases, is with great success led over the fields.

With the water obtained from the drainage of the land, Mr. Scobell has created a mill-power, which turns a wheel twenty-eight feet in diameter. With this is connected a threshing-machine, a winnowing-machine, and a flour and grain mill, for the purposes of the establishment; and the same power is applied to a mill for crushing and sifting bones, to a chaff-cutter, and to a grindstone.

From the situation of the ground, likewise

on the side-hill, Mr. Scobell is enabled to irrigate portions of his land, which he does with great advantage. From the rocky character of the country, the fences on the farm are stone walls, a very desirable mode of disposing of the surplus stone in the fields; and his gates upon the farm are of iron, at the moderate cost of 7s. 6d. per gate. They appeared, however, quite too light and frail for endurance.

The fixtures on the farm are of the rudest description, and no pretensions are made to neatness or exactness; but every thing seemed well cared for; and for economical arrangements for effecting the purposes intended, for a management combining the lowest scale of expenditure with the highest scale of profit, few more successful examples have ever come under my observation. The courageous enterprise which could boldly face the obstacles to be encountered in this most inauspicious tract of country, would qualify a man for a much higher military commission than that which its proprietor had borne, and the sound judgment and skill which suggested and planned the improvements, and carried them out with such a creditable economy of labour, are well worthy of commendation.—*Colman's Tour.*

### Salt—A Fertilizer.

By C. N. BEMENT.

THE value of salt for agricultural purposes, has long been known both in Europe and in this country, and why it has not been more generally used is beyond my comprehension. More than one hundred and fifty years ago, Sir Hugh Platt, an eminent writer of that day, speaks very decidedly of the benefits which might be derived from the practice of sprinkling salt upon land, and calls it the "*sweetest and cheapest*, and the most *philosophical* of all others." He relates the case of a man, who in passing over a creek on the sea-shore, suffered his sack of seed corn to fall into the water, and that it lay there until it was low tide, when, being unable to purchase more seed, he sowed that which had been in the salt water, and when the harvest time arrived he reaped a crop far superior to any in the neighbourhood. The writer adds, however, that it was supposed the corn would not fructify in that manner unless it actually fell into the water by chance; and therefore neither this man nor any of his neighbours ever ventured to make any further use of salt water.

The same curious writer tells also of a man who sowed a bushel of salt, long since, upon a small plot of barren ground, and that

to that day it remained more fresh and green than any of the ground round about it.

Dr. Brownrig, who wrote more than a century ago, in speaking of salt, says, "it is dispersed over all nature; it is treasured up in the bowels of the earth; it impregnates the ocean; it descends in rains; it fertilizes the soil; it arises in vegetables; and from them is conveyed into animals."

In the neighbourhood of the salt works in Great Britain, the value of salt as a manure is well known and acknowledged; it is said "that when wheat and barley have followed turnips on land which had been salted, the ensuing crop has invariably escaped mildew, although that disease had affected all the grain upon the lands adjacent, on which salt had not been used."

It has been asserted that salt is the mother of all manures, as every kind of manure is higher or lower in value according to the salt it produces; and every kind of manure is portioned out to the land according to the quantity of salt or nitre it is thought to contain.

"Nothing in nature," said Hollingshead, "is so powerful as salt to meliorate strong and stiff soils, and also to give moisture to dry ground; it is also a certain destruction to weeds and insects. Besides its efficacy on corn and fallow ground, its excellent qualities in giving luxuriance and salubrity to grass lands, are peculiarly worthy the attention of graziers and the breeders of cattle."

"Soils," says an old writer, "which are subject to the grub, and must be fertilized by common dung, which is a proper nest for the mother beetle to deposit its eggs, must be well impregnated with the brine of dissolved salt, after the dung is first cut up."

The efficacy of salt in destroying noxious weeds, grubs, and insects, is well known in all parts; but a dose sufficient to kill weeds, would also destroy the cultivated crops; therefore great attention and caution should be taken in not applying too much, when intended to fertilize the soil.

The quantity of salt which it would be advisable to use per acre, for the respective crops and upon the different kinds of land, will be best learned by instituting a set of experiments upon every distinct species of grain and roots. Cold, wet land, requiring more, and loose, light land, though it be poor, requiring less. Four bushels to the acre, harrowed in after ploughing, has been found a sufficient quantity on most soils for corn and potatoes; but the best way of all others for ascertaining this point, would be for every one to depend upon the results of his own experiments.

To ascertain the exact quantity of salt which may be necessary for the different kinds of land, and to appreciate the benefits which result from its employment in all the various modes of culture adopted in this country, will require several long series of experiments; we would, therefore, suggest to the executive committee of our State Agricultural Society, that they offer rewards to such persons as shall give them an account of the best experiments with this mineral substance, in the different branches of farming and general agriculture.

The safest way for a farmer to adopt, is to use his salt sparingly at first, and in all cases to leave a small portion of the same land without salt, so that the real effects produced by the salt may be, by comparison, in every instance, self-evident and palpable.

That salt is an excellent manure, experience, the most satisfactory of all evidences, clearly proves.

It is stated in an English publication, that "a farmer in the county of Sussex, some years since, had a field, one part of which was very wet and rushy, and that grass produced upon it was of so sour and unpleasant a kind that the cattle would not graze upon it; he tried several methods to improve it, but to little purpose; at last having heard of the benefits of salt as a manure, he determined to try that; for which purpose he procured a quantity of rock salt, which in a random way, without any regard to the precise quantity, he threw upon the rushy ground, fencing it off from the other part of the field, the effect of which was a total disappearance of every kind of vegetation. In a short time, however, it produced the largest quantity of mushrooms ever seen upon an equal space of ground in the country. These, in the spring following, were succeeded by the most plentiful and luxuriant crop of grass, far exceeding the other part of the field in the richness of its verdure and the quickness of its growth; the cattle were remarkably fond of it, and though the salt was laid on it twenty years before, this part is still superior to the rest of the field."

An interesting detail from the Rev. E. Cartwright, will be found in the 4th vol. of Communications to the Board of Agriculture, England, which is conclusive as to the application of salt as a manure for potatoes. It appears from this communication, that the experiment could not have been tried on a soil better adapted to give impartial results. Of ten different manures which were resorted to, most of them of known and acknowledged efficacy, one only excepted, salt was superior to them all. Its effects, when com-

bined with soot, were extraordinary, yielding in a row two hundred and forty potatoes, whilst one hundred and fifty only were produced from the row manured with lime. It was observable also, where salt was applied, whether by itself or in combination, the roots were free from that scrubbiness which often infects potatoes, and from which none of the other beds—and there were in the field near forty more than made part of the experiments—were altogether exempt. So much for foreign experiments; now let us see what has been done in this country.

From the information which I have been enabled to collect, I am inclined to believe that salt, when sparingly applied, is valuable as a fertilizer, and useful in destroying the grub and wire-worm, which often injure, and sometimes even destroy whole crops; and it has been found by experiments the past season, that the scab, or disease which has proved so disastrous to the potatoe crop in all sections of the country, has never been found upon land that had a proper dressing of salt.

Judge Hamilton, of Schoharie, informed the writer that he had found great benefit from using salt on his potatoe ground last spring. After ploughing he caused four bushels of salt to be sown broadcast on the furrow, upon one acre of the field, and harrowed in. Potatoes were then planted. Part of the field was not salted. Although the season was remarkably dry, the salted acre was observed to maintain a green, vigorous appearance, while the other part of the field looked sickly and stunted. On lifting them in the fall, those potatoes where salt had been applied were of good size, smooth skin, sound, and of good quality, and yielded a fair crop, while those on the unsalted part of the field, although the soil was fully equal to that of the salted portion, the yield was considerably less, potatoes small, and much eaten by worms.

His neighbour had a field of potatoes on the opposite side of the road, soil similar to his own, who planted them the usual way, and the consequence was, his crop was small, inferior in quality, and most of them rotted soon after digging—they were diseased.

Dr. Snug Harbour on Staten Island, informed the writer that he applied four bushels of packing salt to one acre of his potatoe ground last spring, and thinks he derived great benefit from it. Though the crop was not a large one, the potatoes on the salted portion were of much greater size, skin smooth, and free from disease. The vines were more vigorous, remained green, while

those on land of the same quality adjoining, which was not salted, shriveled and dried prematurely; the tubers small and watery; produce less.

E. M. Stone, in a late number of the *N. E. Farmer*, says: "Last spring I tried an experiment on potatoes. I planted in my garden fifty or sixty hills, placing the sets directly on the manure. To about one-half of the hills I applied a table-spoonful of salt, after slightly covering the seed to prevent immediate contact. I then finished covering. The hills so treated, yielded potatoes entirely free from blemish, and of excellent quality. The produce of the residue was badly affected by rust, or scab, and worms, and was hardly worth harvesting."

Professor Morren also directs attention to the importance of salt as a means of repelling the disease. He recommends the tubers to be placed in a steep composed of 54 lbs. of lime, 7 lbs. of salt, and 25 gallons of water.

Mr. J. E. Teschemacher speaking of the potatoe disease in the *N. E. Farmer*, says: "I think that salt, lime, and several chemicals will destroy the disease. I prefer salt, because when mixed in the soil it may get into the juices, and circulate through the whole plant. Lime or lime-water would do the same, to a certain extent, but it is far less soluble than salt."

The following very interesting detailed experiment with salt, was communicated in the 9th vol. and 5th No. of the *Cultivator*, by J. C. Mather, a very intelligent and spirited farmer of Scaghticoke. He says:—"In the spring of 1838, we broke up six acres of sward land that had been mowed a number of years, intending to plant it to corn, but observed when ploughing, that the ground was infested with worms—the yellow cut, or wire-worms, and black grubs:—as we had mostly lost our corn crop the year previous, by having the first planting almost entirely destroyed by the corn worm above described, we expected a like calamity would follow the present year, unless some preventive could be used to destroy the worms. And having frequently and unsuccessfully used all the recommended remedies to destroy the corn worms, we were induced, at the suggestion of an English labourer, to try salt. After the ground was thoroughly harrowed, five bushels of salt per acre were sowed broadcast, leaving a strip of near half an acre on each side of the field, to satisfactorily test the experiment. The whole was then planted to corn and potatoes. The corn on the part where no salt was sown was mostly eaten up by the worms, and was re-ploughed and planted

to potatoes. The potatoes on the whole lot were a good crop, but decidedly better where the salt was applied. I regret that we did not ascertain by measurement the actual result. There was a very perceptible difference in the appearance of the vines during the whole summer. On the part where the salt was sown they grew larger and were of a darker green colour, and continued green longer in the fall than the others."

"In the spring of 1839 we spread on a good coat of manure, and planted it all to corn, except about half an acre of the salted land, which was planted to Rohan potatoes. The Rohans were the best crop of potatoes I ever saw. Seed planted, two and a half bushels, produced over 300 bushels. The largest potatoes weighed  $4\frac{3}{4}$  lbs. The corn was a heavy crop, but was not measured. The summer was very dry and hot; but the corn on the salted land did not appear to suffer at all from the drought, while the other was considerably injured. The salted land appeared always moist, and the growth of every thing upon it was very rapid. We found great difficulty in keeping the weeds down. After three successful hoeings, we were obliged in August to give it a hand weeding. Spring of 1840, intended to have stocked the land down for meadow; but thinking it too rich for oats, planted potatoes without manure. Crop good. The effects of the salt still very apparent. Adjudged to be one-third more potatoes where the land was salted."

"Spring of 1841, sowed a part of the lot to oats, the remainder to potatoes and onions, without manure. The onions were a great crop. The summer was very dry, but they did not suffer, while other crops in this neighborhood, on similar soils, were nearly destroyed by the drought. The oats were a heavy crop, and much lodged on the salted part. The clover grew well, and produced a fine crop of fall feed. This I cannot account for, except by supposing that the salt kept the land moist, or attracted moisture from the atmosphere, as I know of no other piece of land in the town that was well seeded last year; it was almost an entire failure; and the most of the land stocked down last spring has been or will be ploughed up in the spring to be seeded.

"We sowed salt the same spring on a part of our meadows. The grass was evidently improved, the result satisfactory, and we shall continue to use it on our meadows."

At a farmers' conference meeting, held at Marcellus, Onondaga county, in November last, Mr. Brown, President of the County Agricultural Society, said, "he had used salt as a manure with great benefit. He

sows it broadcast upon wheat and grass at the rate of three to five bushels to the acre. On grass he would sow it in the fall—for wheat he would sow it just before the wheat is sown. He found that three bushels of salt to the acre on his wheat field, occasioned an increase of seventeen bushels of wheat to the acre over that which had no salt. The soil was a strong loam with a stiff subsoil."

Cuthbert W. Johnson, a distinguished agricultural writer, strongly recommends salt as a manure, at the rate of ten to twenty bushels to the acre, to be sown some two or three weeks before the seed is put into the ground. He says the benefits are as follows: 1st, When used in small quantities it promotes putrefaction. 2nd, By destroying grubs and weeds. 3rd, As a constituent on direct food. 4th, As a stimulant to the absorbent vessels. 5th, By preventing injury from sudden transitions of temperature. 6th, By keeping the soil moist."

It would seem from all the facts I have been able to collect, that salt corrupts vegetable substances when mixed in small quantities, but preserves them when it predominates in a mass; that in dry seasons its effects are more apparent, and whether it attracts moisture from the atmosphere, or whether it acts as a stimulant or condiment, is of little consequence so long as its effects are certain.

On account of the small quantity of salt, in weight, required for manuring lands, it is no inconsiderable recommendation, because on that account it may with ease be conveyed to the most rough, steep and mountainous parts, to which the more bulky and heavy manures most in use could not be carried, but with great labor, and at an expense far exceeding all the advantages to be effected from them.

For a top dressing, a composition of salt and lime, four bushels of the former and twelve of the latter, to the acre, have been highly recommended for grass lands infested with moss, and promoting a more vigorous growth of grass. Its beneficial effects on asparagus beds is well known to gardeners, giving a deeper color and a more vigorous growth to the plants.

Salt itself is considered, by some, rather too harsh in its nature; but a mixture, say six bushels of dry ashes to ten of salt, is sufficient for an acre, and should be spread upon the furrow and harrowed in. By being thus mixed, one particle incorporates with and mollifies the other, and if conveyed into the earth by a soapy, smooth method, will prove the real enricher the earth wants, to send forth vegetation.—*Quarterly Journal of Agriculture and Science.*

### Cornwall and the Land's End.

MANY of the practices prevailing in Cornwall, with the modes of speaking and forms of expression among the people, are so nearly allied to those of New England, as to satisfy me that we must have imported them from this part of the world, and that scions from Cornwall are thickly engrafted in our pilgrim land. I wish we might inherit, in the fullest measure, the spirit of full-souled hospitality which I found among them. I have only to regret that the rules which I have prescribed to myself forbid my saying what I would. But the feelings of grateful and affectionate respect are not the less strong for being suppressed; and my Cornwall friends, from their own generous natures, may be assured that my sense of their constant and disinterested kindness is all which they themselves would desire it should be.

On this excursion into Cornwall I went to the Land's End, and planted my foot on the very last rocky point, extending into the sea, which I was able to reach. I had but a few moments before passed a traveller's home, with the significant sign, "The First and the Last House in England." Nothing can be more picturesque than this rude and rock-bound shore, with its white-fringed ruffle of surf as far as the eye can reach, and a few scattered rocks at a distance, over which the swelling waves were profusely pouring their showers of diamonds, so treacherous to the home-bound mariner, so picturesque and beautiful to the landsman, as he suns himself upon the grassy shore, watching the distant sails scattered upon the wide expanse, full-freighted with human life and hopes glittering in the sunlight, and floating like water-fowl in their native element.

As I stood upon the far-jutting point of the promontory, and felt that no intervening country separated me from the land of my birth and the home of what is most dear to me, I found my head growing dizzy, my heart beating as though it were struggling to get out, and my cheeks quite wet, perhaps with the spray; and I could only find relief in sending a thousand unspoken messages of affection, and in more earnest prayers for the prosperity of the land and the loved ones whom I had left behind. May the winds waft the former to their objects, and the last find a response in heaven!—*Colman's Tour.*

### Premiums of the Pennsylvania Horticultural Society.

The following will be awarded at the Stated meeting on the 19th inst.

**SEEDLING CAMELIA.**—For the best Ame-

rican, exhibited at any stated meeting from December to May, inclusive, \$10.

**EVERBLOOMING ROSES.**—For the best 12 named varieties, in pots, \$7.

For the next best do. \$1.

For the best American seedling, \$3.

**PELARGONIUMS (*Geraniums.*)**—For the best ten named varieties, in pots, \$3.

For the next best do. \$2.

**POTATOES.**—For the best forced, half a peck to be exhibited, \$2.

*At the intermediate meeting on the 2nd of next month.*

**ROCKET LARKSPURS.**—For the best, twelve to be exhibited, \$2.

**STRAWBERRIES.**—For the best two quarts, of a named variety to be exhibited, \$2.

For the next best do. \$1.

**CHERRIES.**—For the best, three pounds, of a named variety to be exhibited, \$2.

For the next best do. \$1.

**TURNIPS.**—For the best grown in the open ground, one dozen to be exhibited, \$2.

*At the Stated meeting on the 16th.*

**GARDEN ROSES.**—For the best, twelve named varieties to be exhibited, \$3.

For the next best do. \$2.

**PINKS.**—For the best, six named varieties to be exhibited, \$3.

For the best American seedling, \$2.

**ARTICHOKES.**—For the best, six in number to be exhibited, \$3.

**GRAPES (*Foreign.*)**—For the best, raised under glass, three bunches, \$5.

For the next best do. \$3.

**CHERRIES.**—For the best, named, three pounds to be exhibited, \$2.

For the next best, do. \$1.

**TO COOK SPINACH.**—It should be nicely picked, and put into a stew pan, with just sufficient water to keep it from scorching. When it has boiled for twenty minutes, pour it into a cullender and strain the water off; put it into the stewpan again, with a piece of butter the size of a walnut, and a little pepper and salt; mince it up, and return it to a slow fire; take some slices of light bread, toast them well on both sides, dip them in the water in which the spinach was boiled, lay the spinach on the toast, and garnish with hard boiled eggs, and you will have one of the best spring dishes.

OLD authors are profuse in their praise of *Sage*, and it is said the Chinese esteem it as superior to the best of their own tea. Philips states that the Dutch send out dried *Sage* leaves to China, for which they receive four times their weight of tea.

### The Crocus.

THE origin of the word Crocus is, perhaps too uncertain to hazard an opinion upon. The ancient fabulists employed it as the name of a youth who was said to have "sighed away his life" and become a flower,—a poetical idea, worthy of Ovid.

Every one as naturally looks for Crocuses in the flower garden, as for primroses on the hedge bank, when the first warm rays of spring remind us that vegetation is waking from its wintry slumber.

"Welcome, wild harbinger of spring!  
To this small nook of earth;  
Feeling and fancy fondly cling  
Round thoughts which owe their birth  
To thee, and to the humble spot  
Where chance has fixed thy lonely lot.

"To thee—for thy rich tipped bloom,  
Like heaven's fair bow on high,  
Portends, amid surrounding gloom,  
That brighter hours draw nigh,  
When blossoms of more varied dyes  
Shall ope their tints to warmer skies.

"Yet not the lily nor the rose,  
Though fairer far they be,  
Can more delightful thoughts disclose  
Than I derive from thee;  
The eye their beauty may prefer;  
The heart is thy interpreter!"

BERNARD BARTON.

The usual cultivation of Crocuses, as every body knows, consists alone in once covering the bulbs with earth. They grow and flower, and grow and flower as regularly as the earth revolves about the sun. If however the finest flowers be desired, or increase be wished of any favorite sorts, the bulbs should be taken up after the decay of the foliage, and replanted in September; or they may be taken up in July, and replanted at once.—*Maunder's Botanic Garden.*

### The Grape Vine.

Much has been said and written on the culture of the grape: and much more will probably be necessary, before we shall generally be persuaded to act as if we thought it worth while to expend a little care and trouble for the attainment of a far greater benefit. We do not seem aware of the facility with which a luxuriant and fruitful vine may be obtained. The writer recollects observing to a friend, some months since, that "every man who had a foot of ground out side of his house, might have a grape vine." "O," said he, "no ground at all is necessary!" Well, but how is that? "Plant your vine," he replied, "in your cellar, lead it out at the window, and train it up the building, to the top of your house, if you like." Now, whether the roots of the vine would be quite satisfied with the darkness and coolness of the cellar, without the light and warmth of the sun, we know not, but it is mentioned

to show the little excuse farmers have, who do not luxuriate themselves, and enable their families to luxuriate in a plentiful supply of this delicious fruit. The following remarks of Dr. Underhill, a successful culturist in the vicinity of New York, were made at a meeting of the Farmers' Club, of the American Institute, on the 7th ult., and we take them from the *Farmer and Mechanic*.—En.

The grape is most delicious, most salutary—diluting the blood, and causing it to flow easily through the veins—there is nothing equal to it for old age. In this country its use will grow, will increase until its consumption will be prodigious. It will supplant some of the articles which destroy men, and establish the cheerful body in place of the bloated, diseased systems of the intemperate. No disease of the liver—no dyspepsia are found among those who freely eat the grape. This remarkable fact is stated in reference to the vineyard portions of France. Persons who are sickly in grape countries, are made well when grapes are ripe. And this result is familiarly called the *Grape Cure!* In this country our attention has been long misdirected. We have spent years and sums of money on imported vines. We have proved the falacy of all this. The foreign grape vine will not flourish in our open air. It only thrives under glass! I suppose that millions of dollars have been lost on these foreign vines during the past century. Climate has settled that question. Our extremes of cold and heat are incompatible with the character of the foreign vine. Time will show that our native stock of grapes will, by cultivation, gradually improve in quality. It is with them, as with animals, great amelioration follows care and proper knowledge. I spent some thousands of dollars on the foreign grape vines, without success. We want to supply our twenty millions of people with fine grapes! In 1830, France produced fourteen thousand million pounds of grapes. Of which, were consumed on the tables and exported in the form of raisins, &c., two thousand million of pounds! Are you afraid that our market will be overstocked from the few vineyards which we have?

There are many books on the culture of the vine, but their doctrines are generally not at all applicable to our country. Europe has the moisture from the ocean—we have the dry winds blowing over our continent. More heat penetrates our ground in one of our hot, bright days, than England has in a week. The books of Europe are an honor and an ornament to the world—but they lead us from the truth frequently—such is the great difference of the climates of Europe and America. We must here select our best na-

tive grapes—there are many—of which we have now proved the Isabella and Catawba to be excellent. Plant vines deep, on dry soil, where there are no springs of water—on slaty, calcareous, or other soils—but the drier they are, the better for the grape. A soil of brick clay will not do. The roots must be deep to avoid our severe droughts. Plough the ground exceedingly deep before you plant your vineyard. I have found that in seven years' culture, the savage much of my Isabella has vanished. Its character is greatly changed for the better. Its pulp is almost gone; its seeds are less.

The culture of the vine has one great and eminent advantage over all other crops. If you plant it well, you will get an increasing crop for twenty-five years; and every year (with rare exceptions) for fifty and even seventy-five years, a good crop. Vines will sometimes live a hundred years!—and on our native vines you can have double the quantity which is obtained from a vine in Europe, where the vine has from ages of short pruning, become feeble, and attained its perfection. We do not let the vines bear one half as many grapes as they would if all were left on. Thin them out well. You will have better and richer fruit.

In pruning, I do not spur them! I cut away the old, and bring the new vine to bear. Nineteen out of twenty persons spur-prune their vines in this city—leaving two eyes on.

I keep my vines within about six feet in height for convenience in gathering the clusters. All kinds of animal substances are good for manure for vines. Street manure is excellent for them. They ought not, however, to be stimulated too highly, for then they become profuse in foliage, and the fruit mildews and rots. An even regular growth ought to be kept up. Rotten sods mixed with barn-yard manure is good for vines. Blood is good. Long Island might by means of the fish called Manhaden be made one beautiful vineyard! Take the fish in June, make a hole near the root with a crowbar, push down a fish—there will be no smell from it, and it is an admirable manure for grape.

Composts of sea weed, black earth and cow and horse dung are good.

Ashes are excellent on sandy lands where their phosphates are leached off by rains.

Prune in March! they bleed, and my bleeding vines present a magnificent spectacle in the rays of the sun. Slight bleeding does not hurt them a bit! The buds start the better for it. The Germans say, "if the juice runs out of the ends of the vines, we know we shall have a good crop!" In France

and Italy however, they do not prune so as to bleed their vines.

### Johnny Applesced.

ABOUT the time of the survey of the lands in the United States military district, north-west of the river Ohio, preparatory to their location by those holding the warrants which had been issued by the government to the soldiers of the revolutionary war, for services during that war, there came to the valley of the Muskingum, and its tributaries, the Tuscarawas, Walhouding, Mohican, &c., a man, whose real name, if ever known, is not now remembered by the oldest inhabitants here, but who was commonly known and called all over the country by the name of Johnny Applesced.

This man had imbibed so remarkable a passion for the rearing and cultivation of apple trees from the seed, and pursued it with so much zeal and perseverance, as to cause him to be regarded by the few settlers, just then beginning to make their appearance in the country, with a degree of almost superstitious admiration.

Immediately upon his advent he commenced the raising of apple trees from the seed, at a time when there were not perhaps fifty white men within the forty miles square. He would clear a few rods of ground in some open part of the forest, girdle the trees standing upon it, surround it with a brush fence, and plant his apple seed. This done, he would go off some twenty miles or so, select another favorable spot, and again go through the same operation. In this way, without family and without connexion, he rambled from place to place, and employed his time, I may say his life.

When the settlers began to flock in, and open their "clearings," old Applesced was ready for them with his young trees; and it was not his fault if every one of them had not an orchard planted out and growing without delay.

Thus he proceeded for many years, deriving a self-satisfaction amounting to delight, from the indulgence of his engrossing passion.

Such were the labors and such the life of Johnny Applesced among us, and such his unmingled enjoyments, till about fifteen years ago, when, probably feeling the encroachments of others upon his sphere, and desiring a new and more extended field of operations, he removed to the far West, there to enact over again the same career of humble but sublime usefulness.

This man, obscure and illiterate though he was, was yet, in some respects, another Dr. Van Mons, and must have been endued with

the instinct of his theory. His usual practice was to gather his seeds from seedling trees, and to take them from as many different trees as were to be found within the range of his yearly autumnal rambles, and from those particular seedling trees affording the highest evidence in their fruit that the process of amelioration was begun and was going on in them. At first, his visits necessarily extended to the seedling orchards upon the Ohio and Monongahela rivers in what were called the "settlements;" but when the orchards of his own planting began to bear, his wanderings, for the purpose of collecting seed, became more and more narrowed in their extent, till the time of his departure further westward.

Still true, however, to the instinct which first drew him to the Van Mons theory, for the production of new ameliorated varieties of the apple, he has continued occasionally to return in the autumn to his beloved orchards hereabouts, for the double purpose of contemplating and ruminating upon the results of his labors, and of gathering seeds from his own seedling trees, to take with him and carry on by their means reproduction at the West. Recently, his visits have been altogether intermitted. Our hope is that he may yet live in the enjoyment of a green old age—happy in the multitude of its pleasing reminiscences.—*Magazine of Horticulture*.

Coshocton, Ohio, Feb. 24, 1846.

### Gurneyism.

THIS term, of whose meaning perhaps nineteen twentieths of our readers are utterly ignorant—is applied to a new and particular kind of manuring, which has been employed with signal success by Mr. Gurney, a farmer in East Cornwall. The operation consists in covering grass land with long straw, coarse hay, or other fibrous matter, about twenty pounds to the fall; allowing this covering to lie till the grass spring through it, which it does with astonishing rapidity, to the desired length, and then rake it off to allow the bestial to reach the pasture. The covering is then applied to another portion of the field; the operation of removal and covering being repeated so long as the straw or hay remains sufficiently entire to admit of convenient application. The merits of the system which is yet in its infancy, were thus stated by Mr. Gurney at a late meeting of the East Cornwall Experimental Club. About seven weeks since, he had covered half a field of grass, of three acres in this manner, and about a fortnight ago, when examined, the increase had been found to be at the rate of upwards of five thousand

pounds per acre, over the covered portion of the field. At the time the straw was raked off and laid in rows twelve feet apart in the field, and 115 sheep were put on the grass with a view to eat it down as quickly as possible. After they had been there about a week, they were succeeded by 26 bullocks, to eat off the long grass remaining, and which the sheep had left. The field was thus grazed as bare as possible. The same straw was now again thrown over the same portion of the field from which it had been raked; and on inspection that morning, he had found the action going on as powerfully as on the former occasion. He thought the sheep, on first raking off the straw, were not so fond of the grass as they were of that uncovered; but after twenty-four hours exposure to the sun and air, he thought they rather preferred it. He had forty acres now under the operation, and in consequence of it, he had pasture when his neighbours had none." Fibrous covering, or Gurneyism, as thus described, is certainly a cheap and convenient mode of manuring; all that is wanted is only further experiment to test its general applicability.—*Chambers' Journal*.

### Cultivation of Fruit.

THE following extracts from a letter recently received from Robert Chisolm, of Beaufort, S. C., by the editor of the *American Farmer*, are taken from that paper. Every hint in relation to the propagation of fruit, or its improvement, is valuable to the farmer and the marketman. We again repeat, that adequate care is too frequently neglected in this matter, by too many among us.—Ed.

"I have just received a large lot of all kinds of fruit trees from Paris, which to my surprise came out after a voyage of nearly 90 days, in better order, and are doing apparently much better than Apple, Peach and Pear trees received early in the winter from an honest nurseryman on Long Island. I believe the experience of our seaboard generally, is in favour of European trees over Northern. Thus far in the year my fruit trees promise most abundant returns for the liberal manuring, little attention and poor soil I have given them. My soil is either a very stiff red clay very near the surface, or a very thin soil upon a hard sand, of the nature of quicksand. The most productive Apple trees that I have, are upon the Doucin or half standard stock, and next upon the Paradise or dwarf. The trees I have are mostly from Italy, and have succeeded well thus far, that is, they have borne well, and the fruit has been as fine as any I have ever eaten in this country, and very superior to any thing I have ever eaten in Europe. Apple

and Pear trees have, however, been found not to succeed upon their own roots, i. e. upon Apple (standard) and Pear roots, in the sandy soils of our Sea islands, being disposed to grow too vigorously, and bear little, and sometimes not even blossom.

"I have imported a large number of dwarf and quenouille trees from Paris, for several of my friends this year, so that we will soon know whether trees of those kinds will succeed any better.

"An old and experienced planter and gardener in my neighbourhood, whips or beats his Pear trees with rods, or poles, or cow-skins, when they do not bear, and has succeeded in making them yield fruit by this treatment. I find my soil or treatment equally favourable to the sweet Orange trees, which bore most abundantly last summer; and the fruit has been pronounced by all to whom I have given them, and they are not few persons, to be the sweetest oranges they have ever eaten, in which opinion I quite coincide, as far as my knowledge goes. I have also several hundred Olive trees, received from Florence, most of which are just coming into bearing, and promise most abundantly this year, although many of them bore last summer.

"I believe that in our country an unreasonable prejudice exists against budding or grafting the peach upon the quince. Most amateurs in Europe prefer such trees, because they come into bearing much sooner, frequently produce larger and finer flavored fruit, occupy much less room, admitting thereby of a much greater variety of fruit in a small garden, requiring to be only about ten feet apart, and will frequently flourish in soils unfavorable to trees upon pear roots.

"I have succeeded in making very dwarfish pear trees, one now bearing, not more than two and a half to three feet high, by budding fruit spurs into quince stocks quite near the ground. I rather prefer budding buds that have started, or spurs, or even limbs sometimes as long as eight inches, to dormant buds or eyes. In roses I seldom use other than started buds or short limbs when I have a choice.

"It would give me pleasure to have you just drop into my garden to see my Tea and Noisette Lamarck Roses, nearly four inches across, the bushes hanging on the ground with a large variety of Tea, Noisette Bourbon and other Roses; my apple trees, sheets or balls of blossoms, pear and peach trees filled with fruit, my olive trees appearing almost bending under the weight of their unopened buds, and many other sights that gratify my grateful heart daily.

ROBT. CHISOLM."

### Maple Sugar.

Our readers are perhaps, scarcely aware of the great amount of sugar made in the Eastern States. In Maine, New Hampshire, Massachusetts, Connecticut, Vermont, New York, and Pennsylvania, more than 20,000,000 lbs. are produced—full one-tenth of the whole made in the United States. New York is the greatest producer of this article, after Louisiana. The following is taken from the *Maine Farmer*.—Ed.

We have no doubt that sugar enough to supply every family in Maine might be made from the rock maples within the limits of the state. Those who have been "*in the woods*," know something of the vast extent of forest there is on our frontier, made up in part, and in many places wholly, by this noble tree.

Whether it could be made as cheap as the southern sugar from the cane, is entirely another question. We suppose that, as it is generally made, it cannot be, and of course there is not so much attention paid to the manufacture as there would be, were it otherwise. When maple sugar is made right, and divested of all foreign ingredients, it is as good, and indeed, is just the same as the best cane sugar. We generally find it in a somewhat impure state; containing a portion of the astringent matter of the maple, and, of course, discolored in appearance, and not pure to the taste. Almost every one who makes sugar has some rule of his own. A year or two ago we received some from a friend in Mount Vernon, that was perfectly crystallized, but we have not yet ascertained the process by which it was done. As a general thing, there is too little care taken in keeping the sap and the kettles clean. The sap is most commonly caught in rude troughs, that probably have been out in the weather during several seasons; and when collected, poured into the kettle without straining. No attention is paid to the condition of the sap, whether it be sour or not, whether it be clean or not, and no trouble taken to clarify it.

Among the many directions given for the manufacture of this kind of sugar, we like best those given by Mr. E. W. Clark of Oswego, New York. We believe he obtained a premium for some of his sugar. The following are the directions he gives for the process:

"When the syrup is reduced to a consistency of West India molasses, I set it away till it is perfectly cold, and then mix it with the clarifying matter, which is milk or eggs. I prefer eggs to milk, because when heated, the whole of it curdles, whereas milk produces only a small portion of curds. The eggs should be well beaten, and effectually

mixed with the syrup while cold. The syrup should then be heated until just before it would boil, when the curd rises, bringing with it every impurity, even the coloring matter, or a great portion of it, which it had received from the smoke, kettles, buckets, or reservoirs. The boiling should be checked, and the scum carefully removed, when the syrup should be slowly turned into a thick woollen strainer, and left to run through at its leisure. I would remark, that a great proportion of the sugar that is made in our country is not strained after cleansing. This is an error. If examined in a wine glass innumerable minute and almost imperceptible particles of curd will be seen floating in it, which, if not removed, render it liable to burn, and otherwise injure the taste and color of it.

"A flannel strainer does this much better than a linen one. It is indeed indispensable. As to the quantity of eggs necessary, one pint to a pailful of syrup is amply sufficient, and half as much will do very well. I now put my syrup into another kettle, which has been made perfectly clean and bright, when it is placed over a quick, solid fire, and soon rises, but is kept from overflowing by being ladled with a long dipper. When it is sufficiently reduced, (I ascertain this by dropping it from the point of a knife, while hot, into an inch of cold water—if done, it will not immediately mix with the water, but lies at the bottom in a round flat drop,) it is taken from the fire, and the foaming allowed to subside. A thick white scum which is usable is removed, and the sugar turned into a cask, placed on an inclined platform, and left undisturbed for six weeks or longer, when it should be tapped in the bottom and the molasses drawn off. It will drain perfectly dry in a few days.

"The sugar made in this way is very nearly as white as lime sugar, and beautifully grained. We have always sold ours at the highest price of Muscovadoes; and when these sugars have sold at eighteen cents, ours found a ready market at twenty. Two hands will sugar off 250 lbs. in a day. From the scum taken off in cleaning, I usually make, by diluting and re-cleansing, one-sixth as much as I had at first, and of an equal quality."

Maple sap makes a very palatable drink, and those who have only a tree or two in their vicinity, can, at the present time supply themselves very easily with it by tapping and catching the sap. It is also made into a very pleasant beer. It is excellent to feed bees with, and is the first thing that offers itself, of the spring product, for that purpose.

### American Institute—Farmers' Club— Indian Corn.

May 5th, 1846.

J. S. SKINNER, in the Chair.

*Mr. Meigs*—Remarked that the term *Maiz* was, when spelt *Mayse*, used by some of the northern people of Europe to denominate bread. Maiz was of the genus of plants called *Zea* by the botanists.

That the term *Samp* was Indian, and meant corn coarsely broken boiled *in milk*. The term *Hommony* was Indian, and meant corn coarsely broken, boiled *in water*. And that it was conceded that Indian corn was a native of America, unknown to Europe or Asia before the discovery of this continent.

As to Indian corn, the qualities of it vary much in the different sections of the United States. The bread made from Southern corn is dry and very palatable; that from Northern corn is more moist and heavy. The quality of bread made of any corn depends as much on the modes of cooking it as upon the kind of corn used. I think that the success of the experiment of introducing the use of Indian corn into England, will depend upon these circumstances of quality and cooking.

*Col. Edward Clark*—Our Northern corn seems to contain more silicious matter in its composition, than the Southern corn. It requires much longer immersion in water before it is sufficiently softened. Our flint corn has its name from its hardness. Our Southern corn is easily pounded or ground, and is much more easily cooked. When cooked with milk, or with a portion of lard in it, it is excellent food.

*Judge Van Wyck*—Indian corn helps the soil on which it grows for succeeding crops of grain. It is an excellent crop to precede one of wheat. The soil for corn must be rich—for it is a common saying—*Corn is a grass feeder!*—and the cultivation necessary in a crop of it, has the effect of leaving the soil in fine condition for wheat or any other grain. Corn is one of the strongest and best foods for man, and still more so for many animals. It has more of the *flesh-making properties* in it than any kind of wheat. *Oats and corn ground together* form a feed which fattens animals more rapidly than any feed given to them. I believe that the Southern corn for some purposes is preferable to the Northern. It makes a lighter bread and is more easy to cook. But the Northern is a stronger food than the Southern. The stalks of corn fed to cows give the best milk and more of it than any hay. This effect is probably due to the large amount of saccharine contained in the stalks—sugar is made from their juice. The roots of corn extend far, and great care ought to be taken

not to injure them in plowing or other cultivation.

*Mr. Houghton*, of Rahway, N. Jersey—Our Northern corn, if judged by its price in market, is to be preferred to any other, for it brings always *two cents per bushel more than any other corn!*

*Col. Clark*—Our Northern corn weighs six pounds per bushel more than the Southern corn.

*Mr. Wakeman*—Our Northern hard corn is oily, and what is termed Pop Corn, owes its peculiar property to its oily nature. I read the following remarks from an intelligent writer, "Of the grain stuffs, rice and corn differ in this, that the former contains the least fatty matter, and corn the most, and ranging between these extremes we have wheat, oats, rye, barley, &c., all different, and yet are capable of being applied to the conditions best suited to them. It is on account of the fatty nature of Indian corn, that it is such a strong kind of food, and that persons unaccustomed to it cannot at first endure it. The nations which feed chiefly on rice, are not near so robust as those which use Indian corn, as the blacks at the South mostly do. Persons unaccustomed to this kind of food, therefore, will do best to commence with the white Indian meal, in preference to the yellow, as it is not so rich. This preference has already occurred in England, where the article is new. There is only one more observation which I wish to make. As Indian corn meal contains so much fat in it, if kept too long it is liable to become rancid, and it is then more or less unfit for use. In the shipments made to the West Indies, the meal is commonly kiln-dried, to obviate as much as possible, this tendency to rancidity. For reasons just detailed, the white corn meal will keep rather better—and from its being lighter and milder, it is as much preferred for use in warm climates, as the yellow for similar inducements, is in cold."

*Mr. Hyde*—The discussion of this question here, ought to be carefully conducted; for it may have some influence on public opinion abroad. There are two kinds of Southern Gourd Seed Corn—one white and the other yellow. Our Western corn is a flat grain, and is both white and yellow. Our Northern white and yellow corn have more gluten and less starch than the Southern corn—so has the corn of our Western country. The differences of quality are almost as distinguished as the latitudes in which they are produced. I have raised the Canada corn in Missouri, and its growth was there so rapid that it was fit for eating by the first day of July. The white corn of Rhode Island, has more starch than most

Northern corn. Jersey corn has more yet, and makes better bread. Our Western corn has yet more starch. Our Tuscarora corn has most starch of any corn. And I have known persons find it quite difficult on examining fine bolted meal from the Tuscarora corn, to distinguish it from wheat flour! Our sweet corn has little, if any starch—it is only good to eat when green, it is then very sweet and delicious. The Canada corn is insipid—Rhode Island corn is somewhat so. The Sweet corn grows all over our country without alteration in its peculiar properties.

*Mr. Meigs*—I have planted almost all the varieties of Indian corn. When Lewis and Clark returned from their visit to Oregon, they brought with them a small corn, which had been from time immemorial, cultivated by the Mandan Nation of Indians, and have for years cultivated that corn in my garden, and have distributed its seed for years. The plant attained about three feet of height and the ears of green corn were usually fit to eat on the fourth of July.

*Mr. Hyde*—We can raise Indian corn in our country for *twenty cents a bushel!* we can have from thirty to fifty bushels per acre with a very moderate amount of labor when compared with other grain. Our wheat may average some twenty or twenty-two bushels per acre—so that we can easily have twice as much corn as of wheat on an acre. In our Western world, corn is raised by the plow alone—the *hoe is almost* entirely unused by our people, and it is not necessary to use it. Corn pounded in a mortar coarsely, or ground coarsely in an iron mill, and judiciously cooked, is universally esteemed.

*Mr. Browne*—I exhibit here the pop corn and the rice corn; the grains of the latter of the size, and nearly the figure, of grains of rice. This rice corn has of all, the least portion of starch. In these grains the oil is the cause of the peculiar effect of heat in turning the grain inside out, called  *popping*  it, from the slight explosion which results from the decomposition of the oil of the grain. In order to produce this result in the best manner, have a box of wire gauze of small meshes, holding about two quarts; put in the pop corn and expose it to heat, often turning it about, and very soon every grain will explode and be turned inside out. The gases cannot burn, nor can the corn be hurt by the fire, for it acts on the same principle with Sir Humphrey Davy's Safety Lamp! A Light House on Lake Erie has used oil made from corn for burning. Some sixteen gallons of the oil have been obtained from one hundred bushels of corn, and it is believed that the oil is of a superior quality.

The various applications of Indian corn

are very valuable in rural economy. Those kinds which yield the most starch are best for bread. Those which contain the largest portion of oil are best calculated for feeding poultry.

*Prof. Mapes*—Corn is supposed sometimes not to flourish for want of the presence of phosphates in the soil. How to supply such deficiency—bone dust is well adapted, for bone dust contains eighty-five per cent. of phosphate of lime and fifteen per cent. of gelatine. The fish called Moss Bunker, used for manure, is valuable principally on account of the super phosphate of lime in its bones. It is the chemical element to which its fertilizing powers are due.—*Farmer and Mechanic.*

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For the Farmers' Cabinet.

### The Yellows in Peach Trees.

ALL who appreciate the peach as one of our most delightful fruits, must watch with interest every suggestion that may promote its preservation and thrift. For several years past the *yellows* and the *worm* made our peach orchards so short-lived and so apt scarcely to bear at all, that our Jersey farmers were so discouraged that few trees were planted; they however seem to have revived for the last season or two, and many orchards have recently been set out. I meet with the remarks below in the *Cultivator*, and though there is nothing conclusive in them, they will yet, I believe, be read with interest by many readers of the Cabinet, as they have by myself.

W. N.

Newtown, N. J.

THE Yellows in peach trees, is a subject that still continues to be interesting in this part of the country. I wish, therefore, to communicate a fact which may be of some importance in our inquiries after the cause of that disease.

Four years ago, Mr. B. Silliman, Jr., of this city, procured from Liverpool a considerable number of young peach and nectarine trees *budded on plum stocks*. Some of them were put for standards and others walled upon a board fence. There had been no peach trees for twenty years on the ground where those were planted. They grew well the first season, and appeared in perfect health. The second season some of the *peach* trees showed symptoms of yellows, and died the third season. At the present time—February, 1846,—no one of the trees, either nectarine or peach, is free from disease. In the garden adjoining that of Mr. Silliman, there were diseased trees standing at the time the imported trees were planted out.

The following inferences may perhaps be safely made from this experiment.

1. Budding on plum stocks, is not a security against the "yellows."

2. The plum tree has not hitherto been known to be liable to the disease. We may therefore conclude that the disease commenced in Mr. Silliman's trees in the *peach* and not in the *plum* portion—that is, in the *top*, and not in the *root*. This furnishes a strong probability that it is the natural course of the disease to commence and be seated primarily, in the part of the tree above ground.

3. The disease did not arise from anything inherent in the trees, but from some cause external to and disconnected from them. The ground of this conclusion will not be apparent without taking in connection with what has been stated, the fact, that the "yellows" is unknown in England. This conclusion bears pretty directly upon an important theory, which has been very ably presented to the public in a recent work, and met with a favourable reception. The theory is thus stated: the yellows is "a *constitutional taint*, existing in many American varieties of the peach, and produced in the first place by bad cultivation and the consequent exhaustion arising from successive over-crops. Afterwards it has been established and perpetuated by sowing the seeds of the enfeebled tree."

It is most sincerely to be regretted that any fact should present itself, that seems irreconcilable with a theory which offers to us, if correct, so ready and sure a means of having healthy trees. According to the theory, trees procured from regions where the disease has not appeared—England, France, Italy, China, or even our own "Great West," for example—*should* be free from disease, and *should* continue so, if planted in an unexhausted soil. Mr. Silliman's experiment leads us to apprehend that we are not in that way to escape the evil.

To see that we make no unwarranted conclusion, let us advert to the facts and circumstances involved in this trial of foreign trees. It is well known that the "yellows" has not appeared in England. Mr. Downing (*Fruits and Fruit Trees of America*, p. 467,) states a further fact, that "notwithstanding the great number of American varieties of peach trees that have been repeatedly sent to England, and are now growing there, *the disease has never extended itself there*, or been communicated to other trees." Peach trees in England, therefore, have *no constitutional taint*, that makes them liable to the "yellows;" and if they

remain there they never take the disease. But bring these trees to New Haven, and in fifteen months after their arrival they are dying with the "yellows." There must therefore be *something* here which is not there. The disease shows itself too soon after the trees reach this country to admit of the supposition that the exhausting processes said to be peculiar to our climate and practices, have an agency in producing it. Must we not suppose the disease to be connected somehow with *place* rather than *condition*? It matters not where our trees or seeds come from—Liverpool, Flushing, Newburg, Western New York or Ohio—if planted out in New Haven or its vicinity, either in light sand, or deep, rich loam, they die of the "yellows;" some in one, some in two, all in three or four years.

The inference from all this seems unavoidable, that the cause of the disease has existence independent of the constitution of the trees. What this cause is, where it is, what it is attached to, what it emanates from, thousands besides myself are waiting and watching with anxiety to know. Many facts which cannot now be detailed, show satisfactorily that the presence of a diseased tree among healthy ones, has some deleterious influence, direct or indirect, upon the health of its neighbours—but in what way, we are as yet unable to say. Our best mode of guarding our trees against this destroyer is in conformity with this idea of a communication of disease from one tree to another; which is, to *exterminate diseased trees, and replace them with such as are healthy*. It is found in practice desirable that the extermination should extend to *all* affected trees, leaving none. And the greater the territory over which this measure is enforced, the better. I cannot, from my own experience, say confidently that it makes any difference whether the trees are rooted up when in full leaf, or after the leaves have fallen.

NOYES DARLING.

New Haven, Ct., Feb. 10th, 1846.

ASPARAGUS should be tender; if not, the slower it is boiled the better. It should be put into boiling water, with a little salt, and boiled for half an hour. It is better to boil it in a cotton bag,—and, by the way, all house-keepers should have small cotton bags for boiling vegetables in, as they are not only better, but save time in dishing. When done, have some toast ready, which dip in the water in which the asparagus is boiled. Then lay the asparagus on it, pour melted butter over it, and send it to the table.—*Ohio Cultivator*.

### Cultivation of the Hop.—*Humulus lupulus*.

ALTHOUGH the Hop is not a culinary vegetable, as it is more or less used in every part of our country, it may not be amiss to treat of its culture. It is presumed, that in proportion as habits of temperance are inculcated, our citizens will have recourse to beer as a wholesome beverage; and as a great deal depends on the manner in which Hops are cured, I propose giving directions for their management throughout, so as to enable those who choose, to prepare their own. My information is collected chiefly from Loudon's *Encyclopædia of Plants*.

"The Hop has been cultivated in Europe an unknown length of time for its flowers, which are used for preserving beer. Its culture was introduced from Flanders in the reign of Henry the VIII; though indigenuous both in Scotland and Ireland, it is little cultivated in those countries, owing to the humidity of their autumnal season. Like other plants of this sort, the hop bears its flowers on different individuals; the female plants, therefore, are alone cultivated. There are several varieties grown in Kent and Surrey, under the name of Flemish, Canterbury, Goldings, &c.; the first is the most hardy, differing little from the wild or Hedge Hop; the Goldings is an improved and highly productive variety, but more subject to blight than the other.

"The hop prefers a deep loamy soil on a dry bottom; a sheltered situation, but at the same time not so confined as to prevent a free circulation of air. The soil requires to be well pulverized and manured previous to planting. In hop districts the ground is generally trenched either with a plough or spade. The mode of planting is generally in rows six feet apart, and the same distance in the row. By some, five, six, or seven plants, are placed in a circular form, which circles are distant five or six feet from each other. The plants or cuttings are procured from the most healthy of the old stools; each should have two joints or buds: from the one which is placed in the ground springs the root, and from the other the stalk. Some plant the cuttings at once where they are to remain, and by others they are nursed a year in a garden. An interval crop of beans or cabbage is generally taken the first year. Sometimes no poles are placed at the plants till the second year, and then only short ones of six or seven feet. The third year the hop generally comes into full bearing, and then from four to six poles from fourteen to sixteen feet in length are placed to each circle, or one pole to each plant if cultivated in

straight rows. The most durable timber for poles is that of the Spanish Chesnut.

"The after culture of the hop consists in stirring the soil, and keeping it free from weeds: in guiding the shoots to the poles, and sometimes tying them for that purpose with bass or withered rushes; in eradicating any superfluous shoots which may rise from the root, and in raising a small heap of earth over the root to nourish the plant.

"Hops are known to be ready for gathering when the chaffy capsules acquire a brown colour, and a firm consistence. Each chaffy capsule, or leaf calyx, contains one seed. Before these are picked, the stalks are detached, and the poles pulled up, and placed horizontally on frames of wood, two or three poles at a time. The hops are then picked off by women and children. After being carefully separated from the leaves and stalks, they are dropped into a large cloth hung all round within the frame on tenter hooks. When the cloth is full, the hops are emptied into a large sack, which is carried home, and the hops laid on a kiln to be dried. This is always to be done as soon as possible after they are picked, or they are apt to sustain considerable damage, both in colour and flavour, if allowed to remain long in the green state in which they are picked. In very warm weather, and when they are picked in a moist state, they will often heat in five or six hours: for this reason, the kilns are kept constantly at work, both night and day, from the commencement to the conclusion of the hop-picking season.

"The operation of drying hops is not materially different from that of drying malt, and the kilns are of the same construction. The hops are spread on a hair cloth, from eight to twelve inches deep, according as the season is dry or wet, and the hops ripe or immature. When the ends of the hop stalks become quite shrivelled and dry, they are taken off the kiln, and laid on a boarded floor till they become quite cool, when they are put into bags.

"The bagging of hops is thus performed: in the floor of the room where hops are laid to cool, there is a round hole or trap, equal in size to the mouth of a hop-bag. After tying a handful of hops in each of the lower corners of a large bag, which serve after for handles, the mouth of the bag is fixed securely to a strong hoop, which is made to rest on the edges of the hole or trap; and the bag itself being then dropped through the hole, the packers go into it, when a person who attends for the purpose, puts in the hops in small quantities, in order to give the packer an opportunity of packing and trampling them as hard as possible. When the

bag is filled, and the hops trampled in so hard that it will hold no more, it is drawn up, unloosed from the hoop, and the end sewed up, two other handles having been previously formed in the corners in the manner mentioned above. The brightest and finest coloured hops are put into pockets or fine bagging, and the brown into coarse or heavy bagging. The former are chiefly used for brewing fine ale, and the latter by the porter brewers. But when hops are intended to be kept two or three years, they are put into bags of strong cloth, and firmly pressed so as to exclude the air.

"The stripping and stacking of the poles succeed to the operation of picking. The shoot or bind being stripped off, such poles as are not decayed, are set up together in a conical pile of three or four hundred, the centre of which is formed by three stout poles bound together a few feet from their tops, and their lower ends spread out.

"The produce of no crop is so liable to variation as that of the hop; in a good season an acre will produce 20 cwt. but from 10 to 12 cwt. is considered a tolerable average crop. The quality of hops is estimated by the abundance or scarcity of an unctuous clammy powder which adheres to them, and by their bright yellow colour. The expenses of forming a hop plantation are considerable; but once in bearing, it will continue so for ten or fifteen years before it requires to be renewed. The hop is peculiarly liable to diseases; when young it is devoured by fleas of different kinds; at a more advanced stage, it is attacked by the green fly, red spider, and ottermoth, the larvæ of which prey even upon the roots. The honey-dew often materially injures the hop crop; and the mould, the fire-blast, and other blights, injure it at different times towards the latter period of the growth of the plant."

The culture of hops is becoming an important branch of husbandry in the State of New York.\* A correspondent observes, that "as fine samples have been grown in Orange and Madison counties as in any part of the world. The hop is considered somewhat precarious; but when the season is good, the profit is very great. The average product may be stated at 700 lbs., though it has reached 1600 lbs. to the acre; and in the latter case the expense amounted to sixty dollars. The ordinary, or average price, may be stated at eighteen cents per pound. The profits on an ordinary crop, according to these assumed data, would be about seven-

\* Gurdon Avery, in the village of Waterloo, Oneida Co., New York, is said to have raised in 1842 on twelve acres of land, 29,937 lbs. of hops.

ty dollars from the acre. It often falls materially short of this, however, from the want of knowledge and care in gathering and drying the crop.

“The quantity of hops taken to Albany and the neighbouring towns on the Hudson, this year, (1834) has been estimated at 2,300 bales, or 500,000 lbs., which, had not many of them been prematurely gathered, or badly cured, would have yielded to the growers ninety or a hundred thousand dollars. But of the 2,300 bales, there was not more than 200 bales, we are informed, that ought to have received the denomination of first sorts. Many of them were picked too early, before the matter that imparts to them their value was sufficiently developed; and others were scorched or smoked in curing. This carelessness has seriously affected the character of our hops abroad, and they are no longer purchased by the Philadelphia brewers. They would soon form an important article of export, if their character was raised by care in their culture and drying, and a rigid inspection.”

The young shoots of both wild and cultivated hops are considered by some as very wholesome, and are frequently gathered in the spring, boiled, and eaten as asparagus. The stalk and leaves will dye wool yellow. From the stalk a strong cloth is made in Sweden, the mode of preparing which is described by Linnæus in his *Flora Suecica*. A decoction of the roots is said to be as good a sudorific as Sarsaparilla; and the smell of the flowers is soporific. A pillow filled with hop flowers will induce sleep, unattended with the bad effects of soporifics, which require to be taken internally.—*Gardener's Assistant*.

**CABBAGE SPROUTS.**—Very few people take half the pains they ought with cabbages. When they are cut—no matter how—the stumps are left to bring sprouts; no matter when, nor how many. Now, the fact is, that when the sprouts begin to come, they should be all rubbed off but the best—or at most two; but if there be only one left to grow on each stump, it will grow faster and better, and be occasionally as good as the first head that was out; instead of which, a multitude of small ones are allowed to grow, not any of which bring good hearts, and all are, for the most part, but a poor apology for greens. When a cabbage is cut, the leaves should be cut off the stem, and as soon as the buds of the stump begin to grow, rub off, or cut, all that are not wanted, leaving one of the strongest and best to grow into a head, which it will do in an incredibly short

time; equalling, and more frequently excelling, the first head itself, in flavour and appearance. This is adapted for families more than market gardens, because there is some trouble in rubbing or taking off the useless shoots; but it is well worth while in the case of early cabbages, in a private family, for it forms an excellent second crop.

### Washings of our Streets.

WHAT a vast amount of fertilizing material is daily running from our gutters into the sewers, and thence to the Delaware and Schuylkill, to dirty their streams, and thus be rendered worse than useless. It is well worth the consideration of the shrewdest among us, whether it may be possible in any way to avoid this waste, and turn it to valuable purposes in agriculture and horticulture. The following paragraph from a Scotch paper is to the point, and shows that the idea is by no means new with us.—ED.

“Were Glasgow properly washed out, I should judge the washings capable of irrigating at least 15,000 acres—a square of five miles; and this, at £30 per acre, would be worth £450,000; or, at only £20 per acre, £300,000 yearly. Taking into account the population of Glasgow, these sums are considerably under what Liebig allows. We should have here a stream of dirty water running out from the city, to return again in a stream of milk—a transformation effected by the mysterious metamorphic power of combined vegetable and animal assimilation. No doubt a large outlay of capital would be necessary, in the first place, to bring in and distribute a sufficiency of water over the city, and to effect a complete drainage; and in the second place, to raise the collected washings, conduct them by aqueducts to the proper distance, and spread them out in a complete network of irrigation; but the exuberant fertility which would thence be extended over a large space of country would more than doubly compensate the amount of outlay, while the improvement which would be effected in the health, and even in the morals and character of the population of Glasgow would be inappreciable. In the event of this improvement being carried out generally, our beautiful rivers and streams, which now as they pass our cities and populous villages, suffer pollution by the drainage, would continue to run in crystal purity to the sea, sweet as when they first welled out in the fountains and springs from the bosom of our pastoral hills.”

To feed land before it is hungry—to give it rest, before it is weary, and to weed it before it becomes foul, are said to be evidences of good farming.

### To keep Plants and Trees on a long Voyage.

A CORRESPONDENT of the Gardener's Chronicle, writing from New Zealand says, "I was led to recommend the packing of fruit and other trees in zinc cases, through an inadvertence it is needless to explain; I regret this the more, as it may be productive of injurious consequences. The trees—apple and pear—to which I alluded in my former letter, and which, after being nine months out of ground (the vessel not sailing until five months after the time stipulated in the advertisement), are now flourishing in my garden, some of them having borne fruit this season, were packed in a deal case, in moss only, and without straw. At Valparaiso I witnessed another successful instance of this way of packing. A Frenchman arrived there, after a voyage of nearly four months, with several cases of flowering shrubs and trees from France, in the very best order. They had each a small ball of earth to the roots, which were afterwards wrapped in moss, and the plants were packed in the same material to prevent their being disturbed. I am anxious to correct any error, because a case of plants was sent to us by the London Horticultural Society, packed air-tight, and they all perished. In the warm latitudes these air-tight cases prevent evaporation, and this causes fermentation, especially if straw be used, as in the instance of a case I received, with the other alluded to above, containing peach, plum, gooseberry, and currant-trees, all of which died."

### THE FARMERS' CABINET, AND AMERICAN HERD-BOOK.

PHILADELPHIA, FIFTH MONTH, 1846.

It was the Editor's privilege to visit his friend Samuel C. Ford, a few days ago, at Olney, on the Second street road, some five miles from this city. The farm contains about 105 acres, and lies handsomely, and perhaps equally on either side of the turnpike, and certainly gives evidence throughout, of careful, systematical, and successful cultivation. It is indeed a beautiful spot, and at this surpassingly delightful season of the year, the great abundance of trees of every kind, with which the homestead is surrounded; the rich foliage of the neighboring forests, and the fields of wheat and grass on the farm, all combine to mark it as one of those blessings meant, by a kind Providence, to be "richly enjoyed." We were particularly pleased with the garden and the green house, combining as they do, so practically the useful with the beautiful and the tasteful. The fruit trees look healthy and promise an abundance,—both standards and espaliers. The Seckel pear trees have a remark-

ably fine appearance, and confirm the observation frequently made within the last year or two, that this tree seems to be recovering from the threat of extermination that for a while, hung over it. The wheat and the grass are fine. Guano has been used, evidently with great success, on both. We hardly remember ever to have seen at this time of the year, a more luxuriant promise of wheat, than in the fields at Olney; and we could not help wishing while viewing them and the grass, for an opportunity to give our friend a chase through them, by and by, with the cradle and the scythe. Poudrette was applied to the corn at planting, last spring: its effect, was all that could be desired—this season, Guano also was used at planting, and if it should operate on the corn, as it is operating on the grass and wheat, it will be a pleasure to do the husking.

The whole country is magnificent. How richly may its privileges and its beauties be appreciated, by those whose enterprise and industry and labour, have augmented the general good! and how are they multiplied to those whose minds are properly disciplined, and whose taste and liberality have aided in elevating the common tone of feeling, and standard of enjoyment.

A LIST of Premiums offered by the Agricultural Society of New Castle County, at the Fall Exhibition, to be held on the 16th of Ninth month next, at Wilmington, came to hand just as we were going to press, too late for this number. It shall appear in our next.

WE have not been able to keep up our supply of Poudrette, with the demand. As the season for corn planting is now pretty much over, we shall have plenty of it soon, for those who incline to use it on potatoes, or around the corn, after it is up. In this case it should be covered from the sun, not left on the surface of the ground.

THOMAS CROFT, of Wilkesbarre, will accept our thanks for several copies of his pamphlet on the *Potatoe disease*, and *Remedy for it*. He has thrown within small compass, a variety of important facts in relation to this matter.

A. B. ALLEN, of New York, has published an extended catalogue of his Horticultural and Agricultural Implements and Tools—Garden and field seeds—Fruit trees, and domestic animals. He has a large collection on sale at his Ware-house. His catalogue has been received.

The quantity of rain which fell in the 4th month, 1846, was ..... .211 inches.  
*Penn. Hospital, 5th mo. 1st.*

It is stated in the Ohio Cultivator, by Isabella Innis, of Franklin County, Ohio, that her dairy for the year 1845, consisted of ten cows, and besides that consumed by the family, she made 1388 lbs. of butter; most of which she sold in Columbus herself at 12½ cents per pound, and performed most of the labour with her own hands.

FINE Strawberries from Baltimore, are in our market this day. Price fifty cents a box.

The list of Premiums of our Agricultural Society, did not come to hand in time for this number.

Our enterprising gardeners in the South—from the vicinity of Charleston, and Norfolk were in our market on the 5th inst., with fine green peas. On the 8th we had bushels of them, from 25 to 40 cents a half peck. Theirs, is, indeed a genial clime, which enables them to anticipate us at least a fortnight in their early vegetables.

A FEW days ago, we took a turn through the large Agricultural Warehouse of D. O. Prouty, in this city. His advertisement is found in the Cabinet. The inspection was highly interesting, and conclusively showed the great improvement made in almost every article used on the farm, since first the editor sweat out his muscular energies in their handling. Lightness, combined with strength and good workmanship as well as reasonableness of price, mark these various articles. No farmer ought to use poor implements. Good ones are the cheapest, and save the bone and sinew of man and beast.

#### SHORT ADVERTISEMENTS,

The subject matter of which, may correspond with the agricultural character of this paper, will be inserted at the rate of one dollar for each insertion of ten lines or less; and so in proportion for each additional line. Payment in advance.



### Agricultural Implement & Seed Warehouse,

No. 194 $\frac{1}{2}$  Market Street, Philadelphia.

For sale as above. Cultivators from \$3 50 to \$5 50 each; Cultivator Ploughs for working among corn, potatoes, roots of every kind, digging potatoes, &c., &c.; Horse Rakes; Centre-Draught Ploughs for 1, 2, 3 or 4 horses; Cutting Boxes in great variety; Corn Shellers; Grain Fans; Grain Cradles of the best make; Scythes, Snaths, Scythe stones, Rifles, Grass Hooks; improved Barrel Churns, Cheese presses, &c., &c. Garden and Flower Seeds of all kinds, for sale at wholesale and retail, by D. O. PROUTY.  
March 15—1f.

#### Agency for the Purchase & Sale of

### IMPROVED BREEDS OF CATTLE & SHEEP.

The subscriber takes this method of informing his friends and the public, that he will attend to the purchase and sale of the improved breeds of cattle, sheep, &c., for a reasonable commission. All letters post paid, addressed to him at Philadelphia, will be attended to without delay.

AARON CLEMENT.

Jan. 15th, 1846.

### COATES' SEED STORE,

OF MORE THAN FORTY YEARS STANDING,

Where may constantly be had

Clover, Timothy, Orchard, Herd,

AND OTHER

GRASS SEEDS,

TOGETHER WITH A COMPLETE ASSORTMENT OF

GARDEN SEEDS,

Of the finest Quality and best Varieties,

JOS. P. H. COATES.

No. 49, Market st., Philada.

PHILADELPHIA

### AGRICULTURAL WAREHOUSE,

No. 291 Market Street, North side, between Seventh and Eighth Streets, Philadelphia.

Thomas Furber has just received from Worcester, Massachusetts, an assortment of Ruggles, Nourse and Mason's improved Eagle, Subsoil and other Ploughs, which have been so much approved by the principal Agricultural Societies in New England the several last years; also Bennett's Cultivators and Stevens' Self-Feeding Hay and Straw Cutter, a late and very valuable improvement in that kind of implement; Grain Cradles, &c.; an assortment of Ruggles, Nourse and Mason's Self-Sharpening Ploughs of the form and model of those above named, are daily expected. T. F. has and will constantly keep a large assortment of Farming Implements, as Fan Mills, Scythes and Hay Cutters, Corn Shellers, Grain Cradles, Scythes, &c., together with Garden Tools of all kinds.

May 15th, 1846.

1 yr.

NEW

### Horticultural and Agricultural Ware-house,

84 Chesnut Street below Third, South side.

The subscriber has for the better accommodation of his customers, opened the above ware-house, with a large stock of Garden and Field Seeds, crop of 1845. Implements and Books on Gardening and Farming; he calls the particular attention of farmers to his pure stock of Sweede Turnips, Field Carrots, Beets and Parsnips, Pruning Shears, Saws and Knives.

March 14th, 1846.—1y.

R. BUIST.

### SEED STORE,

No. 23 Market Street, Philadelphia.

The subscriber keeps constantly a supply of White and Red Clover, and other grass seeds; fresh Perennial Rye-grass, and Lucerne seed. Field seeds, consisting of choice Spring Wheat, Barley, Potatoe Oats, Northern and other seed-corn. Also, in season, Fruit and Shade Trees. Garden and Bird seeds generally. Guano in parcels to suit purchasers.

M. S. POWELL.

Philad., Feb., 1846.

1f.

We keep on hand at this office, and will supply our friends with Agricultural works generally. Among which are

THE FARMER'S ENCYCLOPEDIA, full-bound in leather;—Price	\$3 50
YOUATT ON THE HORSE, with J. S. Skinner's very valuable Additions;	2 00
BRIDGEMAN'S GARDENER'S ASSISTANT;	2 00
THE AMERICAN POULTRY BOOK;	37½
THE FARMER'S LAND MEASURER;	37½
DANA'S MUCK MANUAL;	50
Complete sets of the FARMERS' CABINET, half-bound, 9 vols.	7 50
DOWNING'S Landscape Gardening,	3 50
Downing's Fruits and Fruit Trees of America,	1 50
SKINNER'S Every Man his own Farrier,	50
AMERICAN Poulterer's Companion,	1 25
BOUSSINGAULT'S RURAL ECONOMY,	1 50
FARMERS' & EMIGRANTS' HANDBOOK,	1 00
MORRELL'S AMERICAN SHEPHERD,	1 00
STABLE ECONOMY,	1 00
BEVAN on the HONEY BEE,	31½
BUIST'S ROSE MANUAL,	50
SKINNER'S CATTLE & SHEEP DOCTOR,	50
AMERICAN FARRIER,	50
THE FARMER'S MINE,	75
HOARE ON THE VINE,	62½
HANNAM'S Economy of Waste Manures,	25
LIEBIG'S AGRICULTURAL CHEMISTRY,	25
“ ANIMAL CHEMISTRY,	25
“ FAMILIAR LETTERS,	12½

As well as his larger works on Chemistry and Agriculture.

Subscriptions received for Colman's Agricultural Tour—or single numbers sold.

☞ We are prepared to bind books to order.

**GUANO.**

TWENTY-FIVE tons first quality Ichaboe Guano, in bags or barrels, for sale in lots to suit purchasers, by

S. & J. J. ALLEN & CO.,

No. 7 South Wharves, 2nd Oil Store below Market street, Philadelphia.

October 15th, 1845.

tf.

**THE FARMERS' CABINET,**

IS PUBLISHED MONTHLY BY

JOSIAH TATUM No. 50 NORTH FOURTH STREET, PHILADELPHIA.

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JOSIAH TATUM.

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# THE FARMERS' CABINET, AND



## AMERICAN HERD-BOOK.

DEVOTED TO  
AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

Perfect Agriculture is the true foundation of all trade and industry.—LIEBIG.

Vol. X.—No. 11.]

6th mo. (June) 15th, 1846.

[Whole No. 137.]

PUBLISHED MONTHLY,

BY JOSIAH TATUM,

EDITOR AND PROPRIETOR,

No. 50 North Fourth Street,

PHILADELPHIA.

Price one dollar per year.—For conditions see last page

For the Farmers' Cabinet.

### Prospects in Eastern Virginia for new Settlers.

TO THE EDITOR,—I observe in the last number of the Cabinet, the highly interesting communication of "Viator," followed by the Report of the Petersburg Agricultural Society, on the subject of "the probable emigration into lower Virginia of a number of farmers from New Jersey."

In the autumn of last year, the writer of this, at the request of a few of his neighbours who intended to visit the Northern part of Virginia to look at the country, addressed a letter to the editor of the *Richmond Whig*, enquiring the prices of land in the Eastern counties, and what sort of reception emigrants from the more Northern States would be likely to meet with:—this letter was obligingly published in the *Whig*, and answers have been received from many of the most intelligent citizens, of more than

CAB.—VOL. X.—No. 11.

twenty different counties. These letters, without exception, express the strongest desire to encourage Northern farmers to come among them, and hold out every inducement which can be desired. A friend of the writer introduced the subject to the Agricultural Society of Petersburg, which numbers among its members some of the most patriotic and intelligent citizens of the State.

In a very recent visit to that section of the State, the writer received all the attention and kindness for which Virginians are so justly celebrated. The country around Petersburg possesses advantages which certainly are not exaggerated in the Report—lands of excellent quality can be purchased within three to five miles of the city, at \$5 per acre, in many instances with good buildings, and an abundance of timber. Shell marl of the best quality abounds almost everywhere, and manures from the city are almost altogether neglected. It was stated that the best stable manure sells for twelve and a half cents per cart load, or twenty-five cents for a two-horse wagon load. The markets for meats and vegetables, are higher than those of Philadelphia or New York. Wherever the attempt has been made, the result shows the soil to be susceptible of the highest improvement, and productive in all the grains, grasses and fruits.<sup>1</sup>

In company with two of the members of the Society who drew up the Report referred to, we made an excursion to *Sandy Point*, the princely estate of R. B. Bolling, in

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Charles City county.\* We met a most cordial reception from the distinguished proprietor and his family, and enjoyed their splendid and generous hospitality for a couple of days. This estate consists of about eight thousand acres, nearly one half of which is in cultivation. About eight hundred and fifty acres were in wheat, which promised a yield of twenty to thirty bushels per acre—adjoining this, a field of 525 acres was in corn, in which thirty ploughs were at work—more than one thousand acres were in clover of luxuriant growth, most of which is to be ploughed down for the next crop of wheat; in addition to these five lots of twenty-five acres each, near the Mansion-house, are in high condition and present a miniature of the large farm. The cultivated land fronts on the James' river for several miles, while back of it lies the timber—nearly four thousand acres of primitive growth and exceedingly valuable. The mansion is delightfully situated on the bank of the river, and commands a view of it for many miles in both directions; the lawns and garden are adorned with shrubs and trees, and cultivated in a style that rivals the most tasteful in the vicinity of the Northern cities. At a short distance above the house is a large and handsome brick barn, with thrashing machine, fans, corn-shellers, mill for grinding corn, saw-mill, &c., &c., all worked by a neat steam engine. The houses for the labourers, stables for the stock, the stock itself of horses, mules, oxen, cows, sheep, and the roads through the estate, all evince the taste and care of the proprietor, and deserve the highest praise. If any one doubts the capabilities of the soil in this region of the State, a visit to Sandy Point, and the estates on the opposite side of the river—Lower and Upper Brandon—will convince the most sceptical. Yet in passing down the river the next day in a steamboat, we met a highly respectable citizen of Chester county, Pa., who told us he had just purchased eleven hundred acres within a few miles of the latter named places, on fine navigable water, well timbered, with abundance of the best marl, having on it a grist-mill in good preservation, and water power sufficient for a saw-mill, in addition; for which he pays but \$2 per acre. The writer of this has received direct offers of near one hundred thousand acres, in very desirable localities, at prices varying with the state of the improvements, from \$1 to \$30 per acre. S. S. G.

Moorestown, N. J.

### American Produce in England.

As the demand for articles of our manufacture or growth is extended, it will, we trust, be found that our ability to satisfy the demand, is also increased. With a great variety of climate, and vast extent of territory—with our industry and skill and free institutions, who shall limit, under Providence, the amount to which we are able to feed and to clothe the world? The following extract is from a letter in the *Boston Traveller*, dated London, April 3rd, 1846.—Ea.

WITHIN two or three years a great many articles of food, the produce of the U. States, have been sent to England in large quantities, and they have commanded good prices. American cheese, when it was first introduced here, was not esteemed, and only the poorer classes would purchase it, the quality was so ordinary; but now the leading cheese mongers always have a large supply of American cheese, and take care to inform the public of its superior quality. *Indian corn* is another article of food that is just now talked about, and great efforts are making to introduce the bread made from wheat flour and Indian meal, not only amongst the Irish people, but in the United Kingdom. It is coming rapidly into favour in all the large towns. Dr. Thompson recently read an able paper at a meeting of the Glasgow Philosophical Society, on the nutritive qualities of Indian corn, which he ranked very high, and said it made "an agreeable article of diet."

The luxuries, too, of the U. States, have made their appearance in the metropolis of England. To say nothing of the great value of American ice, and its extensive use by the nobility and gentry, the tables of the West End aristocracy can now be supplied with canvass-back ducks, wild turkeys and venison! The "*American Ice Company*" recently astonished the epicures of the clubs by the following announcements: "*American Forest Venison*. A few saddles, of very superior quality, in fine condition, just received by the American Ice Company, 106 New Bond street." Again: "*Wild Turkeys*, from the American forest, domesticated turkeys, wild geese from the American lakes, mongrel geese, and a superior lot of capons, just received in fine order, at 106 New Bond street." Here is another announcement, and it is probably the first of the kind that ever appeared in a foreign newspaper: "*Canvass back ducks*, from Chesapeake bay. A very fine lot of this celebrated water-fowl, just received from America, in excellent preservation, for sale by the American Ice Company, 106 New Bond street."

The American ice trade must prove exceedingly profitable the present season, as the remarkably mild winter here prevented

\* See a notice of this estate on pages 19 and 79, vol. 7, of the Farmers' Cabinet.

any of the traders in ice from securing any stock. During the spring and summer months American ice will be in great demand. It is sold at ten shillings sterling the cwt., or at two pence per pound at retail. A warehouse has been prepared at the St. Katharine's dock, in a cool place, and effectually protected from the sun and heat, expressly for the storage of American ice, and where it can be immediately deposited on being cleared from the vessel, and remain till the owners remove it to their own warehouses. The Londoners are just beginning to appreciate American ice, and large quantities can readily be sold here at high prices.

For the Farmers' Cabinet.

### Delaware Lands.

TO THE EDITOR.—As immigration to Texas, Oregon, or California, is the order of the day, I desire to show that it would be the interest of good practical farmers, to purchase lands in Newcastle county, Delaware, at \$15 to \$30 per acre, or in the Southern part of Cecil county, Md., at \$10 to \$20 per acre. Any practical farmer with a small capital, can purchase a farm of good natural soil, well wooded, at, say \$20 per acre. Say he purchases 300 acres at \$20; this will be \$6,000, at an interest annually of \$360. Allow 250 acres to be tillable land, divided into five fields,—50 acres to be woodland—one field to be planted in corn, one to be sowed with oats, after corn, and one sowed with wheat on a clover sod; and one field to mow, and one for pasture. Any prudent, industrious working man, can lime and clover this land, and he will receive in two years, or in two crops, on all the fields, as much grain and grass, over and above all which the land would have produced without lime or clover, as will pay for the lime and cost of hauling, spreading and interest. So that any judicious man may find it his interest to purchase these worn-out lands, and he will realize more clear profit than he would if he immigrated to the far West or South.

In this county the water is good, and the citizens are healthy, and large fortunes have been made and are being made, by poor men, who had but little money and but little credit. But by perseverance, they have in many instances purchased farm after farm; made them good; built fine houses and good barns on them, and are worth ten, twenty, forty, sixty, and one hundred thousand dollars. What has been done can be done again; like causes will produce like effects: "The way to wealth is as plain as the road to the corn-field." Land in Newcastle

county and in Cecil county, Md., bought ten years ago at \$10 and \$20 per acre, is now worth \$40 to \$60, and the owner not out of pocket one cent for improvements, beyond the clear income from his improved lands. The crops will double in two years, from the use of forty bushels of lime per acre; in five years they will increase so as to sell for three times the original cost. I know of no part of the United States that offers equal advantages to the poor, industrious, judicious, go-ahead man, whose motto should be "be sure you are right, then go ahead."

The Schuylkill lime is generally used in this region; but lime from Baltimore, and from New York and Delaware, have all been used with uniform success. Shell lime is also equally good on our soil. Plaster should be used on clover, at the rate of one bushel per acre, annually. The clover should be ploughed in for wheat on the poor lands. Wheat should be sowed in all cases by the first week in September.

If some of the farmers of Pennsylvania, New Jersey, New York, or New England, would come and purchase the worn-out lands, and aid us by their talents, industry, and capital, we would have the finest improved counties in the middle States, and it would be much more to their interest than roving over the United States and other countries, for a resting place, and after they get it, are far worse off than those who have come among us; witness the success of Philip Reybold, William J. Hurlock, William Polk, Andrew Eliason, Eldad Lore, James T. Bird, John Jones, Col. Joshua Clayton, John Biggs, George Harbert, John R. Price, John McCracken, John P. Cochrane, and many others, who have made their farms good and acquired handsome profits by small investments; their lands are worth two hundred to four hundred per cent. more than the original cost.

HENRY CAZIER.

Mount Vernon Farm, Del., June 2nd, 1846.

LARD FOR LONDON.—Happening in at Hastings' Lard-oil Factory, we found them putting up lard in hogs' bladders, for an English dealer. This is the fashionable form of the article of the best quality, in that market, where it brings fifteen cents a pound. The cases come from Ohio, are well cleaned, and when filled and cold, appear as white and as hard as an ostrich's egg.—*Springfield Republican.*

THE delicate pink spots on turkeys' eggs will wash off when the egg is fresh and warm.

### Rearing Cattle, with a view to early maturity, as practiced in Berwickshire, England.

By JOHN WILSON, EDINGTON MAINS, BERWICKSHIRE.

THE valley of the Tweed has long been famed for the rearing and fattening of cattle, its rich pastures, warm turnip-soils, and proximity to England, affording peculiar facilities for prosecuting this branch of rural economy. The "Short-horns" were early introduced into it, and soon became its established breed; and though still inferior to the Tyne-side herds in symmetry, colour, and grazing quality, yet nowhere, perhaps, are they brought to market, at two years old, in such perfection of weight and fatness.

The production of beef, at the quickest and cheapest rate, being the object in view, the first requisite is a stock of cows possessing qualities suitable for this purpose. Accordingly, they should be good milkers—able to keep at the rate of two and a half to three calves each—of a kind known to have a tendency to fatten readily, and to come early to maturity, and of a structure likely to produce a vigorous, well-grown steer. In other words, they must be good Short-horns; only having more regard to their milking properties than is usually done by breeders of bulls. And here it may be well to notice, that it is in general highly inexpedient for the beef-grower; the farmer who depends largely on his regular cast of fat cattle—to attempt breeding his own bull. *It is only a few individuals in any district who have the taste and skill requisite for this difficult department of the business, not to mention the large capital which must necessarily be invested in it, the precariousness of the return, the greater liability to casualties of such high-bred animals, and the additional expense of their housing and maintenance.* On Tweed-side, the breeding of bulls is confined to a very limited number of persons, chiefly Northumbrians, who, by devoting their whole attention to this department, are able, from year to year, to furnish a class of bulls which are steadily improving the general breed of the district. The contrary practice is at this moment compromising the character of this valuable breed of cattle in several districts of Scotland, into which they have been more recently introduced. *Made wiser on this point by experience, the farmer of the Border purchases from some breeder of established reputation a good yearling bull, which he uses for two or three seasons, and then replaces by another in like manner.* This bull serves his own cows and those of his hinds, and some

of the neighbouring villagers', and thus, though his own stud be limited to six or eight cows, he can select from the progeny of his own bull as many calves as he requires to make up his lot, and has them more uniform in colour and quality than could otherwise be the case. As the male parent among sheep and cattle is known to exert by far the greatest influence in giving character to the progeny, and increasingly so in proportion to the purity of his breeding, it is evidently much for the advantage of the beef-grower to *spare no reasonable trouble and expense in obtaining a bull of thorough purity, and then to select his calves with the most scrupulous attention.* From overlooking all this, how often may cattle be seen, on the best of land, too, which can only be fattened at an enormous expense of food and time, and after all, are so coarse in quality as to realize an inferior price per stone. Occasionally a few beasts of the right sort will be seen in such lots, which, by going ahead of their fellows, to the extent of £4 or £5 a piece, of actual market value, show what might have been done by greater skill or attention on the part of the owner.

It is very desirable to have all the cows to calve between the 1st of February and the 1st of April. If earlier, they will get almost dry ere the grass comes, and calves later than this will scarcely be fit for sale with the rest of the lot. When a calf is dropped, it is immediately removed from its dam, rubbed dry with a coarse cloth or wisp of straw—this being what the cow would do for it with her tongue, if allowed—and then placed in a crib in the calf-house among dry straw, when it receives a portion of its own mother's first milk, which, being of a purgative quality, is just what is needed by the young animal. For a fortnight, new milk is the only food suitable for it, and of this it should receive a liberal allowance thrice a day; but means should now be used to train it to eat linseed-cake and sliced Swedish turnip; and the readiest way of doing so is, to put a bit of cake into its mouth immediately after getting its milk, as it will then suck greedily at anything it can get hold of. By repeating this a few times, and placing a few pieces in its trough, it will usually take to this food freely, and whenever this is the case, it should have as much as it can eat, that its allowance of milk may be diminished, to meet the necessities of the younger calves which are coming in succession. This is of the greater importance that it is always most desirable to avoid mixing anything with their milk by way of helping the quantity. When a substitute must be resorted to, oatmeal por-

ridge mixed with the new milk, is perhaps the best. Sago of late years has been much used for this purpose; but an eminent English veterinary surgeon has recently expressed a very decided opinion, that its use impairs the digestive powers of the animal and predisposes to disease. The sour smell invariably found in a calf-house, where porridge or jelly of any kind is mixed with the milk, is proof sufficient that indigestion is the consequence. An egg put into each calf's allowance, and mixed with the milk by stirring with the hand, is a good help, and never does harm; but with this exception, it is best to give the milk warm and unadulterated, however small the quantity, and along with this, *dry* farinaceous food, turnips and hay, *ad libitum*. If more liquid is needed, a pail with water may be put within their reach, as this does not produce the bad effects of mixed milk. Indeed, in this it is the best to keep as closely as possible to the natural arrangement according to which the calf takes its suck—at first frequently, and then at longer intervals, as it becomes able to eat of the same food as its dam.

The diet of the cows at this season is a matter of some consequence. Swedish turnips yield the richest milk, but it is too scanty, and calves fed on it are liable to inflammatory attacks. Globe turnips should, therefore, form their principal food during the spring months. Care must also be taken that they do not get too low in condition in the autumn and winter, and for this end it is well to put them dry *at least* three months before calving. Some may think this long; but on a breeding farm, milk is of little value at this season. The cows, when dry, are kept at less expense, and by this period of rest, their constitution is invigorated, greater justice done to the fetus, now rapidly advancing to maturity, and so much more milk obtained after calving, when it is really valuable.

When the calves are from four to six weeks old, they are removed from their separate cribs to a house where several can be accommodated together, and have room to frisk about. So soon as the feeding-yards are cleared of the fat cattle, the calves are put into the most sheltered one, where they have still more room, and are gradually prepared for being turned to grass; and when this is done, they are still brought in at night for some time. At six weeks old, the mid-day allowance of milk is discontinued, and at about fourteen weeks they are weaned altogether. When this is done, their allowance of linseed-cake is increased; and as they have been trained to its use, they rarely

dily eat enough to improve in condition at this crisis, instead of having their growth checked, and acquiring the large belly and unthrifty appearance which used to be considered an unavoidable consequence of weaning. The cake is continued until they have so evidently taken with the grass as to be able to dispense with it. They are not allowed to lie out very late in autumn, but as the nights begin to lengthen and get chilly, are brought in during the night, and receive a foddering of tares or clover foggage. When put on turnips, the daily allowance of cake, (say 1 lb. each) is resumed, and continued steadily through the winter and spring, until they are again turned to grass. This not merely promotes their growth and feeding, but—so far as the experience of five or six years can determine the point—seems a specific against black-leg, which was often so fatal as altogether to deter many farmers from breeding. It may be well to state here distinctly, the particular purpose for which cake is given at the different stages of their growth. At first the object is to accustom them to a wholesome and nutritious diet, which will supplement the milk obtained from any given number of cows, so as to admit of a greater number of calves being reared, and at the same time have greater justice done them than could otherwise be practicable. At weaning time, again, it is given to help the young animal over the transition from milk to grass alone, without check to growth or loss of condition. During the following winter, however, the special object of its use is to prevent black-leg, as, but for this, turnips *ad libitum* would be sufficient.

When put to grass as year-olds, they decidedly thrive better on sown grass of the first year than on old pasture, differing in this respect from cattle whose growth is matured. They are laid on turnips again as early in the autumn as these are ready; and it is a good practice to sow a few acres of globes to be ready for this express purpose. It does well to give the turnips upon the grass for ten or fourteen days before putting them finally into the feeding-yards; and then, if they can be kept dry and warm, and receive daily as many good turnips as they can possibly eat—globe till Christmas, and Swedish afterward,—they will grow at a rate which will afford their owner daily pleasure in watching their progress, and reach a weight by the 1st of May, which, if markets are favourable, will reward him well for all his pains.

The leading features of this system are, *uniform good keeping* and *progressive improvement*; in other words, to get them fat

as soon after birth as possible, and keep them so till they reach maturity. The details given above are descriptive of the expedients generally adopted by the breeders of this district for securing these objects.—*Jour. of High. & Ag. Soc. of Scotland.*

Communicated for the Farmers' Cabinet.

#### Cape May Agricultural Society.

A meeting of the citizens of Cape May, N. J., was held at the Court-house on the 25th of Third mo. last, and organized the "Cape May County Agricultural Society." A Constitution was adopted, and Samuel Springer was elected President; Downs Edmunds, Jr., Joshua Swain, Jr., Franklin Hand, and John Stites, Vice-presidents; Richard C. Holmes, Rec. Sec.; John H. F. Stites, Cor. Sec.; and Richard Thompson, Treasurer.

Moses Williamson delivered an appropriate and good Address, from which we make the following extracts.—Ed.

It may be thought by some, useless to form an Agricultural Society in this place; that the mode of farming has been established long since, and any variation from the old habits and practices, is out of the question. They used to plough two or three inches deep when they broke up their fields, foddered their cattle in the main road, kept forty half starved cattle, instead of twenty that might have been wintered tolerably, would sell their grain, and lose two or three cows and half a dozen yearlings, for want of food and attention; buy land enough for three farms, and have nothing left to lay out in improvements, till fifty acres of land, and get from three to five hundred bushels of corn, while a better crop could be got from ten acres of good land properly cultivated. We are glad, however, to say that there have been great improvements made within a few years past in this respect. But where improvements have been made, they have not, by any means, been pushed to their utmost limit. Another objection to such a society, and which is of a piece with the preceding, is that many suppose they can be taught nothing new on the subject—that it is lost time and waste of money to gain information, or to make experiments on farming. Another objection to doing anything in improving our lands is, our soil is light, barren, and near the sea-shore, and there is nothing within our reach that will make any improvement on them and pay expenses. In answer to this I would say, that the improvements already made are sufficient to show, that much may be done to raise the land to quite a high state of cultivation, and that, too, by the ordinary means which might have been enjoyed by the farm-

er from time immemorial—his barn-yard, ashes, oyster-shells, king-crabs, and seaweed. These have been used in various instances with ample success. If our soil is light, it is capable of great improvement. We know that on the same piece of ground that will yield twenty bushels of corn per acre, forty bushels may be produced, and a much better article. It is by manuring and properly cultivating the land, this excess is secured. Since discoveries have been made in the preparation of manures, by composting, every facility is afforded for furnishing any quantity of excellent manures. The statements which have been given to the public, and which may be relied on, show that these manures may be procured at a very reasonable expense. It is now generally acknowledged, that science is likely to lend important aid in this branch of the agricultural art,—that chemical experiments will make vast improvements, by bringing to the light what had been concealed from the farmer for ages. He may now go scientifically to work, bring to bear on his land the peculiar elements which will call out the latent energies of the soil, or supply the deficiency, as the case may be, and thus be able to prepare a manure suited to any soil he may possess. Seeing, too, every year new discoveries are made, so beneficial to the farmer, there is everything to hope, and nothing to discourage him in the diligent pursuit of his business. I am persuaded that we have only made a beginning in furnishing means to enrich our lands, in kind or in quantity, that may yet be found in the ingredients which our own county may supply, and which, by the proper application of chemical agents, will prepare these ingredients to do for our poor lands more than we could ask, nay, make it almost as productive as the prairies of the West, and on account of its locality, far more valuable.

The practice of sending to Philadelphia to purchase some good, bad, or indifferent animal for a good serviceable horse, does not exactly suit on a farm—however well it may suit a horse-jockey—and with a little care and expense they might be brought up on our own soil, where their qualities would be known; and then such as were most suitable for this region of country could be raised, and such as combined strength and fleetness, fit either for the light carriage or working team. Whatever may be said in favour of the ox-team, it moves too slow for the industrious, driving farmer. But before much can be calculated on in this line, we must raise fresh grass in greater abundance than at present.

The same is true in regard to cattle. We

will never do anything worth while in the milk business until our calves are brought up on fresh grass, instead of *three-square*, and cows be wintered on fresh hay and roots. Although there are many excellent varieties of cattle, yet how little pains is taken to secure the best. It would cost no more to keep a cow that gave a large quantity of milk, than one that gave but little, and which, too, would make better beef. It has been truly said, by an eminent agriculturist, "How many stunted milch cows do we see which may be said to go dry all the year round. How many steers, which, after emptying a whole corn-crib, at last in the spring look like the corn-crib itself, all ribs without, and all hollow inside."

As to swine, we would only say, that there seems but little attention paid to them, beyond provision for family use, being something over 2,000 only raised in the whole county in the year 1840. There is quite a market for hams in the county, which might be supplied at home instead of abroad.

In regard to *sheep*, little attention is paid to these—any kind will answer—any care sufficient, and if they can be found in shearing time, with a few lambs, to make up for the loss of old ones, all is right. And yet how many more might be raised, better in quality and yield, in respect to wool and flesh, if proper attention were paid to them.

I would make a remark respecting the implements of husbandry. These also are improving every year, rendering the business of farming to be better done at a cheaper rate. There is already to be found every utensil that can be serviceable to the present degree of farming knowledge. But how often is some important thing neglected, because some proper implement is not at hand; and how often is a thing badly done for the same reason. Many a useful experiment would be made by the farmer, were he only provided with the proper instruments to do it. One would try deep ploughing if he had a subsoil plough; another would put in his crop in the best manner, if he had a good plough, instead of so rooting it up that you can scarcely tell which way the furrows run, or whether it had not been the regular work of a herd of swine.

I have hinted before that farming too much land is a common fault in our county,—and it is so almost everywhere. We proportion the manure to the size of the field. It is thinly scattered over twenty acres, when it should be put on ten. It then disappears with the first crop, and must be manured again when another planting is made. Being thus exhausted, there is no chance for grass seed to take root, if grass is thought of; for

there are many who have extensive farms, and who have farmed for thirty or forty years, yet never dream of laying out a penny to get their fields into grass. But without sowing grass seed on our fields no permanent improvement can be made. If this were properly attended to, there would be little doubt as to the final success of agriculture in our county. When we can see the green clover and timothy and orchard grass succeeding our wheat, rye, and oat crop, instead of a crop of sickly weeds and wild grass, or the bare sand itself, then we may expect a new era in farming to be at hand in this part of the country.

It is said we have no market that is convenient enough to encourage the business to any extent. We would say, that there are many articles which are brought from abroad which might as well be furnished at home; and when we have supplied our own market, will it be impossible to find the way to Philadelphia or New York markets? The improvements in roads and steam navigation will most likely keep pace with the improvement in agriculture. The day cannot be far distant, when it will be a common business to transfer the produce of Cape May to Philadelphia; and when it will be no more a matter of surprise to see a Cape May man at market, than to see a man there who has come twelve miles in his own wagon.

I would now refer to some things which might do much towards the advancement of the agricultural interests among us. The first thing that suggests itself to my mind is, that legislation should do something in this matter more than it has done; that some more inducements should be held out to the farmer by way of premium or protection. That such an important art should have so little done in its behalf by so many of the State legislatures, seems surprising. We would expect the annual bleeding which it gives the farmer, by way of taxation, which he submits to most patiently and honourably, pays for the privilege of keeping horses, cows and wagons, and for his land that he keeps them on, when neither land nor horses nor cattle have blood enough to keep circulation going. We have our school fund, and acts are passed relating to the manufacturing interests, but the farmer may go on and do the best he can, without any special encouragement from that government of which he is the staunch supporter. Thousands of dollars have been expended on public schools, so called. I am not unfavourable to learning, and having it as thorough and universal as possible. But why not encourage a business so important to the community as agriculture? But what receives so little coun-

tenance from legislation by way of encouragement? How many resort to some mechanical business, or other mode of living, because husbandry is attended with so few inducements to pursue it; and how many, almost useless in the world, might be induced to settle in the country and improve the soil; and how many families, entirely destitute, would by this means find enough to live on and to spare?

There is one thing that will always make some people shy of farming, and that is, it is a little too hard work, and it is almost too honest a way of getting a living for others, and for some few it is not high enough business. And on the other hand, the moral tendency, should the business become more general than it is, will counterbalance the evils that might be apprehended. The effects of industry upon the human mind are incalculable. Where can the youth, up till fourteen years of age, the usual period when they go to an apprenticeship, be so profitably employed, so healthful to his body, so advantageous to his morals, as on a farm? Let us have good farms, good grain of all kinds, good horses, cattle, sheep and swine, and the more of them the better. What may, in some measure, compensate for the neglect of legislation in this matter, are the liberal premiums which Agricultural Societies usually offer for improvements in the various branches of agriculture, with a view to excite to honourable distinction. Although the reward be more meritorious than profitable, such competition would lead to the most favourable results; and such has been the effect where this practice has been adopted. And why would not legislative encouragement lead to the same important result? Had legislation offered a donation to every County Agricultural Society in the State years ago, we should not now be meeting for the first time, nor you hearing the first Address on the subject in this county. We should have been some few steps in advance of where we are now in the business of farming. The annual exhibitions of the improvements made, would have given an impulse that would by this time have doubled our present productions.

Another thing indispensable to success is, that farmers must secure all the information on the subject of agriculture within reach. There is an intelligence which should be characteristic of the farmer. The various books written, and the numerous journals published monthly and weekly, will afford much important aid. As well might a man

undertake to be a politician, without informing himself of the various movements going on in the political world, as for a farmer to neglect what is the opinion and practice of other men in regard to the department of agriculture. Meetings, also, may be held, in which matters interesting to the farmer may be discussed—committees appointed on the various branches of husbandry, who shall report their investigations. By this means the best and earliest information would be secured; and this much, a Society, carried out in all its operations, would accomplish. A man would then understand why he does so and so, and be able to give a good and philosophical reason, instead of saying that his father did, or did not so. He will find the use of science in his profession as much as in any other.

He who makes himself master of his own profession, is not the man to neglect other branches of learning; nay, this extensive research in his particular calling carries him often within the sphere of other arts and sciences. So that, instead of merely understanding what pertains or is considered to pertain to his art, he is furnished with a large fund of general knowledge. It is a new thing to introduce into the system of school instruction, the subject of agriculture. But why should it not be deemed as important to give instruction on this branch of business, as it is to give lectures on medicine to the young man preparing for the duties of a physician? The business of the farmer includes not only the skill and labour in managing the implements of husbandry, so as to secure the greatest amount of produce; he is not to be regarded as a mere drudge, and contributing his quota in the same manner as his horse, in bringing forward the productions of the earth. But he can improve his mind in knowledge—exercise his judgment—display his taste in the various branches of his agricultural operations. He is entitled to the comforts and conveniences of life as much as any other man; and he has a good opportunity of manifesting his taste in regard to his dwelling, barn, sheds, fields, &c. His dwelling, in its plain, simple appearance, indicating convenience rather than show, amply surrounded with trees selected from the forest and the nursery, a protection alike from the storm and the hot rays of a summer sun, will bespeak a word of commendation from the passer by, and be indicative of the peace and comfort enjoyed within. His barns and sheds are constructed with a view to convenience and comfort, his fields are properly arranged and securely enclosed.

But that the farmer may himself enjoy the

\* No State Geologist has explored the county of Cape May.

better the fruits which the soil is capable of yielding, the kitchen-garden comes in for a good share of attention, and he feels his independence as much as at any other time, when the good housewife has spread upon his table the choicest vegetables, in every variety, which have been furnished from his own garden. I need not speak of the profit of a good garden, especially to a farmer, either for his own consumption or for the market. But his garden should be one—not a thing with that name, without sufficient enclosure to protect it against depredators of every description, and without a soil fertile enough to produce the best vegetables in great abundance.

The farmer has much to encourage him in his laudable business, so necessary to human existence and rational enjoyment,—one which man in his innocence followed,—one the most healthful which a man can pursue. A business, too, we might venture to say, as fruitful in suggesting to the mind of man the power, the wisdom, and the goodness of the Creator, as any other. He sees the wonderful skill of the Deity in adapting the soil to the production of plants. He sees every day the goodness of his Heavenly Father, in furnishing for man and beast their necessary food. Such manifestations of design cannot be lost upon the observing farmer. He lives amid the works of the Almighty, and the laws of nature which he established when he made the heavens and the earth. Then he marked out the laws which regulate the raising of plants; the seed time and harvest as then, so are they now.

These extracts contain many *home* and substantial truths, and we trust they will not be lost on our friends of Cape May, or indeed we might add, on our friends generally. Very frequently it happens that a remark may not exactly apply to ourselves, yet if we make the most of it, a hint, a suggestion may be derived from it of great practical usefulness.—Ed.

### Improvements in Irish Agriculture.

By HENRY S. RANDALL.

A GREAT improvement is taking place in the agriculture of some districts in the north of Ireland, by a system of means novel, and not without interest to American farmers. The incentive or impulse to these changes is given by the proprietors to the tillers of the soil, partially by a judicious distribution of bounties, calculated—and this is most wisely done—as much to appeal to the pride—the *esprit du corps*—as to the pocket of the recipient: and the spirit thus awakened is furthered and sustained as well as guided in proper channels, by the employment of

agriculturists of science and experience to counsel and encourage the tenants, to see that each is properly noticed and rewarded for his improvements,—in short, to exercise all the supervision which the tenants will *voluntarily* submit to. This is far preferable to *cocrcion* through leasehold stipulations.

Foremost among the landlords who thus wisely study their own and their tenants' interests, is the Earl of Gosford, whose large estates lie in the county of Armagh. And how favourably does this nobleman's conduct, in this particular, contrast with that of the scores of titled *absentees*, who treat the land that bore them as a conquered province, to be drained of its entire income to support the dissipations of the English and continental capitals and watering places!

Among the scientific agriculturists, who, as the employees of the landholders, have done most to improve the husbandry of the north of Ireland, first, probably, stands William Blaker, Esq., the "agriculturist" of the Gosford and some other estates. This gentleman, without claiming to have been the originator of each detail of the system of husbandry advocated by him, probably deserves the credit of uniting the several parts—practices drawn from various local systems—into one homogeneous whole, adapted to the exigencies of the section of country which his labours are designed to benefit. And here let it be remarked, in passing, that the skill of the *adapter* is scarcely second to that of the discoverer or inventor. The same system, it is but a truism to say, will not work equally well under all circumstances. Skilfully to seize upon and connect, from the great store-house of mind, or of physics, the precise materials adapted to *our own wants*, is the wisdom of the wise man—the talent of the able one.

An occasional correspondence with Mr. Blaker for several years, has kept me in some measure advised of the results of his labours. These are shown in the proceedings of the annual Market Hill agricultural meeting. But before proceeding to discuss the relative merits of the *new* and *old* husbandry, let us glance at the organization of this Agricultural Association, and some of its methods of doing business. Hints, not without value to *us*, may, peradventure, be gleaned from them.

I presume from all that has met my eye, that there is no initiation fee to the association—its limits being entirely territorial ones—the Earl of Gosford and another landholder, a brother of Mr. Blaker's, paying all the premiums. These are mainly of a character which makes the bounty to a great

extent an honorary one, such as splendid clocks, silver cups, &c. It would be the easiest thing in the world to *cant* a little on this subject by saying that *money* would be more useful to the tenant. The greatest *permanent* benefit the tenants derive from the system of rewards, would be to make them good farmers. This would not only relieve the presents wants, but, with the ordinary blessings of Providence, would guard against the future. If a showy testimonial of his victory, like an elegant clock, or a piece of plate, will influence him more than money to such a result, then it is unquestionably better to offer him the former. That the devisers of the scheme understood well whom they had to deal with, the result shows. I certainly have never read of keener contests for agricultural superiority than those of the tenants forming this association, nor, I will add, those that interested me more. And there is another feature in this system which *appears* to work well, and which would be incompatible with money premiums. It is this. The ownership of these clocks, etc., is not secured by one victory. *Three* are necessary to that end. The design of this, and it seems to produce that effect, is to lead to *sustained* exertions. Premiums, as commonly paid, often go to reward a more desultory effort, or "good luck." It is amusing to learn in the reports of the committees at the Market Hill meeting, and in the published remarks of Mr. Blaker, the strong exertions of the victors of last year to maintain their superiority this. After the last whirlwind charge of the French at Waterloo—an empire staked on the "issue of a die," and *lost*—Bonaparte left not the disastrous field a more thoroughly *defeated* man, in his own estimation, than some of the losers of these clocks and cups! One brave fellow had done his utmost—but

a trivial error in a nice point had robbed him of victory. I can fancy his look of pride humbled, of disappointment acutely felt but manfully borne! This was too much! Lord Gosford, immediately declared he should retain his clock—and to the victor he awarded a still more expensive one! Before dismissing this part of the subject, it may be well enough to remark, however, that *all* the bounties or premiums are not paid in this way. Seeds, guano, etc., for the use of the land, are from time to time distributed to reward improvements.\*

I have hitherto omitted to state the particular objects for which these premiums are paid. They are paid invariably, I believe, for the best managed farm, including all their crops, their proper rotation, their adaptation to the greatest amount or maximum of production, without unnecessary or improper exhaustion of the soil,—stocks of all kinds,—management of manures,—permanent improvements, such as draining, fences, buildings, &c.—in a word, the greatest improvement to the farm and the greatest profit to the tenant. This is no doubt better both for landlord and tenant, in the circumstances in which these parties are placed towards each other, in Ireland, than to pay bounties on separate animals and crops.

The size of the farms of the great body of the Irish tenants, would strike an American farmer with surprise. Perhaps the average would not exceed ten English acres. But do these men, if they have families, get a comfortable living on these mere "patches" of land? If we may trust the assertions of Mr. Blaker, they do,—although the land is in many cases of a very inferior quality, until improved by the tenant.

The following table will give an idea of what the land supports:

*Stock on ten farms, containing 98 acres, 3 roods, 20 perches, on Lord Gosford's estate.*

No.	Contents of Farm.			No. of persons on each Farm.	Stock on Farms					Rent of Farm.			
					Horses.	Cows.	Heifers.	Sheep.	Pigs.				
					£.	s.	d.						
1	9	0	33	7		4					11	1	8
2	8	2	20	7			1				10	7	0
3	8	3	9	7							11	9	1
4	9	1	32	6							11	13	10
5	8	2	10	5		4					17	3	0
6	9	2	0	4	1	4	1	2			11	5	9
7	10	2	14	4	1	3					11	18	6
8	10	3	17	6	1	2					12	7	2
9	10	3	30	8	1	3					12	0	6
10	12	1	15	6	1	4					12	0	8
Total,	98	3	20	60	4	32	2	2	26		121	12	2

\* Large quantities of the seeds of such crops as it is considered important to introduce and extend, are also lent out to the tenants. On the Gosford and Drumbanagher estates, says Mr. Blaker, 42 bushels of turnip seed, 9 tons of clover seed, 138 bushels of vetches, and 512 bushels of grass seed, were thus lent to the smaller tenants during the past season.

One-half of the above land is under flax or grain crops.

Would a single farmer with his family, in our own country, make a living off the whole 98 acres, after paying a rent of £121 12s 2d—\$583 90? Unquestionably not, under anything like ordinary circumstances. Neither could an equal amount of stock be kept on anything like the same amount of even our best lands. It will be observed that one-half of the 98 acres is under crops, very little of which reaches the stock, besides the straw. Should we let the keep of the horses, heifers, sheep, pigs, and two of the cows offset against the straw, then we should have 30 cows kept on 49 acres of land,—a cow to an acre and a fraction less than two-thirds of an acre!

Whence this difference in the acreable products of the United States and Ireland? Is it in the quality of the soil? The better class of New York lands are decidedly superior to the 98 acres above particularized, if we may credit Mr. Blaker,—that is, before the latter were recently made over, so to speak, by the present system of culture. How then *sixty* human beings can obtain subsistence, where in this country a single family could not—over and above rent—is indeed surprising. True, things which the American farmer would consider *necessaries*—things of course—would be unapproachable luxuries to the small Irish tenant, even under the ameliorating influences of a Gosford and a Blaker.\* An American farmer can eat of meat, wheaten bread, milk and butter, and as many varieties of vegetables as he chooses, three times a day, and have a “chicken in his pot” not only “on Sunday,” but on any other day in the week! More than this. He can send his children to school five or six months in the year, until they are 16 or 17 years old, and can, and often does, educate them to the learned professions. Great as the difference is, however, between the expenditures—the “outgoes”—of the American and Irish farmer,

\* Justice all round requires that I should copy the following statement of Mr. Blaker, in relation to the holders of the ten farms given in the table. He says: “the stock that these small farmers are possessed of shows that they are by no means in penury. I have chosen those who are living along the road side, and if any one has the curiosity to visit them to-morrow, I shall have a jaunting car ready at Mr. Ringland’s, at Gosford gate, to take them to their houses. No one, I expect, will conceive he is to meet with any great appearance of wealth—it is up-hill work to amass riches from a few acres of land, paying a fair rent, and rearing a young family—but I believe every one of them will be found in a thriving condition.”

it by no means explains the monstrous discrepancy between a given amount of land supporting sixty persons or only six. Nor do the highest market prices at which products are sold in Ireland, explain it. Saying nothing about the *people*, the amount of *stock* kept on the land shows conclusively, as I have before stated, that such farmers as those whose farms and stock are enumerated in the foregoing table, actually obtain a much larger product per acre, than the proprietors of the best American lands. The question again arises, whence is it? This is best answered by considering the system of husbandry under which they obtain these results, the *new* system, as it is called, introduced by Mr. Blaker.

Mr. B. found these small farms imperfectly drained, notwithstanding they were cut up into various small plats or fields by numerous ditches. Mr. B. introduced furrow-draining, and urged the levelling of all the surface ditches. This resulted in a considerable saving of the land,—and the whole farm, with the exception of the enclosure about the barns, &c., is thrown into one field. The crops are then put in in “strips” across the entire farm. This of course is followed by the practice of soiling the whole stock. Mr. B. contends that two cows can be thus summered from the same land one would require if pastured. He also recommends a larger proportion of roots and other crops to be fed green, than we know anything about in this country. This is necessary where the soiling system is pursued, and it leads to an indefinite increase of manures. These manures, increased by composts, and protected from the weather, are sufficient in many instances to give a dressing to one-third of the whole farm!

Such is a bare outline of the system. How much of it would be applicable here, the good sense of each one must determine. That it has wrought a great and ameliorating change in a portion of Ireland, under the auspices of Lord Gosford and Mr. Blaker, there can be no doubt. It is rapidly extending in that country. Agriculturists—some of them tenants—tutored under the eye of Mr. Blaker, are constantly going out to take charge of other estates, thus spreading the system far and wide. Success to them! Success to the pioneers in this philanthropic work! Across the wide Atlantic, we tender them the meed of American sympathy, and American praise.—*Journal of Agriculture and Science.*

SALT, or brine, is good for the *Plum Tree*, *Asparagus*, and *Onions*.

### A New Flower Garden in Paris.

A LATE letter from Paris, contributed to the columns of an exchange journal, has the following information:

"The fashionables of Paris have been thrown into an ecstasy delight by the opening of a flower garden on a new plan, in the *Champs Elysees*. It is called *Le Jardin D' Hiver*, the Winter Garden, and is a veritable floral palace. A perpetual summer reigns under its vast glass roof, with an atmosphere as fragrant as the spicy vales of the Indies. Here are found the treasures of all seasons and all climates; the most modest and most superb plants, flowers of the mountains, and flowers of the valley. Beautiful promenades are laid out, bordered with trees and fringed with evergreens. After threading the pretty labyrinths of the garden, you enter the saloon, carpeted with green and furnished with ottomans, where the flowers are arranged with such exquisite elegance and art, as only the hands of a Parisian can arrange these delicate creations. The court in front of the garden is always filled with the carriages of those rich votaries of pleasure, who come here to select from two hundred thousand plants, the most beautiful flowers with which to decorate their persons for the ball or the opera, and as a matter of course, drawing all the dandies and idle fashionables of the capital to this enchanting retreat, so that the proprietor is likely to reap a golden harvest from his happy thought of a Winter Flower Garden."—*Repository*.

### Tabular Estimate of Crops for 1845.

WE again have the pleasure of acknowledging the reception of a large volume of upwards of 1300 pages, from Edmund Burke, the Commissioner of Patents, containing his Annual Report to Congress, for the year 1845.

The Patent office is now regarded as the general head and representative of the useful arts and industrial interests of the country, and this volume necessarily embraces a great amount of information on these matters. The industry and enterprise and good judgment of the present Commissioner, as well as of his predecessor, have swept over a large field, and gathered within the compass of a Report, a vast number of facts and statements, both valuable and interesting.

Twelve hundred and forty six patents were applied for during the past year, about 200 more than for 1844. The receipts of the office were nearly \$43,000, while its expenses were such as to leave a balance of more than \$11,000 in its favor.

In the 9th No. of our last volume, tabular estimates were given of the crops of the different states, for the

year 1844. Similar tables taken from the Report, are appended, showing the results of cultivation, &c. for 1845. While the population of our country is steadily on the increase, and the general prosperity is steadily augmented, we find apparent, a variation from year to year, in the amount of agricultural productions, though we must not forget to bear in mind that the numbers given, are all of them, but approximations to the truth. Thus the crop of corn is stated to have been in 1845, four millions of bushels less than in 1844, and nearly eighty millions less than in 1843. The crop of wheat however was by several millions of bushels, heavier than in either of those years, while that of hay was very considerably lighter. The production of silk, appears to be gradually on the increase. Tennessee, Ohio and Kentucky were last year the three greatest corn growers, while New York, Ohio and Pennsylvania grew the most wheat. Louisiana makes more than three times as much sugar, as all the rest of the states together, and New York and Vermont are the next heaviest producers of this article. South Carolina excels in her rice, while Georgia is only inferior to Mississippi in the making of cotton. New York is far the largest producer of potatoes and hay, but Kentucky greatly exceeds all in the growth of tobacco. Thus with our varied climate from Maine to Florida, and from this city to the rocky mountains. Providence has given us every facility for the growth and production of every necessary of life, and of every luxury that can at all minister to our comfort. We dwell truly in a south land. While the soil and climate of one district may direct the agriculturist to some particular objects, those of other districts, favor the cultivation of what is not less essential to the general convenience, though of a very different character. It is our privilege too, not to live beneath a sky so genial, as to supercede the necessity of labor; nature, here, though disposed to yield to cultivation every thing that can be desired, is nevertheless of so rugged a temperament, that she will only throw forth of her abundance to the strong arm of industry and toil. And what a blessing is this! Let us ever remember that no idle population can be prosperous and happy. Who shall limit our resources? or where is the political economist who will calculate the millions and millions which our population may reach, and say that it can go no further? As our country is almost without boundary, so is our ability to produce food for the consumption of man, without limit. And should happily our own follies not thrust away the measure of greatness and increase, which the heart is sometimes made to thrill with the prospect of, he who lives an hundred years hence, may see a Commonwealth, containing within itself, all the elements of a greatness and a strength, both moral and physical, a parallel with which, history has never yet been able to record. Every thing among us of a secular nature, seems aiming at *progress*. Every succeeding year multiplies facilities of every character, and agricultural improvements, we trust, will not be in the rear. If we would not impede this progress, but lay deeply and securely, a foundation for continued national prosperity, let each one practically illustrate the laws of morality—of right—in all the relations of life, as well social and political, as private.—*Ed.*

TABULAR ESTIMATE OF THE CROPS FOR 1845.

State or Territory.	Population in 1840.	Present estimated population.	Wheat.	Barley.	Oats.	Rye.	Buckwheat.	Indian corn.
			Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Maine	501,973	575,500	502,000	273,000	1,564,000	185,000	69,000	1,912,000
New Hampshire	294,374	291,500	647,000	123,000	1,942,000	425,000	154,000	1,828,000
Massachusetts	737,699	817,000	241,000	162,000	1,856,000	594,000	126,000	3,098,000
Rhode Island	108,830	120,000	5,000	51,000	200,000	47,000	4,000	731,000
Connecticut	309,978	320,000	114,000	26,000	1,646,000	1,010,000	444,000	2,649,000
Vermont	291,948	298,000	854,000	51,000	3,593,000	321,000	300,000	1,728,000
New York	2,428,921	2,626,000	16,200,000	3,574,000	23,700,000	3,560,000	3,347,000	13,250,000
New Jersey	373,306	409,000	1,050,000	8,500	4,912,000	2,954,000	900,000	7,314,000
Pennsylvania	1,724,033	1,960,000	12,580,000	141,000	19,826,000	11,929,000	3,322,000	17,126,000
Delaware	78,055	79,000	440,000	4,500	828,000	53,000	13,000	2,713,000
Maryland	470,019	485,500	4,884,000	2,700	1,691,000	944,000	109,000	3,723,000
Virginia	1,239,797	1,255,000	11,885,000	84,600	8,888,000	1,441,000	—	27,272,000
North Carolina	753,419	760,000	1,969,000	3,600	2,673,000	217,000	—	14,887,000
South Carolina	594,398	600,000	1,168,000	3,600	700,000	48,000	—	8,184,000
Georgia	691,392	784,000	1,571,000	11,800	833,000	64,000	—	13,320,000
Alabama	590,756	660,000	980,000	7,200	1,527,000	76,000	—	16,650,000
Mississippi	375,651	586,000	378,000	1,800	1,189,000	21,000	—	2,167,000
Louisiana	352,411	440,000	—	—	—	2,000	—	8,360,000
Tennessee	829,210	910,000	8,340,000	5,500	8,625,000	384,000	26,000	70,265,000
Kentucky	779,828	835,000	4,769,000	15,400	13,091,000	2,548,000	14,000	54,625,000
Ohio	1,519,467	1,760,000	13,572,000	219,600	24,447,000	798,000	950,000	57,600,000
Indiana	685,866	860,000	7,044,000	35,200	13,902,000	221,000	73,000	30,625,000
Illinois	476,183	722,000	4,563,000	101,200	12,957,000	143,000	99,000	25,584,000
Missouri	383,102	540,000	1,525,000	11,000	5,466,000	81,000	19,000	15,625,000
Arkansas	97,574	140,000	2,427,000	900	436,000	12,000	—	8,250,000
Michigan	212,267	320,000	7,061,000	197,200	4,815,000	77,000	260,000	4,945,000
Florida	54,477	80,000	—	—	8,000	—	—	733,000
Wisconsin Territory	30,945	100,000	971,000	20,000	1,200,000	5,000	25,000	672,000
Iowa Territory	43,112	115,000	793,000	25,000	681,000	8,000	14,000	2,028,000
District of Columbia	43,712	54,000	15,000	—	12,000	7,000	—	35,000
Texas	—	100,000	—	—	—	—	—	—
	17,069,453	19,602,500	106,548,000	5,160,600	163,208,000	27,175,000	10,268,000	417,899,000

## TABULAR ESTIMATE OF THE CROPS FOR 1845—CONTINUED.

State or Territory.	Potatoes.	Hay.	Flax and Hemp.	Tobacco.	Cotton.	Rice.	Silk Cocoons.	Sugar.
	Bushels.	Tons.	Tons.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.
Maine - - - - -	8,613,000	1,877,000	—	—	—	—	944	300,000
New Hampshire - - -	3,714,000	526,000	—	—	—	—	1,210	2,200,000
Massachusetts - - -	3,038,000	530,000	—	123,000	—	—	47,110	500,000
Rhode Island - - -	650,000	46,000	—	—	—	—	1,250	—
Connecticut - - - -	1,694,000	458,000	—	794,000	—	—	220,000	50,000
Vermont - - - - -	1,139,000	1,139,000	—	—	—	—	13,740	10,000,000
New York - - - - -	21,986,000	3,703,000	—	—	—	—	7,850	14,500,000
New Jersey - - - -	1,757,000	282,000	—	—	—	—	6,240	—
Pennsylvania - - -	5,497,000	1,527,000	—	535,000	—	—	41,370	1,600,000
Delaware - - - - -	155,000	19,000	—	—	—	—	5,500	—
Maryland - - - - -	705,000	56,000	—	17,920,000	6,000	—	10,240	—
Virginia - - - - -	1,899,000	296,000	—	30,218,000	2,412,000	2,500	9,260	1,700,000
North Carolina - -	2,711,000	67,000	—	10,373,000	40,000,000	3,000,000	8,850	9,000
South Carolina - -	2,520,000	16,000	—	40,000	45,000,000	66,500,000	7,620	30,000
Georgia - - - - -	1,536,000	13,000	—	195,000	205,000,000	14,500,000	8,430	350,000
Alabama - - - - -	1,635,000	15,000	—	341,000	145,000,000	280,000	7,890	12,000
Mississippi - - - -	3,040,000	1,000	—	193,000	235,000,000	975,000	300	—
Louisiana - - - - -	1,299,000	26,000	—	—	185,000,000	3,800,000	1,570	175,000,000
Tennessee - - - - -	2,256,000	42,000	1,500	87,109,000	48,000,000	9,000	30,110	520,000
Kentucky - - - - -	1,508,000	123,000	22,500	63,310,000	1,200,000	17,000	6,970	2,100,000
Ohio - - - - -	4,120,000	1,251,000	500	7,576,000	—	—	39,370	3,900,000
Indiana - - - - -	2,680,000	1,351,000	500	3,520,000	—	—	1,150	8,000,000
Illinois - - - - -	2,631,000	297,000	500	1,168,000	270,000	—	4,680	600,000
Missouri - - - - -	875,000	77,000	12,500	13,744,000	200,000	—	290	450,000
Arkansas - - - - -	642,000	1,000	—	—	17,000,000	6,500	300	5,000
Michigan - - - - -	4,555,000	214,000	—	—	—	—	1,900	3,000,000
Florida - - - - -	255,000	1,000	—	260,000	—	—	590	750,000
Wisconsin Territory -	938,000	84,000	—	—	12,000,000	675,000	40	300,000
Iowa Territory - - -	516,000	26,000	—	—	—	—	—	150,000
District of Columbia -	41,000	1,000	—	—	—	—	1,500	—
	88,392,000	14,065,000	37,500	187,422,000	936,088,000	89,765,000	486,530	226,026,000

From the Massachusetts Ploughman.

## Preserving Currants.

MR. EDITOR,—In the article on "Gooseberries," published in the Ploughman of the 2nd inst., I notice the following direction for preserving the fruit green,—“The unripe berries may be preserved in a fresh state through the winter, in bottles filled up with cold or boiling water, corked and sealed tight, and placed in a cool cellar,—and some say, buried with the cork downwards.”

This may be true, still I should doubt the propriety of “filling up the bottles with cold or boiling water.”

For the last ten or twelve years I have been in the habit of preserving *green currants* in considerable quantities, for domestic use, and find them not only a luxury, but a great convenience. My mode of preserving them is simply this. I gather the currants while green, or before they turn red, put them into *dry glass* bottles, cork and seal them tight; then place them in the cellar, in such a position as is most convenient. In this manner green currants have been preserved in my cellar for years. I have also preserved gooseberries in the same manner, and with equal success. I have green currant pies on my table at all seasons of the year, when other *green* fruit cannot be readily obtained. And if you, or any of your friends, will call at my house, I shall be happy to wait upon and furnish you with green currant pies at *any* season of the year.

M. S. WILSON.

Berkshire Coffee House, Lenox,  
May 4th, 1846.

NEW FACTS RELATIVE TO THE POTATOE DISEASE.—We are informed by Mr. T. C. Peters, of Darien, that he has lost by rot something like 1000 bushels of potatoes this season, and has observed the important fact that a field of potatoes, whose stems and leaves were evidently affected with the blight, had its tubers *preserved* from all injury by the action of a frost that killed the potatoe tops dead. This crop grew on a low piece of ground, and subject to frost. Another field hard by, similarly affected, escaped the frost, and most of the potatoes rotted in the hill. His early potatoes all escaped the malady.

Another fact is this. Mr. Pearce, of Hamburg, who is an excellent and observing farmer, saw his potatoe vines were affected, and pulled several hills to examine the roots. They were sound, and left separated from the stems or tops. By this separation three hills wholly escaped the rot, while the potatoes in all the adjoining hills were rotten at the time of harvest.—*Farmer & Mechanic.*

## Circulation of matter in the Animal and Vegetable Kingdoms.

IN the immense, yet limited expanse of the ocean, the animal and vegetable kingdoms are mutually dependent upon, and successive to each other. The animals obtain their constituent elements from the plants, and restore them to the water in their original form, when they again serve as nourishment to a new generation of plants.

The oxygen which marine animals withdraw in their respiration from the air, dissolved in sea-water, is returned to the water by the vital processes of sea plants; that air is richer in oxygen than atmospheric air, containing 32 to 33 per cent., while the latter contains only 21 per cent. Oxygen also combines with the products of the putrefaction of dead animal bodies, changes their carbon into carbonic acid, their hydrogen into water, and their nitrogen assumes again the form of ammonia.

Thus we observe in the ocean a circulation takes place without the addition or subtraction of any element, unlimited in duration, although limited in extent, inasmuch as in a confined space the nourishment of plants exists in a limited quantity.

We well know that marine plants cannot derive a supply of *humus* for their nourishment through their roots. Look at the great sea-tang, the *Fucus Gigantius*: this plant, according to Cook, reaches a height of 360 feet, and a single specimen, with its immense ramifications, nourishes thousands of marine animals; yet its root is a small body, no larger than the fist. What nourishment can this draw from a naked rock, upon the surface of which there is no perceptible change? It is quite obvious that these plants require only a hold—a fastening to prevent a change of place—as a counterpoise to their specific gravity, which is less than that of the medium in which they float. That medium provides the necessary nourishment, and presents it to the surface of every part of the plant. Sea-water contains not only carbonic acid and ammonia, but the alkaline and earthy phosphates and carbonates required by these plants for their growth, and which we always find as constant constituents of their ashes.

All experience demonstrates that the conditions of the existence of marine plants are the same which are essential to terrestrial plants. But the latter do not live, like sea plants, in a medium which contains all their elements, and surrounds with appropriate nourishment every part of their organs; on the contrary, they require two media, of

which one, namely, the soil, contains those essential elements which are absent from the medium surrounding them, that is, the atmosphere.

Is it possible that we could ever be in doubt respecting the office which the soil and its component parts subserve in the existence and growth of vegetables?—that there should have been a time when the mineral elements of plants were not regarded as absolutely essential to their vitality? Has not the same circulation been observed on the surface of the earth, which we have just contemplated in the ocean,—the same incessant change, disturbance, and restitution of equilibrium?

Experience in agriculture shows that the production of vegetables on a given surface increases with the supply of certain matters, originally parts of the soil which had been taken up from it by plants—the excrements of man and animals. These are nothing more than matters derived from vegetable food, which, in the vital processes of animals, or after their death, assume again the form under which they originally existed, as parts of the soil. Now, we know that the atmosphere contains none of these substances, and therefore can replace none; and we know that their removal from a soil destroys its fertility, which may be restored and increased by a new supply.

Is it possible, after so many decisive investigations into the origin of the elements of animals and vegetables, the use of the alkalis, of lime and the phosphates, any doubt can exist as to the principles upon which a rational agriculture depends? Can the art of agriculture be based upon any thing but the restitution of a disturbed equilibrium? Can it be imagined that any country, however rich and fertile, with a flourishing commerce, which for centuries exports its produce in the shape of grain and cattle, will maintain its fertility, if the same commerce does not restore, in some form of manure, those elements which have been removed from the soil, and which cannot be replaced by the atmosphere? Must not the same fate await every such country which has actually befallen the once prolific soil of Virginia, now in many parts no longer able to grow its former staple productions—wheat and tobacco?

In the large towns of England, the produce both of English and foreign agriculture is largely consumed; elements of the soil indispensable to plants do not return to the fields—contrivances resulting from the manners and customs of English people, and peculiar to them, render it difficult, perhaps

impossible, to collect the enormous quantity of the phosphates, which are daily, as solid and liquid excrements, carried into the rivers. These phosphates, although present in the soil in the smallest quantity, are its most important mineral constituents. It was observed that many English fields exhausted in that manner, immediately doubled their produce, as if by a miracle, when dressed with bone earth imported from the continent. But if the export of bones from Germany is continued to the extent it has hitherto reached, our soil must be gradually exhausted; and the extent of our loss may be estimated, by considering that one pound of bones contains as much phosphoric acid as a hundred weight of grain.

The imperfect knowledge of nature, and the properties and relations of matter, possessed by the alchemists, gave rise, in their time, to an opinion that metals as well as plants, could be produced from a seed. The regular forms and ramifications seen in crystals, they imagined to be the leaves and branches of metal plants; and as they saw the seed of plants grow, producing root, stem, and leaves, and again blossoms, fruits and seeds, apparently without receiving any supply of appropriate material, they deemed it worthy of zealous inquiry to discover the seed of gold, and the earth necessary for its development. If the metal-seeds were once obtained, might they not entertain hopes of their growth? Such ideas could only be entertained when nothing was known of the atmosphere, and its participation with the earth, in administering to the vital processes of plants and animals. Modern chemistry indeed produces the elements of water, and, combining them, forms water anew; but it does not create those elements—it derives them from water; the new-formed artificial water has been water before.

Many of our farmers are like the alchemists of old,—they are searching for the miraculous seed—the means which, without any further supply of nourishment to a soil scarcely rich enough to be sprinkled with indigenous plants, shall produce crops of grain a hundredfold.

The experience of centuries, nay, of thousands of years, is insufficient to guard men against these fallacies; our only security from these and similar absurdities must be derived from a correct knowledge of scientific principles.

In the first period of natural philosophy, organic life was supposed to be derived from water only; afterward, it was admitted that certain elements derived from the air, must be superadded to the water; but we now

know that other elements must be supplied by the earth, if plants are to thrive and multiply.

The amount of materials contained in the atmosphere, suited to the nourishment of plants, is limited; but it must be abundantly sufficient to cover the whole surface of the earth with a rich vegetation. Under the tropics, and in those parts of our globe where the most genial conditions of fertility exist—a suitable soil, a moist atmosphere, and a high temperature,—vegetation is scarcely limited by space; and where the soil is wanting, it is gradually supplied by the decaying leaves, bark, and branches of plants. It is obvious there is no deficiency of atmospheric nourishment for plants in those regions, nor are these wanting in our own cultivated fields: all which plants require for their development is conveyed to them by the incessant motions of the atmosphere. The air between the tropics contains no more than that of the arctic zones; and yet how different is the amount of produce of an equal surface of land in the two situations!

This is easily explicable. All the plants of tropical climates, the oil and wax palms, the sugar-cane, &c., contain only a small quantity of the elements of the blood necessary to the nutrition of animals, as compared with our cultivated plants. The tubers of the potatoe in Chili, its native country, where the plant resembles a shrub, if collected from an acre of land, would scarcely suffice to maintain an Irish family for a single day. The result of cultivation in those plants which serve as food, is to produce in them those constituents of the blood. In the absence of the elements essential to these in the soil, starch, sugar, and woody fibre are perhaps formed; but no vegetable fibrine, albumen, or caseine. If we intend to produce on a given surface of soil, more of these latter matters than the plants can obtain from the atmosphere, or receive from the soil of the same surface in its uncultivated and normal state, we must *create* an artificial atmosphere, and add the needed elements to the soil.

The nourishment which must be supplied in a given time to different plants, in order to admit a free and unimpeded growth, is very unequal.

On pure sand, on calcareous soil, on naked rocks, only a few genera of plants prosper, and these are, for the most part, perennial plants. They require, for their slow growth, only such minute quantities of mineral substances as the soil can furnish, which may be totally barren for other species. Annual, and especially summer plants, grow and attain their perfection in a comparatively short

time; they therefore do not prosper on a soil which is poor in those mineral substances necessary to their development. To attain a maximum in height in the short period of their existence, the nourishment contained in the atmosphere is not sufficient. If the end of cultivation is to be obtained, we must create in the soil an artificial atmosphere of carbonic acid and ammonia; and this surplus of nourishment, which the leaves cannot appropriate from the air, must be taken up by the corresponding organs, that is, the roots, from the soil. But the ammonia, together with the carbonic acid, are alone insufficient to become part of a plant destined to the nourishment of animals. In the absence of the alkalis, the phosphates and other earthy salts, no vegetable fibrine, no vegetable caseine, can be formed. The phosphoric acid of the phosphate of lime, indispensable to the cerealia and other vegetables in the formation of their seeds, is separated as an excrement, in great quantities, by the rind and barks of ligneous plants.

How different are the evergreen plants, the oleaginous plants, the mosses, the ferns, and the pines, from our annual grasses, the cerealia and leguminous vegetables! The former, at every time of the day during winter and summer, obtain carbon through their leaves by absorbing carbonic acid, which is not furnished by the barren soil on which they grow; water is also absorbed and retained by their coriaceous or fleshy leaves with great force. They lose very little by evaporation, compared with other plants. On the other hand, how very small is the quantity of mineral substances which they withdraw from the soil during their almost constant growth in one year, in comparison with the quantity which one crop of wheat of an equal weight receives in three months!

It is by means of moisture that plants receive the necessary alkalis and salts from the soil. In dry summers a phenomenon is observed, which, when the importance of mineral elements to the life of a plant was unknown, could not be explained. The leaves of plants first developed and perfected, and therefore nearer the surface of the soil, shrivel up and become yellow, lose their vitality, and fall off while the plant is in active state of growth, without any visible cause. This phenomenon is not seen in moist years, nor in evergreen plants, and but rarely in plants which have long and deep roots, nor is it seen in perennials in autumn and winter.

The cause of this premature decay is now obvious. The perfectly developed leaves absorb continually carbonic acid and ammonia from the atmosphere, which are converted

into elements of new leaves, buds, and shoots; but this metamorphosis cannot be effected without the aid of the alkalies, and other mineral substances. If the soil is moist, the latter are continually supplied to an adequate amount, and the plant retains its lively green colour; but if this supply ceases from a want of moisture to dissolve the mineral elements, a separation takes place in the plant itself. The mineral constituents of the juice are withdrawn from the leaves already formed, and are used for the formation of the young shoots; and as soon as the seeds are developed, the vitality of the leaves completely ceases. These withered leaves contain only minute traces of soluble salts, while the buds and shoots are very rich in them.

On the other hand, it has been observed, that where a soil is too highly impregnated with soluble saline materials, these are separated upon the surface of the leaves. This happens to culinary vegetables especially, whose leaves become covered with a white crust. In consequence of these exudations the plant sickens, its organic activity decreases, its growth is disturbed; and if this state continues long, the plant dies. This is most frequently seen in foliaceous plants, the large surfaces of which evaporate considerable quantities of water. Carrots, pumpkins, peas, &c., are frequently thus diseased, when, after dry weather, the plant being near its full growth, the soil is moistened by short showers, followed again by dry weather. The rapid evaporation carries off the water absorbed by the root, and this leaves the salts in the plant in a far greater quantity than it can assimilate. These salts effloresce upon the surface of the leaves, and if they are herbaceous and juicy, produce an effect upon them as if they had been watered with a solution containing a greater quantity of salts than their organism can bear.

Of two plants of the same species, this disease befalls that which is nearest its perfection; if one should have been planted later, or be more backward in its development, the same external cause which destroys the one will contribute to the growth of the other.—*Liebig's Letters.*

#### The Death of Dr. Mease.

At a special meeting of the Philadelphia Society for promoting Agriculture, held on the 20th inst., agreeably to public notice, in reference to the decease of the late President, Dr. James Mease, Vice President Kenderdton Smith, in the chair:

The object of the meeting having been

stated by the Vice President, with appropriate remarks on the life and character of the deceased, it was on motion of William S. Torr, unanimously

Resolved, That this Society has learned with deep regret the death of our venerable President, Doctor James Mease, after having passed through a long life devoted to science and philanthropy, and whose zeal in the cause of agriculture has contributed essentially to its advancement.

Resolved, That this Society mourns the loss of so valuable a member, and deeply sympathises with his afflicted family in this dispensation of Divine Providence.

Resolved, That a committee be appointed to convey to his family the foregoing resolutions. Whereupon, Wm. S. Torr, A. S. Roberts, Cornelius S. Smith, and Col. Kenderdton Smith, were appointed said committee. Extract from the minutes.

AARON CLEMENT, *Rec. Sec'ry.*

Philadelphia, May 21st, 1846.

#### Premiums of the Pennsylvania Horticultural Society.

The following will be awarded at the intermediate meeting on the 7th prox. The premiums for this month were given in our last number.

CARNATIONS—For the best Flake, four named varieties to be exhibited, \$2.

For the best Bizarre, do. \$2.

For the best Picotee, do. \$2.

For the best American seedling, \$2.

CAULIFLOWERS—For the best, grown in the open ground without protection, four heads to be exhibited, \$3.

For the next best do. \$2.

*At the Stated meeting on the 21st.*

RASPBERRIES—For the best, two quarts to be exhibited, \$2.

For the next best do. do. \$1.

CURRENTS—For the best Red, two quarts to be exhibited, \$2.

For the best White, do. do. \$2.

For the best Black, do. do. \$2.

GOOSEBERRIES—For the best, named, one quart, in a ripe state, do. \$2.

APRICOTS—For the best named, two dozen to be exhibited, \$2.

For the next best named, do. do. \$1.

APPLES—For the best named, early, half a peck, do. \$2.

Who does not know, says the Genesee Farmer, that when the tillers of the earth prosper, all other classes participate in an equal degree?

**Premiums offered by the Agricultural Society of Newcastle Co., Del.,**

*At the Fall Exhibition, Cattle Show and Ploughing Match, to be held at Wilmington on Wednesday, the 16th of September, 1846.*

**HORSES.**

For the best thorough bred stud horse, certificate of merit.

For the next best do., certificate of merit.

For the best stud horse for field and road, certificate of merit.

For the best pair of carriage horses, certificate of merit.

For the best saddle horse, Farmers' Encyclopedia.

For the best pair of work horses, certificate of merit.

For the next best do., certificate of merit.

For the best thorough bred mare, certificate of merit.

For the best mare for field and road, Youatt on Horses.

For the best horse colt from two to three years old, Colt Bridle.

For the best horse colt from one to two years old, Farmers' Cabinet one year.

For the best mare colt from two to three years old, Colt Bridle.

For the best mare colt from one to two years old, Farmers' Cabinet one year.

For the best colt under one year old, Farmers' Land Measurer.

**CATTLE.**

For the best bull, Washington's Letter on Agriculture.

For the second best do., Youatt on Cattle.

For the third best do., Farmers' Cabinet one year.

For the best pair of fat cattle, Treatise on Cattle.

For the best fat steer, Clater and Youatt's Cattle Doctor.

For the best lot of grass fed steers, not less than six in number, Farmers' Encyclopedia.

For the best lot of fat heifers, not less than six in number, Farmers' Encyclopedia.

For the best cow, the latest improved Churn.

For the second best do., superior Butter Tub.

For the third best do., Farmers' Encyclopedia.

For the best bull calf from one to two years old, certificate of merit.

For the best bull calf under one year old, Farmers' Cabinet one year.

For the best heifer calf from two to three years old, Colman's Reports.

For the best heifer calf from one to two years old, Youatt on Cattle.

For the best heifer calf under one year old, Cultivator one year.

For the best lot of store calves not less than six in number, Colman's Reports.

For the best pair of working oxen, Skinner's Farmers' Library.

For the second best do., Youatt on Cattle.

For the third best do., Muck Manual.

For the best pair of four-year old steers, Youatt on Cattle.

For the best and best broke pair three-years old, Farmers' Cabinet one year.

**SHEEP.**

For the best long-wooled buck, Blacklock's Treatise on Sheep.

For the next best do., certificate of merit.

For the four best long-wooled ewes, Farmers' Cabinet one year.

For the four next best do., certificate of merit.

For the best short-wooled buck, Treatise on Sheep.

For the next best do., certificate of merit.

For the four best short-wooled ewes, New England Farmer, 1 vol.

For the four next best do., certificate of merit.

For the four best lambs of any breed, Cultivator one year.

For the four next best lambs of any breed, certificate of merit.

**HOGS.**

For the best boar over one year old, Farmers' Encyclopedia.

For the second best do., Farmers' Cabinet one year.

For the best boar under one year old, Farmers' Encyclopedia.

For the best sow over one year old, Farmers' Encyclopedia.

For the best sow under one year old, Skinner's Farmers' Library.

For the next best do., American Farmer one year.

For the best litter of pigs, not less than five, Colman's Reports.

For the next best do., American Farmer.

**MANAGEMENT OF FARMS.**

For the most extensive, valuable and economical improvements in the cultivation and management of an entire farm, with all its appendages, within the last *five years*.

A detailed statement of the management and produce will be expected by the 15th of November.

Notice of intention to claim these premi-

ums must be given to the Secretary on or before the 20th of June.

The committee will visit such farms as may be entered, in July and September.

#### COMPOST MANURE.

To the person who shall make the most satisfactory, and in the judgment of the committee, the most useful experiment in composting manure, not less than 100 loads of 40 cubic feet, before October 1st, 1846;—Premium—Skinner's Farmers' Library.

#### FOWLS.

For the largest and best variety of domestic fowls, Diploma.

#### IMPROVING WET MEADOW OR SWAMP LANDS.

For the best conducted experiment in reclaiming wet meadow or swamp lands, on not less than one acre, the course of management and the produce, &c., for a period of two years, at least, to be detailed, with a statement of all incidental expenses; Premium—a piece of plate of the value of \$10.

#### TURNING IN CROPS AS A MANURE.

For the most satisfactory experiment of turning in crops as a manure, either *green* or *dry*, on not less than one acre of land, a detailed account of the whole process to be given in writing; Premium—a Diploma.

#### EXPERIMENTS ON MANURES.

For an exact and satisfactory experiment in the preparation and application of manures, either animal, vegetable, or mineral.

#### TO THE BEST TENANT OR RENTER OF A FARM.

Having reference to his skill and management, the care he takes of the property, and the returns he makes to the landlord; Premium by the Society—a Diploma: and a volunteer premium by a member of the Society, of a silver cup of the value of \$10.

For the second best do., a Diploma.

#### TO THE BEST FOREMAN OR FARM MANAGER.

Having reference to his skill as a farmer, his management of the hands on the farm, the attention he bestows upon the stock, the care he takes of the tools and the implements of the farm, and his industry and fidelity in discharging in all respects the duties of his situation; Premium—a piece of plate of the value of \$5, Washington's Letters on Agriculture, and a Diploma.

#### TO THE BEST FARM HAND.

Having reference to his skill as a ploughman, sower, mower, cradler, &c., a piece of plate of the value of \$5, and a Diploma.

#### TO THE FARM LABOURER OR RENTER.

Who while working on a farm, cultivates with the assistance of his family, the best garden, and provides the most neat and comfortable home; Premium—being volunteered by a member—a silver medal, a spade, a garden rake, and two fleeces of wool.

#### CROPS.

For the best crop of wheat, not less than 30 bushels per acre, and not less than five acres, \$10.

For the next best do., not less than two acres, \$5.

For the best crop of corn over 70 bushels per acre, and not less than two acres, \$10.

For the next best do., Farmers' Cabinet one year.

For the best crop of oats over 60 bushels per acre, and not less than four acres, \$5.

For the next best do., Farmers' Cabinet one year.

For the best crop of grass, making not less than two and a half tons of hay per acre, nor less than three acres, Colman's Reports.

For the best crop of potatoes, not less than 300 bushels per acre, not less than one acre, Agricultural Encyclopedia.

For the best crop of ruta-baga turnip of one acre or more, not less than 800 bushels per acre, Colman's Reports.

For the best crop of sugar beet of half an acre or more, and not less than 25 tons to the acre, Colman's Reports.

For the best crop of flat turnips, quarter of an acre or more, not less than at the rate of 300 bushels per acre, Farmers' Cabinet one year.

For the best crop of sweet potatoes, not less than quarter of an acre, Farmers' Cabinet one year.

For the best field of potatoes, not less than three acres, Colman's Reports.

#### BUTTER AND CHEESE.

For the best new milk cheese, Colman's Reports.

For the best fresh butter, not less than five pounds, Churn.

For the next best do., do., Butter Tub.

For the best potted or preserved butter, not less than twenty pounds, nor less than two months old, Colman's Reports.

For the next best do. do., three stone but-  
ter pots.

### CULINARY VEGETABLES.

For the best and greatest variety of gar-  
den vegetables, \$10.

For the second best do., \$5.

For the third best do., Colman's Reports.

For the best cabbage, not less than six  
heads, to be produced on or before the Fall  
Exhibition of 1846, Bridgman's Gardeners'  
Assistant.

For the best cauliflower, not less than  
three heads, Vegetable Physiology.

For the best kale, not less than three  
bunches of one pound each, to be produced  
by November 21st, 1846, Farmers' Cabinet  
one year.

For the best bunch beans, not less than  
half a peck, to be produced on or before  
June 25th, 1846, Cultivator one year.

For the best half peck of onions, raised  
from the seed, Farmers' Cabinet one year.

For the best bunch of onions, certificate  
of merit.

For the best tomatoes, not less than one  
peck, certificate of merit.

For the best egg plants, not less than half  
a dozen, certificate of merit.

### FRUITS.

For the best strawberries, not less than  
two quarts, to be produced on or before July  
1st, 1846, Farmers' Cabinet one year.

For the best raspberries, not less than  
three quarts, to be produced before June  
20th, 1846, Cultivator one year.

For the best early pears, not less than  
half a peck, to be produced on or before  
July 20th, 1846, China fruit basket.

For the best fall pears, not less than half  
a peck, to be produced on or before Novem-  
ber 21st, 1846, China fruit basket.

For the best winter pears, not less than  
half a peck, to be produced between the 1st  
and 17th of March, 1847, China fruit basket.

For the best native grapes, not less than  
four bunches, to be produced between the  
17th and 22nd of October, 1846, Bridgman's  
Gardeners' Assistant.

For the best plums, the least liable to in-  
jury from insects, not less than two dozen,  
to be produced on or before the 5th of Octo-  
ber, 1846, Farmers' Cabinet one year.

For the best quinces, not less than half a  
peck, to be produced at the Fall Exhibition  
of 1846, Cultivator one year.

For the best peaches, not less than half a  
peck, to be produced at the Horticultural  
exhibition, a handsome fruit basket.

For the best apples, not less than half a  
peck, premium saw.

For the second best do. do., pruning knife.

### FLOWERS.

For the best varieties of camellias, to be  
produced to the Society by March 1847, cer-  
tificate of merit.

For the best varieties of roses, to be pro-  
duced to the Society in May or June, 1847,  
certificate of merit.

For the best variety of double pinks, to be  
produced on or before the 15th of June, 1847,  
certificate of merit.

For the best varieties of hyacinths, to be  
produced to the Society on or before May  
20th, 1847, certificate of merit.

For the six best varieties of tulips, to be  
produced on or before May 20th, 1847, cer-  
tificate of merit.

For the six best varieties of dahlias, to be  
produced on or before October 20th, 1846,  
certificate of merit.

For the ten best varieties of chrysanthe-  
mum, to be produced on or before Nov. 21st,  
1846, certificate of merit.

For the best bouquet exhibited at the ex-  
hibitions of the Society, certificate of merit.

For the introduction of any new and valu-  
able seeds, fruits, or plants, presented to the  
Society during the years 1846-7, a silver  
medal of the value of three to five dollars,  
at the discretion of the Board of Directors.

The committee in their discretion, are au-  
thorized to invite the ladies to consent to  
take the sole charge of the Horticultural  
Exhibition.

### SILK.

For the best reeled raw silk, if approved,  
not less than a pound, a premium silk reel.

For the heaviest and best cocoons, exclud-  
ing double ones, not less than five pounds,  
Treatise on Silk.

### AGRICULTURAL IMPLEMENTS.

For the best plough, certificate of merit.

For the best drilling machine, do. do.

For the best grain or grass sowing ma-  
chine, do. do.

For the best mowing or reaping machine,  
do. do.

For the best straw and hay cutter, do. do.

For the best root or vegetable cutter, do.

For the best corn sheller, do. do.

For the best display of agricultural imple-  
ments, do. do.

For the best thrashing machine, do. do.

For the best farm and road wagon, do. do.

For the best cart, do. do.

For the best and most convenient harvest  
bed on wagon or cart wheels, do. do.

### IMPROVEMENT OF AGRICULTURAL IMPLEMENTS.

To the person who shall exhibit at the show any new or improved agricultural implement, the invention being his own, which shall, in the opinion of the committee merit a reward, a premium shall be given not exceeding five dollars.

In all cases proof must be given of the work done by the implement before it is exhibited, and of its having been used and approved by some practical farmer.

#### MAIZE SUGAR.

For the largest quantity of sugar—having regard to quality—not less than 20 lbs., manufactured from corn stalks, Colman's Reports.

#### AMERICAN MANUFACTURE.

For the best American "Russia iron," certificate of merit.

For the best piece of fine broad cloth, do. do.

For the best lot of cassinets, not less than three pieces, do. do.

For the best lot of fine satinets, not less than three pieces, do. do.

For the best specimen of cotton goods, do. do.

For the best ingrain piece of carpeting, do. do.

For the handsomest and best made saddle and bridle, do. do.

For the handsomest and best set of single or double harness, do. do.

For the best lot of edge tools, do. do.

For the best constructed cooking stove, do. do.

For the best lot of cabinet furniture not less than three pieces, do. do.

For the handsomest and best parlour stove, do. do.

For the handsomest and best made marble mantel, do. do.

For the handsomest and best made boots and shoes, three pairs of each, do. do.

For the handsomest and best manufactured hat, do. do.

For the handsomest lot of manufactured silverware, do. do.

For the best and most convenient four-wheel carriage or dearborn for family use, and having regard to cost, do. do.

For the handsomest and best specimen of castings, do. do.

For the best sample of coach or shoe leather, do. do.

☞ All to be made in Newcastle county, and premiums to be awarded to any domestic articles not enumerated as above, at the discretion of the Board of Directors.

*Ploughing Match for horses and oxen—single or double teams, with or without drivers.*

In first class all entries to be by ploughmen over 19 years of age.

In second class between 14 and 19 years of age.

In third class those under 14 years.

First premium for first class, \$10 and a diploma.

Second do. do. do. \$5 and a diploma.

Third do. do. do. Washington's Letters on Agriculture.

Fourth do. do. do. a diploma.

First premium for second class, \$5, Washington's Letters on Agriculture and diploma.

Second do. do. do. Farmers' Library and diploma.

Third do. do. do. diploma.

First premium for third class, or boys, Youatt on Cattle, Farmers' Library, and diploma.

Second do. do. do. Washington's Letters and diploma.

Third do. do. do. Farmers' Cabinet one year and diploma.

Fourth do. do. do. a diploma.

Claims for premiums on crops, must in every instance be accompanied with a statement of the condition of the ground before commencing, and then the whole process of tillage, and the measurement must be of the whole crop by the half bushel, and certified to in writing by the applicant. Crops to be entered as early as the day of Exhibition—applications to be acted on by the committee any time before the 1st of January, 1847.

No animal shall take the same premium a second time.

All articles exhibited will be returned to contributors unless otherwise directed.

If, of any article for which a premium is offered, no specimen be submitted worthy of distinction, the Society reserves the power to withhold the premiums, and in all cases where premiums shall be demanded, they will require such evidence from the claimants as shall be satisfactory to the Directors. No person shall be entitled to a premium for any animal which he shall not have had or possessed at least six months immediately preceding the time of exhibition. It is to be distinctly understood that all grain, vegetables, &c., produced for competition, shall be the growth of the producer.

All premiums not demanded within sixty days after they shall have been awarded, shall be deemed as having been relinquished to the Society. The object of the Society

in offering these premiums, is simply to excite a spirit of emulation among cultivators to improve the varieties of fruits, vegetables, and other productions. It is desirable that each kind of fruit offered for competition may be as numerous as possible, regard being had to produce none but of fair quality. Each article should be accompanied by its appropriate name. It is also desirable that the articles exhibited should be accompanied by short observations on the mode of culture, with any other remarks deemed to be of utility.

The judges are authorized to withhold premiums where none is entitled to distinction; and where but one of a class is exhibited they will award such premium as they think it merits. Those who intend to compete, must inform the Committee of Arrangement before eleven o'clock on the day of exhibition.

All stock, &c., exhibited, must remain on the ground during the exhibition; and all stock intended for sale will be required to be registered in a book provided by the Committee of Arrangement, at the following rates: For each horse, \$2; for neat cattle, \$1 each; for hogs and sheep, fifty cents each.

Articles that are designed to compete for premiums, will be produced when practicable, at the Annual Exhibitions of the Society. Perishable articles may be offered at any of the meetings of the Society, or at those of the Directors, which take place on the afternoon of the second Saturday of every month in the City Hall; or they may be subjected to the inspection at any time, of either of the following committee appointed for that purpose, viz: Dr. J. W. Thomson, M. Canby, J. R. Latimer, Samuel Hilles, Dubre Knight.

The books for the admission of new members, will be open by James Webb, Secretary, at Hall's Hotel, from nine o'clock until two and a half, on each day of the Exhibition; price reduced to \$2, which includes the annual dinner—dinner tickets delivered by the Secretary.

The Society will dine together at three o'clock. All members *not* in arrears to the Society, will receive their tickets to the dinner free of charge. The Annual Address will be delivered by a distinguished agriculturist, at John Hall's Hotel, immediately after dinner.

If you would have a supply of horse-radish through the winter, have a quantity grated while the plant is in perfection; put it in bottles, which fill with good vinegar, and keep tightly corked.

## ADDRESS

*Delivered before the Moorestown Agricultural Society, Burlington Co., N. J., on the 2nd inst., by DR. JOSEPH PARRISH.*

GENTLEMEN,—To understand agriculture in its true meaning, we must study the book of nature; we must exercise our noblest thoughts, to comprehend the phenomena which are daily revealed to us in the operations of those laws which regulate the economy of vegetable life.

*Galileo*, a profound philosopher, when interrogated by the inquisition as to his belief in a Supreme Being, pointed to a straw on the floor of his dungeon, and replied, that from the structure of that object alone, he inferred the existence of an intelligent Creator. When I received through your corresponding secretary an invitation to address you on this occasion, the first thought that occurred to me was, that this would be a theme well calculated to satisfy us with the effort which has been made by the formation of this Society to trace effects to their causes, and to inspire us with zeal in the application of physical science to the pursuit of agriculture. The farmer of the present age ought not to be satisfied with mere bodily rest at the close of his daily labours; his mind should hunger for that knowledge which will unfold to him hidden mysteries—he should want to see, as did *Galileo*, a wonderful mechanism even in a simple straw. He should seek after light that will show him what there is in the bosom of the earth, that causes the seed to burst its shell and germinate into life—what influences surround it that promote its growth and fruitfulness. Not that he should perplex himself with abstruse and doubtful questions—but that he should strive to be exalted above the brute that labours with him, by cultivating the intellect, by studying the philosophy of nature, that he may see in every flower that blooms in his garden, in every ear that grows in his field, and in every blade that springs up in his meadow, the wisdom and design of a beneficent Creator; and as he cultivates a taste for such researches, his fondness for home and the labours of his farm will become stronger, and his instructions to his children will be their surest protection against the allurements of city life, which tempt so many to depart from the straight forward path of honest husbandry. In all nations of the world, where civilization has extended its blessings, agriculture is nurtured as the purest and most certain source of public prosperity. Wherever government is found protecting the farming interests and sustaining a system of well-

paid labour, the soil will become the strongest hold of national wealth and happiness; and in no country are advantages placed within the reach of the agriculturist equal to those which are found in Northern America. Here the husbandman is not borne down by the tithes and impositions of feudal power; the choicest productions of his labour are not exacted by government to gratify an idle and corrupt aristocracy, but as he waters the soil with the sweat of his brow, so does he reap the fruits which she returns to him, and it is the glory of his country that he can devote them to himself, and not be compelled to share them with kings:—that his children, reared in habits of careful industry, may gather its proceeds without dividing them among those playthings of royalty—the babies of queens. His private interest is identified with the public good, and whatever will advance the one, will promote the other. His strength is acknowledged, and his importance appreciated by the nation, and it is time that he *felt himself* rising into the dignity of his exalted position—time that he should cease labouring as a mere automaton, following in the wake of his fathers, and guided by their, instead of his own, experience,—time that he should study and pursue agriculture as a science, that he should acquaint himself with those natural laws which are continually in operation, and are producing the developments which are daily obvious to his senses, but which he cannot understand:—that he should know the action that is produced upon vegetation, by the elements which surround him.

We know already that the harvest will not ripen without the heat and light of the sun—we know that the rain which falls upon our fields is necessary to the production of their fruits—we know that the soil upon which we sow the seed becomes impaired, its fertility exhausted by a too frequent repetition of similar crops; but have we ever inquired whether the roots which push themselves into the earth, have mouths to drink in the rain, and take up from the soil, nourishment for their support and growth? Have we ever investigated the properties of light and heat, and traced their application to the development and final decay of vegetable matter? Have we ever learned, or attempted to learn the peculiar adaptation of certain manures to the different varieties of soil, and the properties of both that may combine to promote luxuriant growth? In reflecting upon the fact of our own existence, did we ever form a conception of the vital principle that gives us motion and sensibility, and think of plants as being possess-

ors of a degree of the same stimulating force—whatever may be its name—and giving to them powers of production, increase, and complete development? And did we ever imagine that the plants which we tread under our feet, have organs of respiration, assimilation, secretion, and excretion, as necessary to their existence as the same class of organs are to the support of ours? And when we remember that there is coursing through all parts of our bodies a vital fluid, without which we could not have a being, did the truth ever present itself to our minds, that the tree which the axe in our hands levels to the ground, possesses a vital current also, which not only circulates through all its parts, but throws out into the atmosphere, the very principle which we inhale into our lungs, to purify and vivify our blood, and render it capable of sustaining life.

These are propositions which it will be interesting for us to consider. It is true that the mechanical arrangements which are necessary to the sustenance and growth of animals and vegetables, as well as the fluids which pass through them, are widely different; but in both alike there is an eminently wise adaptation of means to the end, which we can not but admire. As plants are destined to observe a fixed position, and have not, as animals, the power of locomotion, and at the same time require the agency of the surrounding elements to support them, let us see what contrivance has been adopted to carry out these particular purposes. Take a seed—a grain of wheat—carry it, if you please, from some ancient tomb, where it may have been buried for centuries with the dead; with others it was one day rudely beaten from its hull by the flail of the thresher; with others, too, it may have been packed in heaps and trodden under foot, yet there still remains safely secured in its centre, a little germ that is ready to put forth its vital energies as soon as it may come in contact with its appropriate stimulus. Cast it upon the prepared soil. It matters not in what direction the seed may fall, or what position it occupies. If the end from which the sprout comes is pushed downward into the earth, it nevertheless finds its way through the wall that has imprisoned it, and soon bends its direction toward the surface; the roots which spring from the other end, at first tending upward, soon turn themselves in the opposite direction, until they occupy their appropriate relation to the plant. Having now made its attachments to the earth, and established the primary means of communication with the sources of nourishment, it is prepared to bring into action the numerous

organs that in their turn become developed, to carry on the great function of nutrition and growth. And it is the business of the husbandman to acquaint himself with these functions.

Without going minutely into vegetable physiology, it will be sufficient for our present purpose to know that the elementary texture of plants, consists of cells which form the basis of all their organs; these cells, as well as the spaces between them, contain fluids of different kinds adapted to fulfil different purposes in the vegetable economy. Prior to the researches of modern chemistry it was supposed that pure water alone, was sufficient to support vegetation, and many experiments were tried, which resulted in favour of this opinion; it was not taken into the account, however, that water contains a portion of atmospheric air, and that the component parts of the atmosphere in its gaseous state, as well as in a state of combination with water, were essential to the growth and increase of vegetable matter.

It is not water alone, nor any other agent of itself, that is capable of fulfilling this important office. Heat, water, light, and air, are all necessary to vegetable growth. Heat is the cause of fluidity, without which the sap cannot circulate. Water is the medium through which nutriment is conveyed to the plant; the air affords the principle of vitality, while the light of the sun, by its attractive force is continually inviting the leaves of plants to spread themselves to its influence, in order to facilitate their function of exhalation. The extremities of the roots serve the purpose of absorbing nourishment from the soil, at which points, are placed little spongioles, admirably qualified for the task: and as the roots are constantly spreading in all directions, they are always in contact with some new portion of soil which contains the appropriate food. It is believed by some writers upon the subject, that there exists a perfect uniformity in the direction of the roots with the branches, so that a great portion of the rain which falls from the leaves of plants drops upon the earth at a distance from the stem, corresponding with the different extremities of the roots, and that the spongioles receive a greater amount of support than they would by a less careful arrangement. As these little mouths are incapable of imbibing thick fluids, nature has supplied a solvent which is the menstruum of all the positive food of plants. This, as we know, is rain. It receives in its passage through the soil various ingredients, which it holds in solution, and in this state is taken up by the roots, traverses the

stem and branches of the plant without any perceptible change in its quality, till it reaches the leaves, and thus comes in contact with the atmosphere, where it is subjected to the process of exhalation. By this process it parts with about two-thirds of its water, and leaves the remainder more concentrated, and more divisible into the variety of nutriment adapted to the different portions of the plant. Before the leaves are formed, the sap does not come so completely into contact with the external air. It is not necessary that it should. Its office being the sustenance of an incomplete organism, it has been called the *nursling sap*. By this process of exhalation, the oxygen contained in the water which is separated, is thrown into the atmosphere in the form of gas, and its carbon retained, which being one of the principal ingredients of vegetable structures is returned to the vegetable system for its support. It is in this function, as has been stated, that light exercises its peculiar power over vegetation; for during the night this process of respiration is partially suspended, and a portion of oxygen, the great purifier of organic existence, is admitted, to vitalize the fluids of the plant, and on the return of daylight is again dissipated, to combine with the air. From the returning sap, as it circulates through the plant, is taken up different substances and deposited in its different parts by another set of organs, which in the economy of nature's laws have been provided for the purpose, and whose particular office has been termed secretion. Wax, honey, starch, the turpentine, resins, balsams, are familiar examples of vegetable secretion. So also, are considered the bitter, aromatic, narcotic, and acrid juices, which impart to vegetables their peculiar taste and odor.

The excretion of plants consists in their freeing themselves of noxious or useless particles which they may have absorbed with their nourishment; and the fact that plants possess this power, is of great importance to the farmer, inasmuch as it explains to him the advantage of a rotation of crops; for though materials may have been thrown off by one plant as injurious to it, it does not follow that others of a different species will reject them; they may afford to another variety nourishment, exactly such as is needful for their growth. This may account for the fact which has been remarked for many years in this county, and no doubt in other peach growing districts, that a crop of fine fruit cannot be procured from an orchard immediately succeeding another, on the same ground. The excretions of the peach tree have impregnated the soil with qualities that are obnoxious to its growth, and

hence the necessity of another kind of crop. A change, a regular rotation, is essential to preserve the fertility of the soil, and the consequent value of its productions.

Probably there is no subject more talked of among farmers than the succession of crops; and their experience differs, because of the variety of soils they have to cultivate, and other circumstances connected with their particular localities. You may adopt almost any system of rotation, it is true, and force your lands to the utmost extent, in order to act upon it, provided manure and money enough are expended in the effort; but it is not in such a way that the science of agriculture is to be advanced—if it were, it would be available to but few; it would be pursued as an accomplishment, and an experiment, and would not repay the cost of its management. To make it practical, useful, and profitable, a good system of rotation should of course be adopted; but it must be founded, not upon the custom of a neighbourhood, but upon the particular character of the soil, and its adaptation to the growth of certain plants. A soil in which one earth greatly predominates over another, should have an addition of the deficient material in order to restore a suitable composition. Argillaceous or clayey lands, such as are usually called sour, and wet, harden with the heat of the sun, the dew evaporates from their surface, instead of penetrating below it, and it is incapable of profitable tillage, without appropriate treatment. Apply lime, the mortar of old buildings, or other calcareous substances to such lands, and they will absorb the moisture of the soil, and it will become more friable by a chemical process, which the study of agricultural chemistry will reveal. The manures from the stable or yard, mingled with it in a *state of fermentation*, will impregnate the particles of earth with the gases that escape from it, and render the soil warmer and more nourishing to vegetation. Take, however, a different kind of land—so light and extremely porous, owing to a superabundance of calcareous earth, that it will readily absorb every particle of moisture, and it will require precisely an opposite course of culture. Clay itself, mud from the banks of rivers, will render it more cohesive, and it is evident that to increase this property, the nutritive manures should not, as in the other instance, be applied in a state of fermentation, else they would heat the soil too much, and thwart the object of producing more stability in its character. These observations, no doubt, accord with the experience of every practical farmer; and they are made in order to remind us of the importance of adapt-

ing our crops to the varieties of soil, or of altering the character of the land by appropriate manures to suit the habits of plants we may wish to cultivate: and in addition to enhancing the value of our farms, and reaping larger harvests, we have in such an engagement the satisfaction of improving the mind; which is a duty too much neglected by the agricultural community. There may be those present, who during the hasty consideration which we have given to the general structure of plants and their physiological action in the process of growth, have asked themselves the question—of what use are such disquisitions to the practical farmer? is it not enough for us, that by experience we have learned the kind of crops that are best adapted to our lands, and the best time to sow and to reap? We have educated our sons in the field, and our daughters in the dairy; we work, rest, and are satisfied:—but I trust the day is not far off when such notions will be among the things of the past, and that the members of this and similar societies will prove by their works, that the pursuit of scientific agriculture is not only more elevating to the man, but more productive to his purse, and more honourable to his race and his country, than the unphilosophical method which obtains too generally among us.

Would you make blacksmiths or wheelwrights of your sons, and not instruct them in the laws of mechanics? Would you have them enter upon the practice of medicine or law, without being first acquainted with the human organism, or the government of your country or state? Would you send them upon the wide ocean, to guide a vessel from port to port, without first teaching them geography and the art of navigation? Would you have them embark upon the uncertain sea of mercantile speculation, without acquainting them with the rules of commerce and the laws of trade? And can you train them up as intelligent farmers, without instructing them in the laws of organic life and in the nature of the soils they cultivate? Our country abounds with the means of learning—the doors of the common school are not closed against the lowest and poorest citizen. The children of the mechanic, both male and female, are instructed, not only in what have been formerly considered the elementary branches of education, but in mathematics, the geography and history of the globe, geology, physiology, natural philosophy, chemistry, and some of the modern languages. There is growing up around us a race of refined intelligence, and it is to be hoped of more substantial morality than has hitherto been known in our history:

but where are the sons and daughters of our farmers? Will they be content to bring up the rear in the march of improvement?

Our colleges too are filled with young men obtaining all the acquirements that are supposed to be necessary for the popular professions—doctors, lawyers, and theologians, are increasing almost without number in all parts of our country. And a passion for professional and mercantile pursuits has found its way into the quiet home of the husbandman; and his sons, by the time they enter their “teens,” are ready to go forth in pursuit of knowledge, honour, and wealth, which they conceive can not be obtained in the more unobtrusive walks of agricultural life. And why is it so? Why should the cultivation of the soil be considered a menial employment?—Because the machinery of the human mind has not been sufficiently exercised in the operations of the farmer—because agriculture has been followed as a mere manual art, which has fed and clothed the body, but which has not aimed to satisfy the mind. In short, it has not been pursued as a science. It is not a matter of surprise that so many should engage in what are called the learned professions, when we consider the constitution of the human intellect, its attributes, and its aspirations, and that it is constantly pressing forward in the voyage of discovery; but if we elevate the standard of that profession which is the basis of all others, we offer inducements to the aspirant after knowledge to enter the field, and become acquainted with the sublime truths which are now so little appreciated and understood. For certainly agriculture is the foundation of our social, political, and commercial existence. Every land is enriched by its treasures—every sail that flaps upon the ocean, wafts its products—every anvil sounds praises to its mother earth; and as agriculture is the first among the sciences, in alphabetical order, so is it first in importance to the community of mankind: and yet it is left to find its own auxiliaries, and to seek its own security—and its security consists in great measure in the formation and efficient discipline of agricultural associations—in the study of natural science, which brings man into a closer communion with Supreme Intelligence, elevates his mind to purer thoughts, revives and strengthens the virtues of his heart; and thus increases the safety of society and the stability of government.

In carrying on this work of elevating the character of the labouring class, by calling out their dormant powers of mind, we must encounter difficulty; and the most formidable obstacles in the way, are a blind and ob-

stinate adherence to old practices, on the one hand, and an equally sightless and senseless attachment to mischievous novelties on the other. With the one class, every thing that is written on the subject is received with doubt and prejudice, and whatever treats of agricultural improvement on scientific principles, is set down to the credit of theory and book learning; and none are supposed to possess a knowledge of husbandry but those who hold the handles of the plough. These forget that the hands of man were made as well to direct a pen as to dig the earth; and the mind, to think as well of the connexion between causes and their results, as of buying, selling, and getting gain. With the other class, fanciful speculations are allowed too often to throw the mind from its proper balance, and to impair its judgment; yet even these are useful, as nearly all the arts and sciences are indebted for some of their most important principles and valuable discoveries, to the experiments of the ingenious and visionary. The most effectual way of guarding against the reception of mere speculative opinions, is to study the laws of vegetable life, the chemical constituents of plants, and their relation with the chemical properties of the soils upon which they grow. The most certain auxiliary that agriculture has within its reach to secure its own progress and prosperity, is the proper training of the rising generation. Let every farmer who has a son, teach him to admire nature, and inspire him with a love for the study of her works. Show him that the formation of our globe, with all its marvellous varieties, with every thing that moves and grows upon its surface, and the deep rocks and eternal fires that lie sheltered in its bosom, are evidences of the most sublime and profound science. Teach him that the earth, which he divides with his plough, is not a mere accumulation of inert matter, but that it possesses properties which it is the duty of all who cultivate it to study—that the sun sheds not its rays merely to give light and warmth to man, but to invite the plants of the soil to burst through its crust, and beautify the footstool of Deity. Trained under such influences, think you that your young men would be so desirous to exchange the substantial realities of husbandry for the uncertain chances of commerce! or for the doubts and anxieties of professional life?

Educate them as you ought, and as they deserve, and when they mingle in society they will not feel themselves deficient in intelligence, and shrink from association with good and wise men—they will stand where they ought to stand, among the first

in knowledge and virtue. None others possess the advantages for the formation of character which they do. With the rich treasures of nature spread before them, and an immortal intelligence dwelling within them, they cannot but improve, if their time and talents are properly directed.

Agriculture was chosen by the inspired lawgiver of Scripture history, as the best employment to secure the virtue and happiness of the oppressed people whom he led from Egypt. The land of Judah was promised to the seed of Abraham to be their inheritance. "A land of brooks of water, of fountains and depths that spring out of valleys and hills—a land of wheat and barley, and vines and fig-trees, and pomegranites; a land of oil, olive, and honey." Having established them as an agricultural people, under the system of legislation that was adopted, their first and highest obligation was to the Author of all their gifts. To teach them cheerfulness and contentment, they were to *rejoice* in the seed time, and *give thanks* for the harvest; to preserve inviolate their laws, they were taught to govern themselves by love—to make them hospitable, it was enjoined that they should entertain the stranger within their gates, and exercise benevolence to the widow and the fatherless—and they were commanded not to "muzzle the ox when he treadeth out the corn," as a lesson of kindness to the brute creation. Let us then be stimulated by the virtues and example of the Hebrew Shepherd, who while he fed the flocks of Jethro, became learned in that wisdom which enabled him afterward to be the leader and deliverer of the children of bondage; and among the earliest lessons which we impart to those who are rising up around us, let a love for agricultural life be prominent, because it is the best nursery of the virtues of the human heart, the best protection against the snares and corruptions that infest the world, and the best safeguard to society and to government. It is true that the farmer has his losses and his difficulties; his crops will fail, and his harvests be consumed; but while the merchant may lose his fortune in a moment, by fire, or tempest, and the professional man witness the ruin of all his hopes; the possessor of the soil not only has an inheritance as enduring as time, but he has the promise, that "while the world endureth, summer and winter, seed time and harvest shall not cease."

#### Culture of Cabbage.

The cabbage crop is a very important one in the vicinity of cities, and immense quantities

are raised there; but we doubt whether as much attention is paid to the culture of this vegetable on the farm as there should be, considering its importance as food for both man and beast. It is true that in consequence of the severity of the weather of the Northern States—cabbage being a very watery vegetable—it is not as profitable to feed to stock as in the milder winter climate of Great Britain; and in addition to this, it is more difficult to keep with us, and more difficult to store. Nevertheless, for food for cattle, as the frost cuts off the grass in the autumn, and before the severity of the winter sets in, few vegetables excel it. Then such an immense quantity can be raised per acre, where the ground is favourable for the crop, and it is so easily cultivated, it is quite an inducement for those who have but a small quantity of land to devote a few acres to it.

There are various methods of cultivating the cabbage; for the field, with the larger variety, however, we prefer planting them in hills two and a half to three feet apart each way, it is so much easier using the cultivator among the plants, and thus saves the tedious process of hand-hoeing. It is a general rule to sow the seed in beds, and then transplant. A recent and much superior practice is, to sow from three to five seeds in the places where you wish one plant to grow. In this case the largest and most thrifty plant only is left standing. After it gets three to four weeks old, the other plants are pinched off or broken down. Grown in this way, the heads are said to be much larger and finer than when the young cabbages are transplanted, as it is contended that however carefully the process may be performed, the plant receives a check in its incipient state which it never entirely recovers. There is reason and philosophy in this, and we should be glad if those engaged in the culture of cabbages would make experiments the present season between different rows side by side, sowing the seed as above, and in the usual method, and then transplant.—*American Agriculturist*.

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### THE FARMERS' CABINET, AND AMERICAN HERD-BOOK.

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PHILADELPHIA, SIXTH MONTH, 1846.

It is a luxury for those who are hemmed in with brick and mortar, here in our broad city, occasionally to step forth and breathe the freshness of the woods

and the fields, when clothed, as they have been for a month past, with such exuberance of growth, and fullness of promise. The vicinity of Philadelphia, possesses much to tempt the drive or the walk. There is good farming—beauty of situation—correct taste, and abundant means, whereby all may be improved to the greatest advantage. It would seem as if wealth could hardly be rationally enjoyed any where but in the country. If a man is extravagant in his table, it is but the gratification of one of his lowest propensities; if in his furniture, or his dwelling, it is in things which not only perish with the using, but which soon cease, when their novelty has worn off, to yield any great amount of enjoyment. But let the man of wealth, and liberal views, and cultivated taste, plant himself in the country, under the broad and open sky, and in the midst of his fields and his gardens and his trees, which his own industry and good judgment have made just what they should be, and let him withal be public spirited and enterprising, acting upon the principle that *we do not live for ourselves only*, and we must admit there is open to him a source of enjoyment, of the most healthy and delightful character, for the non-improvement of which, himself only can be to blame, and for the neglect of which he must assume a heavy responsibility.

These reflections have been induced on the present occasion, by a ride the Editor had the pleasure of taking on the 21st ult. to Germantown and its vicinity. Nothing need be said of the season of the year—all of us feel, in common with the vegetable world, a renewal of life, and a fresh breaking forth into its enjoyments. The neighborhood too is well known, and it is not in our plan to describe any part of it.

The day was spent with James Gowen, at Mount Airy, whose land lies mostly on the east side of the Germantown road, some eight miles from the city. The readers of the Cabinet, by means of his occasional communications, are well acquainted with his good farming, and its consequent results—large crops. His farm lies beautifully, and his fields of grass were splendid. His hedges too, of the *Maclura* thorn, or Osage Orange, look thrifty, and promise to do well. His spring wheat, and lucerne, and oats, and corn sown broadcast for soiling, showed that they had been put in the ground by the hand of a master, who intended they should produce well, or the failure should not lie at his door. The cattle have been so repeatedly exhibited at our agricultural shows, that the readers of the Cabinet know more of them than the Editor can tell them. They are truly a splendid lot of Durhams, and though some eighteen or twenty have been lately sold, to lessen the labors of the dairy, the remainder—about thirty,—make a fine display in the pasture. We remarked the milk dripping from the udder of *Dairy Maid* as she stood leisurely chewing her cud. The yard and shrubbery around the house, are just what they should be, showing very plainly the delicate and guiding hand of a mistress, as well as the stronger one of a master. When you get among the out-buildings—the barns and sheds, you might naturally enough conclude you had stumbled into the village. We liked their arrangements, and the neatness of every thing connected with them. There was a place for every thing, and every thing was in its place. The thorough measures adopt-

ed for the saving of every thing that might be turned into manure, were very obvious. We could find no little ditch to carry from the cow yard its juices into a neighbouring ravine, but on the contrary, means were adopted to save and to absorb every liquid, of the stables, and to carry into a general reservoir the slops, soap suds, &c. of the kitchen—all was saved. Our friend at Mount Airy does not act upon the idea that he can afford to waste his manures at home, and come to Philadelphia to replace them by purchase. In the different sections of stabling was the keg of plaster, and every day some was strewn on the floor to absorb the ammonia, which from its volatile nature would otherwise be wasted. The heap of poudrette, that was of course under shelter ready to be used on corn that was then being planted, was carefully covered an inch or two with plaster of paris, that every particle of its virtue might be retained.

The fine property formerly occupied as Mount Airy College, and owned by the late W. G. Rogers, has been purchased by J. Gowen. It lies immediately adjoining the homestead, and will be a splendid addition to it. The buildings and grounds, and healthiness of the neighbourhood, would remarkably well adapt it for an agricultural school, whenever it may be advisable to put such an establishment into operation.

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DIED at his residence in this city on the 14th ult. Dr. JAMES MEASE, in the 75th year of his age.

Strongly attached from early life to agricultural pursuits, and his views being practical, he was an efficient promoter of their interests. For several years past, he filled the chair, with great ability, as President of the Philadelphia Society for Promoting Agriculture. We shall greatly miss at our office, the friendly and social calls, of this, our venerable fellow citizen.

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It is stated that 100 bushels of strawberries were sold in Cincinnati on the 26th ult. Cany any one give an estimate of the quantity brought here in a day in the height of their season?

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The quantity of rain which fell in the 5th month, 1846, was nearly three inches and a half. . 3.44 inches.  
*Penn. Hospital, 6th mo. 1st.*

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MANY apprehensions are entertained of the ravages of the wheat fly. From our *exchanges*, we learn that very considerable injury must be sustained in various sections; while in others, it does not seem to have made its appearance. The wheat harvest commenced a week ago in North Carolina, and the southern part of Virginia, and promises a good yield.

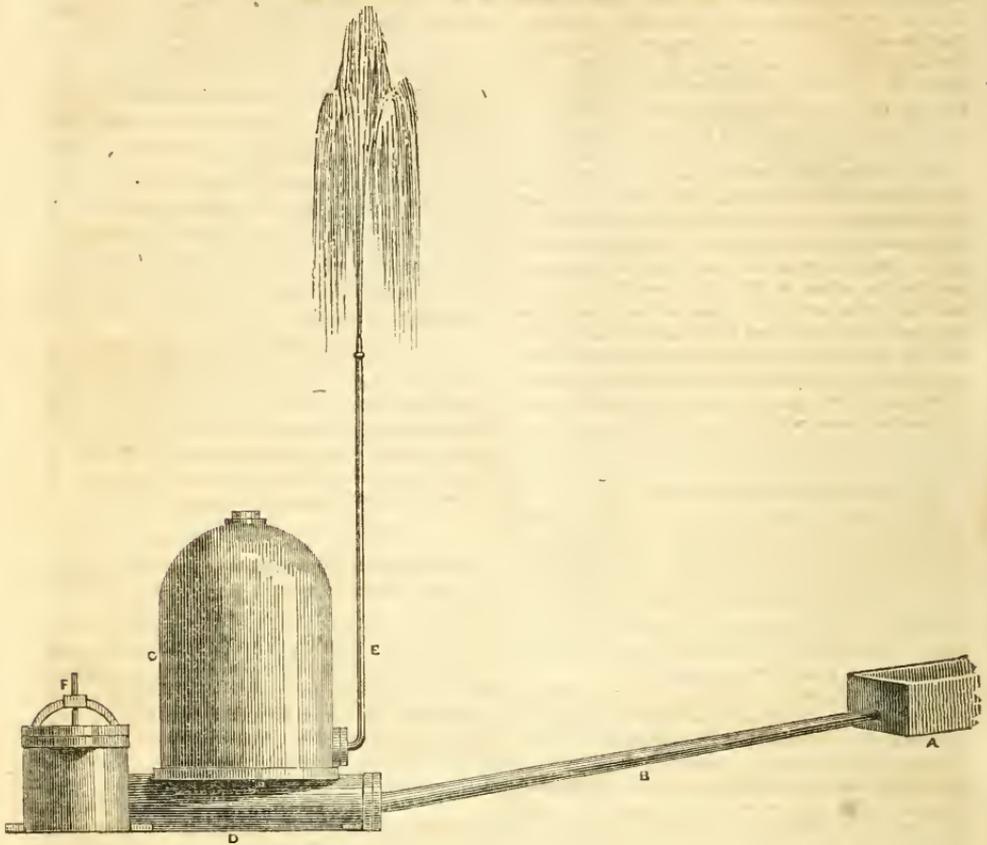
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A LIST of Premiums, &c. of our Agricultural Society shall appear in the next number of the Cabinet.

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OUR Jersey, friends supplied us with new potatoes and string beans on the 9th inst.

## MONTGOLFIER'S HYDRAULIC RAM,



A. Spring. B. Pipe from spring to machine. C. D. F. Machine. E. Pipe conveying water from machine to place required.

### For supplying Farm houses, Factories, Villages, &c., &c. with Running Water.

This is the most simple and effective machine, for forcing water ever invented; and may be used where a fall of two to ten feet can be procured to force a portion of any Spring or Brook, to any required elevation. It combines all the advantages of *cheapness, durability, simplicity and compactness*. Its cost is but about one half that of an ordinary or Force pump. Nothing can be more simple, as may be seen by inspecting the plate. There are but few parts subject to wear, and those easily replaced. Its durability is only measured by that of the material of which it is composed, viz. iron. One calculated to throw a half-inch stream to an elevation of one hundred feet, will occupy but little more than one cubic foot of space. The repairs will not amount to 25 cts. a year, and may be done by any person. They are so constructed, that any person may put them up.

Each Machine warranted in every respect. The necessary pipe may be procured from the subscriber at manufacturers' prices—manufactured and for sale by

**HENRY P. M. BIRKINBINE, Engineer & Machinist,**

Central Block, Broad Street, between Race and Cherry, second floor, Philadelphia;

Where one of the above machines may be seen in operation.

Since the subject has been repeatedly mentioned in the Cabinet, many enquiries have been made respecting the Ram for raising water. H. P. M. Birkinbine, of this city, it will be seen, advertises above. The Editor called at his shop the other day, and was exceedingly gratified with the working of the machine. In many situations, it will be of great consequence to have this available resource for a supply of water.—Ed.

## Thermometers for Farmers in Churning.

The fact being now established after various experiments, that to make butter quickly and good, depends on a certain temperature, (63° Fahrenheit,) in churning, the subscriber is prepared to furnish Thermometers at a low cost that may be relied on for their accuracy. Printed directions furnished to purchasers.

JOSEPH FISHER, 53 Chesnut St., Phila.—1t.

THE FRUIT CULTURIST, adapted to the Climate of the Northern States; containing directions for raising young trees in the nursery, and for the management of the Orchard and Fruit Garden. By JOHN J. THOMAS. Price 50 cents. This is a neat little volume, published by Mark H. Newman, New York, and has been placed on our table by Lindsay and Blakiston of this city, and is for sale by them, as well as at this office. It is a valuable work, prepared by an experienced cultivator of Fruit Trees, and will amply repay every farmer, who will look into it, and use the information to be obtained from it.

### SHORT ADVERTISEMENTS,

The subject matter of which, may correspond with the agricultural character of this paper, will be inserted at the rate of one dollar for each insertion of ten lines or less; and so in proportion for each additional line. Payment in advance.



## Agricultural Implement & Seed Warehouse,

No. 194½ Market Street, Philadelphia.

For sale as above. Cultivators from \$3 50 to \$5 50 each; Cultivator Ploughs for working among corn, potatoes, roots of every kind, digging potatoes, &c., &c.; Horse Rakes; Centre-Draught Ploughs for 1, 2, 3 or 4 horses; Cutting Boxes in great variety; Corn Shellers; Grain Fans; Grain Cradles of the best make; Scythes, Snaths, Scythe stones, Rifles, Grass Hooks; improved Barrel Churns, Cheese presses, &c., &c. Garden and Flower Seeds of all kinds, for sale at wholesale and retail, by D. O. PROUTY. March 15—1f.

## Agency for the Purchase & Sale of IMPROVED BREEDS OF CATTLE & SHEEP.

The subscriber takes this method of informing his friends and the public, that he will attend to the purchase and sale of the improved breeds of cattle, sheep, &c., for a reasonable commission. All letters post paid, addressed to him at Philadelphia, will be attended to without delay.

AARON CLEMENT.

Jan. 15th, 1846.

## COATES' SEED STORE,

OF MORE THAN FORTY YEARS STANDING,

Where may constantly be had

Clover, Timothy, Orchard, Herd,

AND OTHER

GRASS SEEDS,

TOGETHER WITH A COMPLETE ASSORTMENT OF

GARDEN SEEDS,

Of the finest Quality and best Varieties,

JOS. P. H. COATES.

No. 49, Market st., Philada.

PHILADELPHIA

## AGRICULTURAL WAREHOUSE,

No. 291 Market Street, North side, between Seventh and Eighth Streets, Philadelphia.

Thomas Furber has just received from Worcester, Massachusetts, an assortment of Ruggles, Nourse and Mason's improved Eagle, Subsoil and other Ploughs, which have been so much approved by the principal Agricultural Societies in New England the several last years; also Bennett's Cultivators and Stevens' Self-Feeding Hay and Straw Cutter, a late and very valuable improvement in that kind of implement; Grain Cradles, &c.; an assortment of Ruggles, Nourse and Mason's Self-Sharpener Ploughs of the form and model of those above named, are daily expected. T. F. has and will constantly keep a large assortment of Farming Implements, as Fan Mills, Straw and Hay Cutters, Corn Shellers, Grain Cradles, Scythes, &c., together with Garden Tools of all kinds.

May 15th, 1846.

1 yr.

NEW

## Horticultural and Agricultural Ware-house,

81 Chesnut Street below Third, South side.

The subscriber has for the better accommodation of his customers, opened the above ware-house, with a large stock of Garden and Field Seeds, crop of 1845. Implements and Books on Gardening and Farming; he calls the particular attention of farmers to his pure stock of Swede Turnips, Field Carrots, Beets and Parsnips, Pruning Shears, Saws and Knives.

March 14th, 1846.—1y.

R. BUIST.

## SEED STORE,

No. 23 Market Street, Philadelphia.

The subscriber keeps constantly a supply of White and Red Clover, and other grass seeds; fresh Perennial Rye-grass, and Lucerne seed. Field seeds, consisting of choice Spring Wheat, Barley, Potatoe Oats, Northern and other seed-corn. Also, in season, Fruit and Shade Trees. Garden and Bird seeds generally. Guaranteed in parcels to suit purchasers.

M. S. POWELL.

Philad., Feb., 1846.

1f.

We keep on hand at this office, and will supply our friends with Agricultural works generally. Among which are

THE FARMER'S ENCYCLOPEDIA, full-bound in leather;—Price	\$3 50
YOUATT ON THE HORSE, with J. S. Skinner's very valuable Additions;	2 00
BRIDGEMAN'S GARDENER'S ASSISTANT;	2 00
THE AMERICAN POULTRY BOOK;	37½
THE FARMER'S LAND MEASURER;	37½
DANA'S MUCK MANUAL;	50
Complete sets of the FARMERS' CABINET, half-bound, 9 vols.	7 50
DOWNING'S Landscape Gardening,	3 50
Downing's Fruits and Fruit Trees of America,	1 50
SKINNER'S Every Man his own Farrier,	50
AMERICAN Poulterer's Companion,	1 25
BOUSSINGAULT'S RURAL ECONOMY,	1 50
FARMERS' & EMIGRANTS' HANDBOOK,	1 00
MORRELL'S AMERICAN SHEPHERD,	1 00
STABLE ECONOMY,	1 00
BEVAN ON THE HONEY BEE,	31¼
BUISTS' ROSE MANUAL,	75
THOMAS' FRUIT CULTURIST,	50
SKINNER'S CATTLE & SHEEP DOCTOR,	50
AMERICAN FARRIER,	50
THE FARMER'S MINE,	75
HOARE ON THE VINE,	62½
HANNAM'S Economy of Waste Manures,	25
LIEBIG'S AGRICULTURAL CHEMISTRY,	25
“ ANIMAL CHEMISTRY,	25
“ FAMILIAR LETTERS,	12½

As well as his larger works on Chemistry and Agriculture.

Subscriptions received for Colman's Agricultural Tour—or single numbers sold.

☞ We are prepared to bind books to order.

### GUANO.

TWENTY-FIVE tons first quality Ichaboe Guano, in bags or barrels, for sale in lots to suit purchasers, by

S. & J. J. ALLEN & CO.,

No. 7 South Wharves, 2nd Oil Store below Market street, Philadelphia.

October 15th, 1845.

tf.

### Poudrette.

A valuable manure—of the best quality, prepared in Philadelphia, for sale at the office of the FARMERS' CABINET, No. 50, North Fourth Street, or at the manufactory, near the Penitentiary on Coates' street. Present price, for seven barrels or more, \$1 75 per barrel, containing four bushels each. Any number of barrels less than seven, \$2 each, or thirty-five cents a bushel. Orders from a distance, enclosing the cash, with cost of portage, will be promptly attended to, by carefully delivering the barrels on board of such conveyance as may be designated. The results on corn and wheat have been generally very satisfactory. Farmers to the south and in the interior, both of this State and of New Jersey, are invited to try it.

JOSIAH TATUM.

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## THE FARMERS' CABINET,

IS PUBLISHED MONTHLY BY

JOSIAH TATUM No. 50 NORTH FOURTH STREET, PHILADELPHIA.

It is issued on the fifteenth of every month, in numbers of 32 octavo pages each. The subjects will be illustrated by engravings, when they can be appropriately introduced.

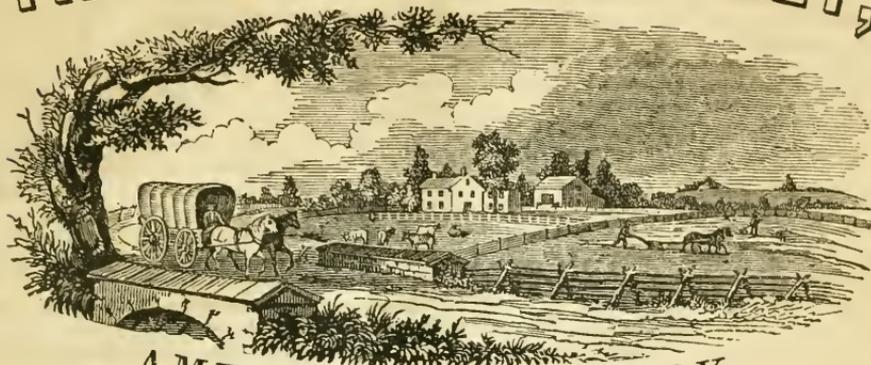
TERMS.—One dollar per annum, or five dollars for seven copies—payable in advance.

All subscriptions must commence at the beginning of a volume. Having lately struck off a new edition of one or two of the former numbers, which had become exhausted, we are now able to supply, to a limited extent, any of the back volumes. They may be had at one dollar each, in numbers, or one dollar twenty-five cents half-bound and lettered.

For six dollars paid in advance, a complete set of the work will be furnished in numbers, including the tenth volume. The whole can thus readily be forwarded by mail. For twenty-five cents additional, per volume, the work may be obtained neatly half-bound and lettered. Copies returned to the office of publication, will also be bound upon the same terms.

By the decision of the Post Master General, the "Cabinet," is subject only to newspaper postage. To any Post office within thirty miles of Philadelphia, they will go free of charge.

# THE FARMERS' CABINET, AND



## AMERICAN HERD-BOOK.

DEVOTED TO  
AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

Perfect Agriculture is the true foundation of all trade and industry.—LIEBIG.

Vol. X.—No. 12.]

7th mo. (July) 15th, 1846.

[Whole No. 138.]

PUBLISHED MONTHLY,

BY JOSIAH TATUM,

EDITOR AND PROPRIETOR,

No. 50 North Fourth Street,

PHILADELPHIA.

Price one dollar per year.—For conditions see last page

For the Farmers' Cabinet.

### Prospects in Eastern Virginia for new Settlers.

TO THE EDITOR,—If we examine a map of the United States, we shall find that Virginia occupies a position the most favoured by nature of any of her sister republics. In her southern counties, cotton, the fig, and other plants belonging to the warmest climates, flourish—the fig standing the winter without any protection. In all the southern and eastern counties, sheep and cattle live out all winter, and really need but little shelter or fodder. In the central mountain region, and the northern and western parts of the State, the climate approaches that of southern Pennsylvania and New Jersey.

There is likewise a great variety of soil suited to the growth of every production of the temperate regions of the earth; while in many of the eastern counties the richest marls are abundant and of easy access, to

sustain and increase the fertility of the land. Both climate and soil seem better adapted to the growth and perfection of all the finer fruits, than any other portion of the United States; and I believe the time is not distant when this region will supply all the northern cities with fruits and vegetables in great abundance and perfection.

The Potomac, Rappahannock, York, and James rivers, penetrate the eastern counties, and with their branches furnish the means for transportation, not only to the northern States, but to all the world besides. Steamboats leave Norfolk in the extreme south-east part of the State late in the evening, and arrive in Baltimore before sunrise the next morning; so that a farmer or horticulturist in the vicinity of Norfolk, can attend the Baltimore or Washington markets as easily, and have his fruits and vegetables, or meats and poultry there, just as fresh as one within a mile of those cities. The run from Norfolk to Philadelphia, or New York, with a good steamer, would occupy but a few hours; and as soon as there is business made for the boats, they will be there ready. During the last year a single individual received \$5000 for cucumbers alone,\* which he raised near Norfolk, and sold to supply

\* Three years ago, a friend of the editor's, who went from New Jersey to the neighbourhood of Portsmouth, Va., told him he had paid the summer before, the sum of \$1200 freight on vegetables, sent to the Philadelphia market.—Ed.

the New York market; and the quantity of green peas, tomatoes, potatoes, green corn, &c., sent from that region, is surprising to many—during the present year large quantities of peaches will also be sent. This business is only in its very infancy in Virginia, and is, as yet, confined to the neighbourhood of Norfolk and Portsmouth, where much of the soil is admirably adapted to these productions.

On the upper part of James river, say half way from Old Point Comfort to Richmond, the banks become high, the country is free from marshes and swamps, and situations are abundant where there is no danger to health to be apprehended. The same remarks apply to the peninsulas between the James and the York rivers, the York and the Rappahannock, and between the latter and the Potomac.

In answer to my inquiries respecting the health, &c., of these peninsulas, a highly respectable physician says, "our climate is delightful, our summers tempered by the sea breeze, which is as regular as the trade winds, are much less oppressive than at the north; and our winters are short, and so mild, that many farmers do not house their stock, or feed them at all.

"Our bills of mortality will compare favourably with those of any other part of the Union below the mountain range. We have no epidemics, no consumption, rarely pleurisy or rheumatism. It is notorious, that before the Revolution, when this was really a garden spot, persons from the upper country came here annually in the summer for health."

The same intelligent writer says, "It must be pleasing to a Virginian to see the attention of respectable and enlightened strangers directed to the valuable but neglected lands of the State. That the importance of her soil and locality are becoming daily more and more appreciated, admits of no doubt. Already a considerable emigration from the north has been directed towards us; and in Fairfax county lands which were thrown out as valueless, have been so improved by the judicious management of their new proprietors, as to rival in production our best farms; producing from ten to fifteen bushels of wheat, and thirty and forty of corn.

"If this can be effected in what has always been considered almost the poorest part of our State, what might not be expected from a district of country, which as you justly say, has been, and may again be made the garden spot of the United States.

"In this region shell marl abounds, and is used with the most decided benefit. I know

of farms in the vicinity of Williamsburg, which ten years ago, would not produce ten bushels of corn to the acre, now producing thirty, from no other assistance than marl.

"We have no scarcity of excellent water, and our soil is based upon clay. White clover is indigenous, and with the slightest assistance from lime and animal manure, red clover grows most luxuriantly. I have raised as fine as I ever saw in Pennsylvania."

A letter from Westmoreland county says, "from four to six thousand acres can be had in the same neighbourhood, where it is healthy and convenient to the Potomac and Rappahannock rivers; the unimproved land, from \$3 to \$4, and that which is improved, from \$5 to \$10 per acre."

Another describes a "farm of 300 acres, with a new comfortable dwelling, on the main road—price \$6 per acre."

Other letters describe lands in almost any quantity, in this region, at prices varying from \$1 to \$5 or \$6 per acre. It may be asked how it can be, that in a country so blessed by nature, with the most genial climate, watered by a profusion of rivers and streams, which abound with the finest fish and oysters; and with a soil which, wherever it is properly used, produces equal to any other—has become so poor as to be abandoned, and thrown out, as waste and valueless?

Intelligent Virginians can easily give a satisfactory answer to such questions; and they are becoming awake throughout the State, to the necessity of applying the only remedy to redeem their beautiful country, and restore their noble "old dominion" to her proper and rightful rank in the great confederacy, of which she was once at the head.\*

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\* The great drawback upon Virginia's prosperity—the incubus that lies with deadly pressure upon her thrift, is the institution of slavery. We are not going to discuss this point, either in its moral or political aspect: the Farmers' Cabinet is not the place for it, were we so disposed. We lay it down, however, as a dogma as incontrovertible as her own mountains are immovable, that Virginia can never attain the degree of prosperity and the position in our confederacy which nature seems to have intended for her, until labour shall become honourable to the white man, and she shall recognize heartily and in good earnest, the important proposition that no idle white population can flourish. Our very heart yearns for the regeneration of Virginia. Great as her star unquestionably is among the greatest of the Union, she finds others by unprecedented strides passing her, and usurping the place she of right should occupy. And why, but because she paralyzes her strength and impedes her progress by clinging to—or perhaps we should rather say, by not shaking off—that

The agriculturists have from the beginning pursued a course which would inevitably impoverish any country upon the earth; they have cropped the soil incessantly, without even permitting it to rest a single season, with tobacco, wheat, and corn, as long as it would produce enough to pay the labour of tillage, without returning to it the least particle of manure of any kind. And when by this murderous system they have got all they could, they have abandoned their old fields and cleared off the adjacent forests, subjecting its soil to the same process, until most of the surface of the eastern part of the State has been robbed of its fertility; and where the palaces of the statesmen of the Revolution stood, surrounded by all the beauties of the most luxuriant vegetation, nothing but a wilderness now appears, and the *wild deer* and *wild turkies* have returned in abundance, and enjoy a more uninterrupted freedom than they can find in the wilds of the "far West."

One of my correspondents, a resident and a native of the Southern part of the State, says, "Nature has done every thing for it, while it has been the work of man to mutilate and destroy. Whenever it shall arise, as it were, from the dust, ..... it will be one of the most delightful countries in the world. Wherever the spirit of improvement has been manifested, its salubrity has been found to be equal to that of any other portion of the State. Our large farmers do not, in most instances, make one per cent. profit on their estates; and indeed they become involved deeper and deeper in debt every year; and from time to time have to sell off the increase of their slaves,—if not worse—in order to keep up. But it is hard to change

which in its very nature, is worse than lead upon her pinions. We speak only of expediency—we have reference only to dollars and cents, and to that widely extended prosperity and influence which are built up and sustained by their instrumentality. We leave the subject in all its moral bearings to herself—all we mean to ask at present is, that she would with a steady step and an eye fixed upon the goal ahead, consult her true and abiding interests, and take measures which in less than twenty years must double—aye treble the value of her real estate, and give such an impetus to her population, that when she shall cast her eye over the census of 1860, she will be ready to doubt the possibility of its correctness.

We have many subscribers in Virginia; and modest as we would fain appear in these matters, the editor has reason to flatter himself in the belief, that his unassuming paper has not been without an influence that shall be permanently beneficial to that portion of our Union. It shall be his aim never to allow this influence to be any other than promotive of Virginia's truest interests.—E.

old habits. There is a great want of every thing like energy and good management in our population at large. Now and then we meet with a prosperous farmer, but they constitute exceptions to a general rule.

Another writer, who offers a large tract of land with a good mill seat upon it, in Westmoreland,—the county which gave birth to Washington—for \$5 per acre, says, "Should you come to Virginia, you must expect to see every thing in the farming way as far down the hill as it can be; but I hope there is a better day ahead. You will find warm-hearted and kind-hearted people; and people who obey the laws, and never interfere with other people's business; and, by the by, not much with their own."

I will make another short extract from a very recent letter, which answers the question thoroughly. "Nature has done every thing to fit this country for the abode of man, but man, by a course of conduct in opposition to the Divine harmony, has marred the works of his Maker. Our political empirics have prescribed various remedies, but few have been bold enough yet to prescribe the only one that can prove effectual. There is one black spot which must be wiped away, before our regeneration can take place. When two of the tribes of Israel wished to settle on the east bank of Jordan, they were told that if their motives were bad, *their sin would find them out*. Thus it must be in all ages of the world."

Intelligent freemen, who are willing and not ashamed to earn their bread by the sweat of their own brows, could soon make these desert places fruitful as a garden; and I feel anxious that my northern brethren, who think of changing their homes, should look at the advantages of this favoured country, before they go to the far West, and fare worse.

In a future number I will describe some fine estates in the upper country, which possess distinguished advantages, and are offered at very low prices.

Persons desirous of going to Virginia to see the country, may obtain any information in the possession of the writer, either personally, or by letter, *post paid*, directed to Moorestown, Burlington county, N. J.

S. S. GRISCOM.

Moorestown, N. J., Sixth mo., 1846.

To take lamp-oil from carpets or wearing apparel, make a paste of rye flour, of the consistency of a rather stiff batter, and apply it to the place; when dry, it will rub off, and take the grease with it. A second application may be necessary in some cases, but not often.

### The Alpaca.

THE late effort of the Agricultural Association in this city to secure the object proposed by Mr. Amory Edwards, who has been five years Consul in Peru, to introduce this beautiful animal in our country, promises to be successful.

Several thousand dollars have been subscribed for this purpose, and Mr. Edwards has offered his services to go down to Peru and Bolivia and select a flock of about three hundred, and bring them to the United States, as soon as the required amount can be obtained.

In England, the experiment has, it appears, proved quite successful. The female in that climate having matured two years earlier, and produced a finer fleece than in its own native districts; the length of staple was also improved, and the fleece increased in a remarkable degree. They are hardy, docile, affected neither by intense cold nor heat. The clip in Peru weighs nine pounds, while that in England is said to weigh seventeen and a half, which is suited to the finest class of goods, and calculated to compete with silk. The flesh is fine, savoury, easily digested, and recommended in Peru, by physicians to invalids, in preference to fowls. The fleece of one alpaca is equal to six merino sheep. The following notice of the alpaca, from the *Baltimore American*, gives a very graphic description of its nature and habits, and may impart a little additional information to our agricultural friends.

"The alpaca inhabits the slopes, table lands, and mountains of Peru, Bolivia, and Chili, enduring all the vicissitudes of the climate. They are found twelve thousand feet above the level of the sea, where they derive a subsistence from the moss, &c., growing upon the rocks, exposed to all the rigors of the elements, and receiving neither food nor care from the hand of man. The shepherd only visits them occasionally; yet such are their gregarious habits, that they seldom stray away and mix with another flock, being kept in discipline by the older ones who know their grounds, and become attached to the place of their nativity, to which they return at night, evincing an astonishing vigilance and sagacity in keeping the young ones together, and free from harm. In the formation of their stomach they resemble the camel, and can undergo extreme hunger and thirst. These are, however, the secondary qualities of the animal, though stated first. It is for its wool that the alpaca is particularly desirable, and entitled to be regarded, should the proposed experiments

succeed, as affording a new and valuable staple of commerce. In this point of view the suggestion becomes one of considerable importance, as it is thought that the alpaca will be found a suitable stock for all our western and northern States, where waste and unprofitable pastures would suffice them, and they would browse on wild grasses and herbage that sheep and cattle reject."—*Farmer & Mechanic*.

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For the Farmers' Cabinet.

### Raising Poor Land.

MR. EDITOR,—I have been a regular subscriber and reader of your paper since 1840; and must now say, that if I have been a little more successful than some of my neighbours, it is owing to the very many valuable hints derived from the pages of the *Cabinet* and other agricultural papers to which I am a subscriber: therefore let me say to young farmers, subscribe at once to some, or all the agricultural papers in your reach; you will be well repaid.

On the 1st of January, 1840, I commenced farming on 200 acres of poor sandy land, for which I gave on a credit, \$1,120 at public sale, which was considered high. The cleared land had been allowed to grow up with bushes and briars, and the farm had never been ditched, and had been cultivated by a good farmer as tenant, from year to year, in two fields. I laid it off in three fields at first, but have it now in four. There are 125 acres of cleared land, 20 of which are branch meadow, which I have got in pretty good order. Five acres are laid off to the house, out-buildings, feed and stack-yards, garden, lawn, &c., &c.; which leaves me 25 acres to each field. In 1839, one half of the farm, or two fields, raised 380 bushels of shelled corn, small grain in proportion, and no hay. In 1840, one third raised me but 320 bushels of corn; and 17 of wheat, and 135 of oats, upon the half tilled in 1839. I have given you what was raised the year before I took it, and what I raised the next year. I was of course not able to do much for my corn-field, and nothing for the field of small grain.

I will now state what I made last year, 1845, on 25 acres, or one field, in corn, and the same quantity in small grain. I do not report the result to show what large crops I produced, but merely to show the difference between what the farm would make when I took it, and what it will make at this time. In 1845 I raised on 25 acres, 660 bushels of corn, three cart-loads of pumpkins, 200 bushels of Irish potatoes, 75 bushels of sweet

potatoes, and two bushels of field peas and beans.

Value of corn,	\$462 00
Pumpkins,	6 00
Irish potatoes,	150 00
Sweet potatoes,	46 87½
Peas,	2 50
On 25 acres, in 1845, I made 70 bushels wheat, at \$70—600 bushels oats, \$200,	270 00
On ten acres of meadow I had 11 tons of hay; the rest being grazed, worth on the farm,	88 00
	<hr/>
	\$1025 37½

I say nothing of what is grown in the garden; the advantages of grazing; increase of stock, &c., &c., including pork raised, vegetables, orchard, &c., which I estimate to be equal in value to the cost of raising the grain, hay, &c., &c.

Now let us see what the produce for 1839 was worth, or would have been worth, if the same quantity of land had been tilled that I tilled in 1845. Assuming that they raised the same average of wheat and oats to the bushel of corn that I raised, it will be found that they raised 190 bushels of corn,

worth,	\$133 00
21 bushels wheat,	21 00
180 bushels oats,	60 00
	<hr/>
	\$214 00

Thus you see that as \$214 are to \$1025 37½ so is the difference since I took it; or it has increased to nearly five times its former value in cropping alone. I have no doubt that at least one dozen of your readers are ready to say that "this is all likely enough; we know that poor land under bad management, can be made to increase at fully this rate with good management and a larger outlay in labour, lime, manure, &c." But let me tell you, gentle reader, that it has been done without any outlay for either lime or other manure, or very little additional labour, except what most men think barely sufficient to cultivate the land and save the crops with. I keep two men and a boy, whose average wages and clothes amount to \$175. I keep two mules and two horses; the boy and one man cultivate the crops, except at busy times; the other man keeps the cart running, making and getting out manure; at leisure times the others are either ditching in the fields or cutting wood, rails and poles in the branch, taking everything before them there. By clearing so much meadow, which once burnt over will want sprouting but once, the grass blade will keep the balance down after that.

My neighbours say my stock is much too large for the farm, but I am a head-strong child, and will have my own way; so I keep two horses, two mules, one colt, and thirty head of cattle, besides calves; all of which are well sheltered in winter, in stabling that I have built for that purpose—for I have been burnt out once since I have been on the farm. My plan is to lose nothing that will make the weeds grow about the house, such as suds, brine, droppings of the poultry-house, pigs, ashes, &c., all of which is taken care of as follows. I keep a *flat* pile of dirt hauled at a proper distance from the kitchen, upon which all such things are put. This pile is top-dressed with dirt as often as I think it will bear it. I forgot to mention that all weeds, the mowing of the lawn, garden-walks, yards, &c., are all put there, and a little dirt thrown over it as soon as it withers a little. My feed yard has a regular slope from the stables to the back part, at a regular fall of three and a half feet in the whole distance. On the lower side I keep dirt hauled in to soak up the strength of the liquid manures that would otherwise escape. My rule is to haul out the farm-yard or stable manure and spread it regularly over the feed yard, and then haul dirt and spread over it, and so on through the summer. My cows as soon as the grass is sufficient, are turned upon the commons, and penned every night in the field upon dirt, leaves, rushes, &c., &c.; this pile I top dress with this kind of stuff about once in two weeks, until feed time, when they are taken into the field that is to go in corn the next spring twelve months, and a pen made, and there I feed away the corn-stalks; while they are a little green they eat them cleaner than they will later, and as soon as they get them sufficiently thick under foot, I top dress with dirt, and so keep on till the stalks are all fed away. Then I take the cattle to the stable, where they have plenty of good dry bedding all the balance of the winter; these stables are kept cleansed precisely as the horse stables are. In this way I raise a good deal of good stuff. My hogs are never allowed to run in the field, but are kept in the woods. When I take them in to fatten, I supply them with materials, and they manufacture me a great deal of manure: I let nothing escape. All of my manures are put on spring crops.

I should have added, the only reason why I did not use lime and plaster in my compost piles, is because I was in debt when I commenced, and had all the farm buildings burnt down after I had put them up. This kept me in debt to enable me to rebuild, and I am still in debt; but I make the farm pay all expenses of cultivation and ordinary im-

provements and repairs, and reduce the debt annually, for I have no other means of importance but the farm.

#### A CONSTANT READER.

Easton, Md., June 9th, 1846.

Communicated for the Farmers' Cabinet.

#### Culture of the Peach Tree.

THE following extracts are made from a letter from Dr. THOMSON, of Wilmington, Del., dated the 26th of Third month last, addressed to the Southern Planter. The subject is important to peach growers, as well as to the lovers of this delicious fruit. The Dr. says in a part of his letter not copied, that the reports in circulation of the enormous profits of this business, have been greatly exaggerated: th's indeed is readily believed, by all who are in the least familiar with operations of the kind. They should be discouraged and rectified, as they are calculated to mislead and disappoint the public.—ED.

To Mr. Isaac Reeves, a native of New Jersey, is the whole credit due of first introducing on a large scale the culture of the inoculated peach tree into Delaware. The late Mr. Jacob Ridgway, of Philadelphia, owning a farm near Delaware City, on the Chesapeake and Delaware canal, was induced by Mr. Reeves to become his partner, and upon this property, in the spring of 1832, they set out the first twenty acres of inoculated peach trees ever planted in this State, with the view of supplying the Philadelphia market. They rapidly extended their plantation to about one hundred and twenty acres, were eminently successful, and one year—the *very best* season they ever had—their gross income from the sales of fruit was some sixteen thousand dollars. Peaches then commanded from one dollar twenty-five cents to three dollars per basket, containing about three pecks. In the spring of 1836, the late Mr. Manuel Eyre and myself followed suit upon our "Union Farm," midway between Wilmington and Newcastle on the Delaware river, to about the extent of one hundred and forty acres. In a year or two afterwards, Mr. Philip Reybold & Sons went into the business—then a host of others, until now, from twenty-five hundred to three thousand acres of land, in Newcastle county, are planted with, and successfully cultivated in peaches, making Delaware, though the smallest of the States, the largest producer of this fruit. The result has been a proportionate diminution of price, the average, per basket, one season with another, not exceeding from thirty to sixty cents. In this way Delaware has become the principal supplier of the Baltimore, Philadelphia, New York and North river mar-

kets, and many of our fine peaches now reach even Boston. The whole annual income from this branch of business to the farmers of this county may be estimated from one to two hundred thousand dollars. For so handsome an additional product the agriculturists of Delaware, as well as the consumers of peaches in our vicinity, owe a debt of gratitude to the *originator* of the culture, whom as one, I should gladly unite in presenting with some valued and lasting memento in recognition of his merit for giving a *new staple to a State*; for who is a greater benefactor to mankind and the age he lives in, than he who brings into operation a new branch of business, giving by his enterprise and perseverance an impetus to agriculture; causing the earth to give forth its increase, and so multiplies its fruits as to bring them within the reach and enjoyment of all? The great improvement made in peaches within the last few years in New Jersey and Delaware, consists in propagating none but the finest kinds, by *budding and grafting*, so as to have the fruit *as early and as late* as our latitude will admit; the earliest ripening with us from the first week in August, such as Troth's Early, Early York and Early Ann, and ending in the latter part of October with Ward's Late Free, the Heath, Algiers' Winter, &c. I need not enumerate all the different varieties used and planted out to keep up this succession—some of the principal are in the order of enumeration, Troth's Early, Early York, Early Ann, Yellow Rare-ripe, Red Rareripe, Malacatoon, Morris' White, Old Mixon, Rodman, Ward's Late Free, Malden, Free Smock, Late Rareripe, Heath, Algiers' Winter, &c. These trees are generally obtained for about six dollars per hundred, from approved nurserymen in Delaware and New Jersey, and the rearing of them constitutes a distinct business of itself. They are produced by planting out the peach stones, or pits, in the spring, which have been slightly covered with earth in the fall, so as to be exposed to the action of the winter's frost. The sooner the pits are put in the sand or earth after the fruit is matured, the better—they should never become dry. The shoots from these stones are budded in August of the same year, from four to six inches from the ground. The ensuing spring all the first year's growth is cut off above where the scion has taken—not, however, until it is well developed—when, in the fall and following spring they are ready for transplanting or sale. The mode of preparing the ground for them is precisely that with us of the Indian corn crop—the earth is well

ploughed, and from thirty to forty bushels of lime are spread upon it to the acre. The trees of like kinds, for the convenience of picking, are then set out in rows at distances varying from twenty to thirty feet apart, according to the strength of the soil; a crop of corn is then put in and cultivated in the usual way, and this is done successively for *three years*; by this time the trees begin to bear. The cultivation of the corn being the proper tillage for the trees, and this crop amply paying for all investment in trees, &c. After the trees commence bearing, no other crop of any kind should ever be grown among them, as I have known two rows of potatoes between a row of peach trees not only to affect the fruit, but seriously injure the trees; but they should be regularly ploughed some three or four times in the season, just as if the corn crop was continued. So obnoxious in our country is the peach tree to the worm, or borer—the *ageria exitiosa*—that each tree in the orchard should be examined twice a year, summer and fall—say in June and October—by removing the earth down to the roots, and killing with a pruning-knife every intruder—then scraping the injured bark and removing the glue. Thus exposed, they should be left for a few days, when the earth should again be replaced with a hoe. The limbs should be only moderately pruned or thinned out, so as to admit the sun and air, avoiding in the operation leaving *forks*, which incline them to split when burthened with fruit. When the peaches ripen, they should be carefully picked from step-ladders, seven to eight feet high, into small hand-baskets, holding one peck each. Our operators for this purpose are both men and women, who earn from fifty to seventy-five cents a day, besides being *found*. These baskets are gently emptied into the regular market baskets, which are all marked with the owner's name and strewed along the whole line of orchard to be picked. As these are filled they are put into spring wagons, holding from thirty to sixty baskets, and taken to the wharf, or landing, where there is a house, shed or awning, for the purpose of *assorting them*, each kind by itself, which is into prime and cullings—the prime being distinguished not only by their size and selection, but also by a handful of peach leaves scattered through the top. They are then put on board the boats in tiers, separated by boards between, to keep them from injury, and so reach their destined market. We consider a water communication from the orchards, or as near as may be, most essential, as all land carriage more or less bruises or destroys the fruit.

Our roads through the orchards and to the landings are all kept ploughed and harrowed down smooth and even. The baskets for marketing the peaches are generally obtained in New Jersey at twenty-five to thirty-seven dollars and fifty cents per hundred. With trifling modifications our culture and practice may be made to suit not only the Southern but the South-Western States. I may here, perhaps, properly remark, that the average life of our trees is from nine to twelve years, when properly cared for and protected as I have described; that the two great and devastating enemies the trees have to contend against are the *peach worm* and the *yellows*; the first readily yielding to the *knife* and the treatment of semi-annual examination; the latter being a *constitutional, consumptive, or miasmatic disease*, for which no other remedy is as yet known or to be practiced but *extirpation and destruction*. There are *many theories and some practice* recorded on this, by far the most destructive enemy of the peach tree. I may hereafter give my own views on this particular and obscure disease. I concur, however, with Mr. Downing, of Newburg, that the great and prevailing disposition of the peach tree in our climate is to over-production of fruit in favourable seasons. Our remedy for this is carefully to thin it off by plucking all those that touch, or are within two or three inches of each other, when the size of hickory nuts, which are thrown into some running stream or into the hog-pens to be devoured. This mode "of heading in," or pruning one half of the producing buds, is new to me, but which I have just tried upon my garden trees in the city, and will be able to speak of *experimentally*, hereafter. With us in Delaware, as everywhere else, the peach tree *succeeds best in a good soil*. That preferred is a rich sandy loam, with clay. Many of my finest trees and choicest fruits are grown in a loose and stony soil. The trees should never be set out in wet, low, or springy situations, and for the same reasons, high and rolling ground should be selected for your plantations, and for the additional circumstance that they are less obnoxious to early frosts.

I may further remark, for the benefit of those desirous to pay some attention to the cultivation of peaches—and *who should not be?*—that considerable additions of new and valuable varieties, *native* as well as *foreign*, are annually being made to those already known among us—many of them very fine. I have now several hundred raised from pits, imported for me by N. Frazier, Esq., Buenos Ayrean Consul, of Philadelphia, and long a

resident merchant in that city, many of which will bear this year and next. To Mr. Sayres, of Sparta, Georgia, I am also indebted for a full sample of the native Georgia varieties, as well as to some other gentlemen in different States—all of which I mean to test and bring into notice, if of sufficient value. Whilst in the vicinity of Richmond, Norfolk, Fredericksburg, Petersburg, Winchester, and other large towns of Virginia, the peach tree may be cultivated with profit for the market, and all over the State for the purpose of drying, every farmer and owner of a lot may raise them in abundance for his own use. But I am persuaded that the best fruit crop that Virginia farmers could raise is the *apple*—the *pippin apple*, with perhaps some other of the finest fall and winter varieties; they will bear transportation—always command a good price, and be saleable in our middle States and Northern markets, and find a ready sale in London and Liverpool. The very best and fairest I have seen for years was during the past winter, the growth of Clarke and Jefferson counties, Virginia. But I am digressing from the object of this letter, in going from the *peach* to the *apple*, yet I am induced, like Mr. Lawrence in his late valuable letters to Mr. Rives, in saying *what Virginia may be*, to stir her up and “provoke her to good works,” if she would take into serious consideration all the advantages of her location, climate, and natural resources. For her extent of territory, mineral wealth and productive capacities, she is unequalled by any of the old or new States, in her ability to accumulate riches and support a population worthy of her ancient fame. But here I must curb my thoughts and repress the feelings and expressions that seek vent in addressing her sons on a specific subject. Two weeks spent in Eastern and two in Western Virginia within the past year, would prompt one of her *native sons* in another State, and under other influences, to say to her *more*, if not *half as well*, as Mr. Lawrence has recently said of what *she is*—of what *she is capable*, and what *she ought to be*. But he must refrain, whenever *she* shall inquire and seek to apply the proper remedy to the disease and answer the interrogatory, why her population is so sparse?—why her mines, her water powers, and her agricultural abilities are not fully developed and made profitable?—he may be inclined to give an opinion for what it is worth.

Ah ha! said the farmer to his corn.  
Oh hoe! said the corn to the farmer.

For the Farmers' Cabinet.

### Diseases of Grape Vines.

MR. EDITOR,—For your April Number I wrote a short article on the “Blight or Mildew of Grape Vines:”—perhaps more extended remarks would be acceptable.

Most of your readers are aware that *cream of tartar* is contained in the sediment of wine. It is found on the sides and bottoms of wine casks after the wine has been withdrawn, and is composed of tartaric acid and potassa. Potassa is the base of potash. This will serve to show the importance of using potash in the culture of the grape. All the tart grapes contain much of potash in the cream of tartar.

For the woody part of the grape vine, some lime is necessary; but the alkali which the grape vine most uses is potash. This potash must be in proportion to the quantity of carbonic acid, &c. furnished and used by the plant—if there is much carbonic acid, ammonia, &c., absorbed by the plant, a greater quantity of potash is necessary; and if the supply of carbonic acid, &c. be small, a less quantity of potash is needed. As it is difficult to measure the quantity of carbonic acid, &c. absorbed by the large leaves of the grape vine, so it is difficult to measure the quantity of alkali needed:—and there are other circumstances in the way of determining the quantity to be supplied. Consequently I could not tell how much alkali would be needed by a plant, even if I were to see it and know the circumstances under which it grows.

The best guide I have found to determine when a plant needs alkali, is to watch it, and if it grows rapidly and healthy, it is doing well enough; but if the leaves show a light blue mildew, or the fruit becomes withered, or is eaten by insects, I immediately apply the alkalies in small quantities every few days, until I see a healthy appearance.

It must be recollected the *alkalies*—lime and potash—are the elements needed. They are found in many substances—lime in limestone, plaster, marl, ashes, &c., and potash in silicate of potash, ashes, nitrate of potash, poudrette, guano, soap-boilers' salt ley, common ley, soap-suds, &c. The ashes of oak, hickory, and other hard woods, contain more potash and lime than the ashes of poplar and the other soft woods, or the ashes of anthracite and bituminous coal. Much of the potash is extracted from ashes by the leaching process; therefore leached ashes are not so good for agricultural and horticultural purposes as unleached ashes—though even unleached ashes will well repay the trouble

and expense of their application. If a grape vine grows in a paved yard, where ashes cannot be dug in, nor scattered over the surface, the application of soap-suds would be particularly desirable. If the vine roots extend much, the soap-suds might be applied in different parts of the yard, where the pavement is not, and where it is supposed the roots of the vine are. The soap-suds might be thrown on the ground as fast as it can absorb it, and this application may be made every week, until the mould has left the vines, and the grapes quit falling or shrivelling. If the vines be very young, or it is desirable, in consequence of the leaves being very much moulded, to apply the soap suds directly to the leaves, instead of the roots—the operation should not be performed while the sun is shining, unless it be early in the morning.

Wood or coal ashes slightly dug in, are a much more safe application than strong ley, nitrate of potash, guano, poudrette, &c.—they are not so liable to kill the vine when used to excess.

CHEMICO.

Wilkesbarre, June 27th, 1846.

From the American Farmer.

### Proper time for Cutting Timber.

THE communication of R. S. Livingston to the "American Agricultural Association," and the conversation growing out of it on the subject of "the proper season for felling timber," as published in the May No. of the American Farmer, induces me to say a word in relation to this matter, which may prove beneficial to some, and induce persons having time and means, to make experiments on the subject.

Some years ago, in clearing a piece of land, I was induced to cut the hickory out first. It suited me to have it done between the first of June and some time in August. The whole of it was cut for fire-wood—part of this laid over the following summer, and when used in the winter for fuel, was found *entirely clear of worm holes, and as sound and solid* as the most durable of our kinds of timber.

It has been repeated by me three several times, and always with the same result. In one instance, a few hickories could not be cut until their neighbours, the oaks, were removed, which could not be cut until the winter—the winter came; they were cut, and the following summer they were literally riddled by the worm, while those cut within the time designated above, were as solid as metal.

These are the facts in the case, but how

to account for them, I was at a loss until the publication of Liebig's work on Agricultural Chemistry. He says, "after August the leaves form no more wood—all the carbonic acid which the plants now absorb, is employed for the production of nutritive matter for the following years: instead of woody fibre, starch is formed and is diffused through every part of the plant by the autumnal sap." I at once saw why no worms existed—because there was no nourishment in the wood for them to subsist on.

Some few persons in this vicinity prefer cutting oak timber for rails in August, while others prefer February. The difference in the times of cutting oak is not so great as in hickory, as the former is not so liable to be injured by worms. A question here presents itself, however, whether it is not better to fell all timber at a season when it is devoid of all *nutritive and fermentable matter*? And whether oak, as rails, or any uses exposed to the weather, would not be doubly durable? May not the dry-rot, from which the shipping interest has suffered so much, have its origin in a want of attention to this matter?

Governments have instituted experiments purposely to find a preventive after the timber has been cut; but as far as my knowledge extends, very little attention has been given to the proper season for *felling* it.

I would here suggest, that in all probability the precise time might be the two last weeks in July, and two first in August.

Any of your readers may have an opportunity of trying experiments through the course of the present season, and thereby render a benefit to several great interests. Let us try to "do a little good."

DANIEL ZOLLICKOFFER.

Lauderdale, May 16th, 1846.

From the N. Y. Tribune.

### To Butter Makers.

MESSRS. EDITORS,—As the season of butter manufacture progresses, it may not be amiss to hint to your numerous subscribers engaged in the same, to be careful and not salt their butter too much—keep it in new white-oak firkins of 50 and 100 lbs.—proportioned to the number of cows—which are perfectly air-tight. One half-inch salt at top and bottom, without brine, unless to soak the firkin, is all sufficient; keep it in a cool cellar until frost comes, and then forward it to market. It is atmospheric air which ruins butter, and if kept free from it in cool situations it will keep sweet for years.

A BUTTER DEALER.

### Swedish Turnips raised on barren land with Artificial Manure.

WE have not seen the English journal from which the following is taken—we copy from the *New England Farmer*, an excellent paper by the way, and always valuable. The editor has been much interested in the experiment detailed. It is a handsome illustration of the efficiency, in one case at least, of *book-farming*.—Ed.

The problem which I sought to solve was—*Can we, by supplying to the soil the constituents—so far as known—of a plant, cultivate that plant successfully on any land, however sterile?*

The portion of ground chosen for testing the principle here implied, consisted of five acres, and was selected because it appeared the most barren and unlikely in the neighbourhood. Scarcely any herbage whatever covered it. On the failure of the hay crop in 1844, a party of poor men from Shaftesbury, came to me soliciting employment. They were set to dig this piece of land, but the soil proved too thin and stubborn for the spade; they therefore, in their own phrase, “knocked it over” with the pickaxe. Twice in the season afterwards it was sown with rape, but the produce was nothing.

A soil of this constitution seemed a fair field for the experiment on a pretty large scale and in a popular way. I say in a *popular* way, because to satisfy the requirements of rigid science, a strict analysis both of the soil and manure would be asked for, before any inference would be permitted to be drawn from the result. Yet for practical purposes, it may seem enough to show that on land growing nothing, a large crop can be raised by adding ingredients which the chemist tells us are necessary for the fruitful cultivation of that crop.

Accordingly, in the latter part of April, 1845, I determined on seeing whether on this piece of land it were possible to produce a crop of Swedes weighing twenty tons to the acre.

To effect this object, chemical analysis, as given in Professor Johnstone's Lectures, acquaints us that there would be required for the bulbs and tops of such a product, inorganic matter weighing more than 500 lbs.; consisting of about 146 lbs. potash, 76 lbs. soda, 69 lbs. sulphuric acid, 30 lbs. phosphoric acid, 103 lbs. lime, 22 lbs. magnesia, 23 lbs. chlorine, 23 lbs. silica, as well as a certain portion of organic matters, in the form of ammonia and carbonic acid. It was expected that if these were sufficiently supplied to the plant in its early stages, the remainder of the carbonic acid and ammonia necessary to the perfection of the crop,

would be furnished either—as Mulder affirms,—from the decaying matter in the soil, or from the ammonia brought down in the rains, according to Liebig.

The quantities of inorganic substances above enumerated, are not constant, but vary, as is well known, within certain limits, according to the soil: they must be considered only as an approximation to the quantities and proportions required.

Now as potash and soda may, to a great extent, replace each other, I calculated that 30 bushels of wood ashes would give those alkalis in sufficient measure. I made no provision for the alkaline earths, supposing that the chalk in the soil would yield lime enough. The sulphuric and phosphoric acids would be found amply in the two cwt. of Ichaboe guano, 50 lbs. of burnt bones dissolved in sulphuric acid, in addition to the sulphates and phosphates contained in the wood ashes. The guano would also yield sufficient ammonia to the *young Swede* plant; whilst two loads of saw-dust, already in a rotten state, having been fermented by pigs' manure and salt, would give out a constant supply of carbonic acid, as well as conduce—according to Mulder—to the constant formation of ammonia in the soil. The great affinity of decaying sawdust for moisture, would prevent the effects of drought so formidable to turnips on our high chalklands. The opposite danger of excessive rains washing the manure away from the growing plants, was guarded against by pouring over the guano and ashes employed, 10 lbs. of sulphuric acid in a diluted form, thereby converting the highly soluble carbonates into the comparatively insoluble sulphates of ammonia and potash.

In order that every portion of the manure thus calculated, might, as far as possible, be duly apportioned to each plant, it was determined to bury both the seed and manure in holes at measured distances; but the looseness of the soil, filling up each hole as soon as made, defeated this expedient. The labourers were then instructed to begin at the highest point, and working downhill, to strike down with their hoes, small drills two feet apart. The manure having been previously hauled to the summit, a large wheelbarrow, loaded with a sufficient quantity for two drills, was wheeled down the interval between the two drills; and a handful of the contents placed at distances of one foot in each drill. Children followed, dropping upon each deposit of manure three fingers full of seed, mixed with fine soil, which served to prevent the manure from burning the seed. In descending the hill they trod on their work, and so buried both

the manure and seed together. This operation completed the process; the only subsequent cultivation consisted in the thinning of the plants by children.

The issue of this experiment has exceeded my most sanguine expectations. Forty perches of the best part of the crop, yielded of clean roots after the rate of 23 $\frac{3}{4}$  tons per acre, whilst 40 perches of the poorest gave 19 tons. On comparing the relative quantities of the heaviest and lightest produce, competent persons have estimated the crop at 21 tons per acre of clean roots. Some of these, when topped and tailed, weighed 14 lbs.; many hundreds of them exceeded 10 lbs. in weight.

One remarkable circumstance presented itself to the observer. Between roots of eight and nine lbs. weight, would be seen every now and then a starvelling plant, with a bulb not bigger than a marble. This arose from the seed being carelessly dropped at a distance from its appointed food. But the accident served to prove beyond all doubt, the efficiency of the manure and the intrinsic poverty of the ground.

When I began this experiment, the men employed on it and every eye-witness who passed by, smiled incredulously at what appeared at the time an act of well-meant folly—but now, the success can no longer be denied, and the last refuge of scepticism betrays itself in the question so often put to me—"But what was the cost? You may buy gold too dear." Of course, this is a most important part of the subject, and I rejoice, for the sake of the labourer begging for work, and the nation begging for food, that I can answer the inquiry most satisfactorily. Thus stands the cost per acre:

	£	s.	d.
30 bushels wood ashes at 6d.	0	15	0
2 cwt. Ichaboe guano, at 7s. 6d.	0	15	0
50 lbs. burnt bones and 22 lbs. sulphuric acid,	0	7	0
30 bushels sawdust,		2	6
Labour account in hoeing, drill, dropping seed—the surface of the land being otherwise untouched,	19	6	
10 lbs. sulphuric acid poured over ashes,		1	3
Rent, 5s.; rates, &c., 2s.		7	0
Seed, 5 lbs. per acre, 1s.		3	6
Hauling manure to the summit of the hill,		7	0
	£3	17	9

It will be observed that no charge is made for pulling the roots, because four or five

tons per acre of green food, furnished by the leaves, and fed to a flock of ewes, must far outweigh that expense, and ought, by right, to add a considerable sum to the credit side of the account.

I have thus given every item of cost that can be laid against 21 tons of Swedes per acre. The precise value of this root is, I am aware, an undecided point. In this neighbourhood, I can sell them at the rate of £1 per ton; but experiments made last year, and others still in progress, lead me to value them at 9d per cwt., at the very lowest—or 15s. per ton, when employed in fattening sheep in sheds; and this exclusive of the value of the dung,—which estimate makes the above crop worth £15 15s. per acre, at a cost of £3 17s. 9d., giving a return of more than 300 per cent. for the outlay.

I hope that it will not be thought an instance of too rapid a generalization, if I draw from this experiment the inference that, with a *skilful* employment of labour, reliance on the principles of chemistry, and adequate capital, there is no soil, however poor, but will abundantly repay the costs of cultivation.—A. Huxtable, in *Journal of Royal Agricultural Society*.

For the Farmers' Cabinet.

#### The Reybold Sheep-shearing.

MR. EDITOR,—The undersigned, present by invitation at the shearing of the Reybold flock of Leicester sheep, in Delaware, on the 18th ult., report as follows:

The flock is in perfect health and fine condition, evincing great care and judgment in the management, and an improvement in fleece and carcass that, after fifteen years of unwearied diligence in the pursuit of that object, may be supposed to approximate to perfection of form and truth of character. Many of the yearling wethers, as well as the ewes, cut eight pounds of washed wool, and not a broken fleece in the whole flock; while a two-year old buck of the Reybold breed, cut eleven pounds and a half of washed wool, of superior quality and fineness.

The imported pure Leicester ewes are splendid specimens of that favourite breed, and cannot, perhaps, be excelled in any country; cutting fleeces of very carefully washed wool, seven and eight pounds each, of fine quality and snowy whiteness.

The imported bucks of the "New Oxfordshire bred," it would be difficult to describe in language that would do them justice. To say that nothing equal to them has ever

before been exhibited in this country, would be but faint praise; indeed they must be *seen and felt*, before they can be *understood*. They were shorn by old and experienced English shepherds, who declare they never sheared or saw their equals in England, *by a long shot*. By the most careful examination and admeasurement before shearing, they were found to exhibit the following enormous proportions:

No. 1. Three feet across the back; five feet from nose to rump; seven feet four and a half inches in circumference—live weight 320 lbs.

No. 2. Two feet and two inches across the back; five feet two inches from nose to rump; seven feet in circumference.

The fleece of No. 1, weighed 13 lbs. of carefully washed wool, white, and of silky texture. No. 2, cut a fleece of well washed wool, weighing 17 lbs., measuring nearly one foot in length of staple, of superior quality, and which, if it had been left unwashed, would have exhibited a fleece weighing more than 22 lbs. After shearing, No. 1 was found to measure five feet six inches in circumference behind the shoulders, but it would be vain to attempt to convey an idea of the enormous depth and width of carcass, or the manner in which the fat is laid on upon the breast, sides, rump and back. Suffice to say, in the estimation of judges present, the carcass would cut from six to seven inches thick of fat on the rib, if the sheep were slaughtered at the present time.

The lambs, a cross with these bucks on the largest of the Reybold ewes, exhibit a remarkable consanguinity of form and character to their sires, and will, no doubt, rival them in the hands of their careful and judicious owner, who will leave nothing undone that can be made subservient to his purpose, namely; the creation of a flock of sheep that shall equal those of any other quarter of the globe, for wool and carcass combined. We were happy to find that inquiries and orders for bucks are being made of the enterprising owner of this magnificent flock for distant plantations; may success attend him in his patriotic undertaking.

Mr. Clayton Reybold succeeds his father in the ownership of the Reybold flock; his address is, Delaware City, Delaware.

I. W. THOMSON, M. D.  
ISAAC REEVES,  
JAMES PEDDER.

Delaware, June 4th, 1846.

We understand that J. A. Woodside is engaged to paint portraits of the "New Oxfordshire Bucks" before shearing, of which we hope to obtain an engraving for publication in our pages.—Ed.

### Remarks on Transplanting Trees.

No work is more carelessly or heedlessly performed, by individuals in general, than planting trees. Few persons seem to be aware that a tree is a living object. To expect success, therefore, in transplanting them, some care must be taken in performing the operation. The following brief rules may be some guide to those who have not had much experience in setting out trees:

1st. Never plant a tree unless the ground has been previously well pulverized and broken fine. To plant trees in holes, as too many persons do, is almost fatal to their future growth.

2nd. Deep planting is one of the greatest errors in this country, and more particularly in those soils in this vicinity; and the probability is, that more trees die from this cause than any other; if they thrive for a year or two, they soon languish and die, apparently without any cause. In cold, clayey soils, this is frequently the case. Avoid by all means this error in this vicinity. The surface roots should never be more than two inches below the soil.

3rd. When the tree is all ready for setting out, commence planting by taking out the earth to the depth of a foot or more, and of a width to admit the roots easily without bending or breaking. If the soil is naturally very poor, some good rich compost is necessary to fill in among the roots with the earth.

4th. Before planting prune off all bruised or decayed portions of the roots, shorten such as are too long; if the roots are thick and matted, they should be thinned out. Avoid cutting or injuring any of the small fibres, for those are indispensably necessary in the first stage of its growth.

5th. The most important rule to be observed in setting out trees, and one that should never be overlooked, is to fill the earth firmly around and among the roots, so that no hollows or crevices may remain. To perform this operation successfully, the earth and compost should be moderately dry; the soil should be thrown in sparingly, and not in too large quantities at once, so as to give the planter sufficient time to arrange the soil among the fibrous roots. Avoid jerking the tree up and down—give it a few taps at the bottom with your hand; a pail or two of water may be given to each tree, by a water-pot, which as soon as it is settled among the roots, should be earthed over to avoid evaporation. If the trees are crooked, they should be carefully staked, and they will soon grow straight.

6th. Do not neglect the trees when they are set out. Keep the ground continually

loose around them; see that no insect attacks them; look after the growth of the wood, and commence with summer pruning in July, when all very rapid growing shoots should be shortened; in each winter pruning cut out all unnecessary wood, and give the tree a washing with a solution of whale oil, soap, and potash.

Strict attention to these rules will amply repay the cultivator for his labours—while without this, no success can be expected.—*Bangor Courier.*

### Agricultural Exhibition.

*Premiums offered by the Philadelphia Society for promoting Agriculture, for the Exhibition, to be held on Wednesday and Thursday, the 30th of September and 1st of October, 1846.*

#### HORSES.

For the best thorough-bred stud-horse,	\$10.
For the next best do.,	do. \$5.
For the best stud-horse adapted to the field or road,	\$3.
For the next best do.	do. \$4.
For the best thorough-bred brood mare,	\$3.
For the next best do.	do. \$4.
For the best mare adapted to the field and road,	\$8.
For the next best do.	do. \$4.
For the best horse colt between two and four years old,	\$6.
For the next best do.	do. \$3.
For the best filly or mare colt, between two and four years old,	\$6.
For the next best do.	do. \$3.
For the best horse colt between one and two years old,	\$4.
For the next best do.	do. \$2.
For the best filly or mare colt, between one and two years old,	\$4.
For the next best do.	do. \$2.

#### NEAT CATTLE OVER TWO YEARS OLD.

For the best Durham bull over three years old,	\$10.
For the next best do.	do. \$5.
For the best Durham bull between two and three years old,	\$3.
For the next best do.	do. \$4.
For the best bull of Devon blood,	\$3.
For the next best do.	do. \$4.
For the best Ayrshire bull,	\$3.
For the next best do.	\$4.
For the best Alderney bull,	\$3.
For the next best do.	\$4.

For the best Durham cow over four years old,	\$3.
For the next best do.	do. \$4.
For the best Durham cow between two and four years old,	\$8.
For the next best do.	do. \$4.
For the best Durham heifer between two and three years old,	\$6.
For the next best do.	do. \$3.
For the best heifer of mixed breed, between two and three years old,	\$4.
For the next best do.	do. \$2.
For the best heifer of native breed,	\$4.
For the next best do.	do. \$2.
For the best cow of Devon blood,	\$6.
For the next best do.	\$3.
For the best Ayrshire cow,	\$6.
For the next best do.	\$3.
For the best Alderney cow,	\$6.
For the next best do.	\$3.
For the best cow of mixed blood,	\$4.
For the next best do.	\$2.
For the best cow of native breed,	\$4.
For the next best do.	do. \$2.
For the best yoke of working oxen, reference being had to their performance,	\$10.
For the second best do.	do. \$6.
For the third best do.	do. \$4.
For the best fat ox or steer,	\$6.
For the next best do.	\$3.
For the best fat heifer over three years old,	\$4.
For the next best do.	do. \$2.

#### NEAT CATTLE UNDER TWO YEARS OLD.

For the best Durham bull between one and two years old,	\$6.
For the next best do.	do. \$3.
For the best Devon bull,	do. 4
For the next best do.	do. 2
For the best Ayrshire bull,	do. 4
For the next best do.	do. 2
For the best Alderney bull,	do. 4
For the next best do.	do. 2
For the best bull calf between four months and one year old, of each of the above breeds,	\$2.
For the best Durham heifer between one and two years old,	\$6.
For the next best do.	do. \$3.
For the best Devon do.	do. 4
For the next best do.	do. 2
For the best Ayrshire do.	do. 4
For the next best do.	do. 2
For the best Alderney do.	do. 4
For the next best do.	do. 2
For the best heifer of mixed breed,	do. 4
For the next best do.	do. 2
For the best heifer of native breed,	do. 4
For the next best do.	do. 2

For the best heifer calf of each of the above breeds, between four months and one year old, \$2.

## SHEEP.

For the best Bakewell or Leicester buck over one year old, \$1.

For the next best do. do. \$2

For the best do. under one year old, 2

For the next best do. do. 1

For the four best ewes over one year old, 4

For the four next best do. do. 2

For the four best ewe lambs between four and twelve months old, \$2.

For the next best do. do. \$1

For the best Southdown buck over one year old, \$1.

For the next best do. do. \$2

For the best do. under one year old, \$2.

For the next best do. do. \$1

For the four best do. ewes over one year old, \$1

For the next best do. do. \$2

For the four best ewe lambs between four and twelve months old, \$2.

For the next best do. do. \$1

For the best Merino buck over one year old, \$1

For the next best do. do. \$2

For the four best do. ewes, do. 4

For the next best do. do. 2

For the best Cotswold buck over one year old, \$1

For the next best do. do. \$2

For the best do. under one year old, 2

For the next best do. do. 1

For the two best do. ewes over one year old, \$1.

For the two next best do. do. \$2

For the two best do. ewe lambs, between four and twelve months old, \$2.

For the two next best do. do. \$1

For the best improved buck of mixed breed, over one year old, \$2

For the next best do. do. \$1

For the four best ewes, do. 2

For the four next best do. do. 1

## HOGS.

For the best boar of any breed, over one year old, \$1

For the next best do. do. \$2

For the best boar over six months and under one year, \$1

For the next best do. do. \$2

For the best sow do. over one year old, 4

For the next best do. do. 2

For the best sow do. over six months and under one year old, \$1

For the next best do. do. 2

For the best boar pig between two and six months old, \$3

For the next best do. do. \$2

For the best sow pig do. 3

For the next best do. do. 2

For the five best pigs under two months old, \$1.

For the five next best do. do. \$2

## POULTRY.

For the best pair of Jersey Blue fowls, \$2

For the next best do. do. 1

For the best pair of any other improved breed, \$2

For the next best do. do. \$1

For the best pair of capons, 2

For the next best do. do. 1

For the best pair of turkeys, 2

For the next best do. do. 1

For the best pair of geese, 2

For the next best do. do. 1

For the best pair of ducks, 2

For the next best do. do. 1

## AGRICULTURAL IMPLEMENTS.

For the best plough, the merits thereof to be decided by trial, \$10

For the next best do. do. 5

For the best drill machine, 4

For the next best do. do. 2

For the best straw or hay cutter, 4

For the next best do. do. 2

For the best horse power straw or stalk cutter, \$6

For the next best do. do. 3

For the best corn sheller, 4

For the next best do. do. 2

For the best wheat fan, 4

For the next best do. do. 2

For the best display of agricultural implements, \$10

For the next best do. do. 5

Suitable premiums will be given for any improved implement of merit, not included in the above.

The ploughs intended for trial, must be at the Exhibition during the whole time. Premiums will be awarded to the best ploughman:

For the best, \$5

For the next best, 3

## AGRICULTURAL PRODUCE.

For the best five pounds of fresh butter, a silver butter knife, value \$5

For the second best do. do. 3

For the third best do. do. 2

For the best firkin or jar of salted or preserved butter, not less than 20 pounds, a silver butter knife, value \$5

For the next best do. do. 3

For the best sample bushel of red wheat, 3

For the next best sample bushel of red wheat,	\$1
For the best do. white wheat,	3
For the next best do. do.	1
For the best sample bushel of rye,	2
For the next best do. do.	1
For the best sample bushel of flint corn,	2
For the next best do. do.	1
For the best do. gourd seed corn,	2
For the next best do. do.	1
For the best do. mixed corn,	2
For the next best do. do.	1
For the best sample bushel of oats,	2
For the next best do. do.	1
For the best sample bushel of potatoes,	2
For the next best do. do.	1
For the best bushel of sweet potatoes raised in this State,	\$2
For the next best do. do.	1
For the best display of agricultural produce generally,	\$8
For the next best do. do.	6

A suitable premium will be given for any new variety of grain of improved quality.

A statement of the mode and manner of making and preserving the different kinds of butter, will be required of competitors. The preserved or salted butter must have been put up at least two months previous to the Exhibition.

### A PLOUGHING MATCH,

For the trial of ploughs and ploughing, will take place on the second day of the Exhibition, 1st of October, at nine o'clock.

Stock entered for the foregoing premiums cannot compete for others.

No animal that has previously taken the Society's first premium, will be allowed to compete in the same class.

Ample evidence will be required as regards the pedigree, age, and character, of all stock entered for premium.

Premiums will be paid in money or Agricultural publications, as may be preferred. All premiums uncalled for within six months from the time of holding the Exhibition, will be considered as donations to the Society.

The Judges are authorized to withhold premiums where the object is not entitled to distinction; and where but one of a class is exhibited, they will award such premium as they think it merits. Those persons who intend bringing animals for competition, must inform the Committee of Arrangement before ten o'clock on the first day of the Exhibition.

Premiums to be confined to animals owned exclusively in this State, except where assurance is given that they will be allowed to remain here at least nine months.

All stock, &c., contributed, must remain on the ground during the two days of Exhibition.

A. S. ROBERTS,  
KENDERTON SMITH,  
ISAAC W. ROBERTS,  
HENRY CHORLEY,  
GEORGE BLIGHT,  
ASHER MOORE,  
AARON CLEMENT,  
*Committee of Arrangement.*

For the Farmers' Cabinet.

### Destructive Insects.

MR. EDITOR,—Some very destructive caterpillars have made their appearance in this region within a few years, and it will be well for growers of fruit to turn their attention, at an early day, to their trees.

Some of these were taken the first of September last,—length from one to one and a half inches; head black, body striped lengthwise, with six yellow and six brown; central stripe above, brown; sparsely covered with stiff hairs or bristles, most of which were at each extremity—growth rapid from a week to ten days, when they underwent a change;—head double its former size—having been less in thickness than the body, and now greater—brown stripes dark, length of body diminished and more densely covered with hair; growth more rapid; amount of leaves devoured immense, in proportion to size of larva. Continued to feed voraciously for two weeks, when they burrowed in the earth, and in three or four days had assumed the pupa form. So soon as the imago emerges—if you deem any part of this worthy of publication—you may hear more.

These feed only at night—as do the larva of most lepidopteræ—and destroy the entire leaf, so that wherever we see a branch divested of its leaves, we may know some attention is necessary. During the day they remain in groups on a small branch or petiole, attached by their central part, both extremities being elevated. This is very peculiar, and enables them to occupy much less space on the branch. This is the proper time to collect and destroy them. If not attended to, they may in a few years become as numerous as they, or similar ones, were in Massachusetts, and subsequently in Illinois, leaving large orchards entirely leafless.

The 7th of last September, for the first, I discovered a different species from the preceding. These larvæ were striped, yellow and brown, as the first, but had an enlarged red ring—the third from the head—from which sprung four black spines, longer than

similar spines from the other rings. Their mode of holding, while at rest, is also different. These hold with all their feet on the flat surface of a leaf. After eating quite as voraciously as the preceding species, until the 24th of September, they spun silken cocoons between the leaves given for food, and are yet nymphæ. I have, however, seen some of these commencing their depredations in a neighbouring orchard this season. These do not confine their ravages to the apple, but with me, have attacked the cherry and quince.

J. K. E.

Paradise, Pa., July 1st, 1846.

For the Farmers' Cabinet.

### Moorestown, Burlington County Agricultural Society.

THIS Society was organized on the 26th of Second month last, by the adoption of a Preamble, Constitution, &c. It has forty-nine members. The following were chosen officers for the present year, viz. Levi Borton, *President*; Allen Jones, Edward French, William Matlack, Israel Lippincott and William Lippincott, *Vice Presidents*; William Parry, *Recording Secretary*; Chalkley Gillingham, *Corresponding Secretary*; Samuel R. Lippincott, *Treasurer*; Silas Walton, Thomas B. Evans, Isaac Collins and John Perkins, *additional members of the Executive Committee*.

The stated meetings of the society are held on the first Third-day in the Third, Sixth, Ninth and Twelfth months, at two o'clock, P. M., in the Town-House at Moorestown.

The Executive Committee, which consists of all the officers above named, with the four additional members, meets on the first Fifth-day in every month, except the months in which the stated meetings are held, and the other members have the right to meet with them.

At the stated meeting held on the 2nd inst., Dr. Joseph Parrish, of Burlington, delivered an address, very appropriate to the occasion, and it was, on motion resolved, that a vote of thanks be presented to him for the kind and able manner in which he has discharged the task, and that he be requested to furnish a copy for publication.\*

Resolved that the Executive Committee be instructed to procure a suitable place for an Agricultural Library, for the use of the members of this Society, and that they be authorized to purchase, or otherwise procure such works connected with the subject of

agriculture, as in their judgment will advance the objects of this society.

Resolved that an extract from the minutes of this society, be published with the address, in the Farmers' Cabinet.

WILLIAM PARRY, *Rec. Sec'y.*

Moorestown, N. J., Sixth mo. 8th, 1846.

For the Farmers' Cabinet.

### Slitting Fruit Trees.

MR. EDITOR,—In a late number of an agricultural paper is an article ridiculing the practice, time-honoured as it is, of slitting the bark of fruit trees to render them healthy and fruitful. The writer remarks that he would as soon think of slitting the skin on a boy's legs to make them grow, as the bark of trees.

This comparison is more witty than just. If the circulation of blood was confined to the inner coat of the skin, and if the interior skin kept accumulating by successive annual layers until it reached the thickness and solidity of sole-leather, then such a practice might be very useful.

It is true, I believe, that the outer bark of most fruit trees runs with its greatest strength directly around the tree; and thus when a number of dry and hardened coverings have accumulated, forms a powerful obstacle to the expansion of the interior wood, and presses so hard upon the circulating portion of the bark as greatly to obstruct the movement of the juices.

Such, I say, may be the case, when these annual coverings have accumulated from any cause, and to satisfy ourselves on this point, we have only to observe the effect of the yarn, or slip of bark, or matting, with which the limb of a tree is bandaged or tied, in the process of budding, which, if not timely removed, will, by the expansion of the wood, come to press so hard upon the interior bark as to ruin all. This effect is produced, we see, by a simple woollen yarn. How much more powerful must be a series of coatings of bark wrapped around just like this bandage. It is said that nature provides for the removal of these outer coatings as rapidly as is necessary. So she does, in general, but not in particular diseased states of the tree. It might as well be said that nature provides for everything necessary to the growth and perfection of trees, fruits and vegetables; but we find on the contrary, that they require our constant care and supervision. Their diseases must be looked to and remedied, as in the human subject, or both will soon be beyond the "reach of surgery"—and this is one of those

\* This Address appeared in our last number.—Ed.

diseases. The voice of ages has pronounced it such, and slitting is the remedy which has been applied. And I would here assure the writer before alluded to, that where he finds a custom sanctioned by universal practice, he may be sure there is something in it.

Others may apply a different cure for this disease, and sometimes unconsciously. Whitewash applied to the bark of trees, acts, there is no doubt, more beneficially, by softening and removing the superfluous integument, than in any other way.

Where the direction of the greatest strength of the bark runs vertically, as in most forest trees, this disease called *hide-bound*, is not likely to occur; as the bark readily splits into seams, and thus accommodates the increased size of the wood until it is finally loosened and falls off. In the sweet-gum, the obstinacy of the bark in the latter particular, is curiously exemplified. I have one growing, which is not thicker in the wood than my finger, but the bark is at least four inches in circumference, and channelled with deep seams extending in nearly to the wood, and passing up spirally like the thread of a very quick screw.

Now as to my experience in the slitting of the bark of fruit trees. On coming to the place where I now reside, four years since, I found several plum and quince trees which were but cumberers of the ground, as they produced no fruit to glad the eye or the taste. They had received all the ordinary attention of pruning, digging, &c. From the appearance of the trees I was induced to try slitting at once; which was performed freely on the branches as high as I could conveniently reach, to the ground—say three or four incisions to the tree. These incisions are now filled with one inch wide, each, of new bark. This, with the further ordinary treatment, has brought the trees into full bearing, though in the case of the plums, unfortunately the depredations of the curculio have hitherto prevented any of the fruit from reaching maturity. This experiment in slitting, has satisfied me of its utility. While writing, I will say that I have this year, however, the prospect of enjoying some of the fruits of my labours; as by removing one of the largest plum trees from the garden to ground to which the poultry has free access, the young fruit has been less molested, and I expect in another year will entirely escape; as when the fruit falls, the grub is industriously sought and plucked out by its natural enemy, the feathered tribe—in this case the poultry.

I intend to remove the balance of the plum trees from the garden next spring. The tree above spoken of as promising fruit,

which is from fifteen to eighteen inches in circumference, was removed in the fore part of April. This was planted in the following manner. I have planted some two hundred fruit and forest trees this spring in this way, and they bid fair to thrive, almost without an exception. Trees obtained from the woods, such as oak, ash, beech, &c., are admitted by all to be hard to transplant successfully, as the roots are large runners, with but few fibres, which are the really important part. The beeches thus obtained have made from eight to ten inches of new wood on the main shoots already, though they have been put out less than two months. To many of your readers it may not be original, though to others I apprehend it will be new. It was communicated by a distinguished manufacturer on the Brandywine, who is as well skilled in the art and mystery of rural life, as in his fabrics; and whose place, I am told—though I have not seen it—might almost compare with “Hagley,” which Lyttleton, “by his taste in rural ornament, rendered the most attractive residence in England.” He confesses to having obtained the secret from his lady—so that whatever credit there is in the matter belongs to the fair part of the creation. It was communicated as being adapted particularly to evergreens, but I have extended it to all, with the greatest apparent success. It is simply this:—Dig a hole sufficiently wide and deep—but not too deep—to receive the roots of the tree; put back of the top soil, sufficient to fill the hole half full. Then add sufficient water—not well or spring water, if it can be avoided—to reduce this into a thin mortar or mud; incorporate well, and place the tree in its position, working it up and down till it reaches the bottom of the hole; now complete the filling, and tread down gently. The tree will at first appear loose and slightly supported, but in twenty-four hours, or as soon as the superfluous water has passed away, the tree will appear to have grown there; and if not large will do very well without support. To protect the tree against the droughts of midsummer, it is my practice to raise a mound of earth from four to eight inches around the body, to be removed after the first season. It should be dishing towards the tree.

To persons who propose transplanting trees of considerable size next fall or spring, I would recommend to them to go at once and dig a ditch around the tree at a distance that will leave sufficient root, carrying the ditch below all the roots, and cutting them off in its progress down, and again refilling the ditch. The remaining roots will imme-

diately send out fibres which will greatly assist the tree when it comes to be removed. A little red paint for the bruises and wounds of trees, I find to answer well.

Yours truly, P.

Newcastle Co., Del., June 1st, 1846.

### Crops in Alabama.

To the Editor of the Farmers' Cabinet:—

DEAR SIR,—I have been highly pleased, and I trust benefited, by the perusal of your excellent agricultural journal, as every cultivator of the soil must be, who takes a deep interest in his honourable and useful avocation. I was in your city last summer while on my first visit North;—I was born and raised in the South, and never before travelled North, although upwards of fifty years of age. I endeavoured as far as it was in my power to make my trip an agricultural one; still a travel through the States without acquaintances, affords but little opportunity of observing much of the agricultural operations going on. I however saw enough not only of the high state of improvement in many sections through which I passed, but of the deep and abiding interest taken by the farmers in many sections I travelled through, to stimulate me to increased attention to my farm. I am at this time deeply engaged in manure making. I am preparing a compost of blue marl and pine straw, that is, the leaf of the long leaved pine. I have set in to prepare fifty thousand bushels of compost manure, by hauling into a lot where my cattle are penned each night on the straw and marl. I prepared last summer and fall, some forty thousand bushels of the above compost; I spread it over my land at the rate of eight hundred bushels to the acre; the growing crop on the land manured with the compost above, is at this time twice as large as the crop on land equally good, that I did not have manure enough to spread over. The land I am manuring at the above rate, was nine years past, a perfect forest; the present crop is the ninth crop grown on the land I now own, as I settled this place in the woods in 1839.

I am pleased to have it in my power to inform your readers, that the prospects of the farmer are truly flattering at this time through this entire region of country; we have been blessed with fine seasons; the lands being generally fresh and good, the corn and cotton look well, and in our southern climate much of the corn may now be said to be made: it is, however, too early to determine as to the cotton crop, as so much depends on the months of July, August and

September, as to the extent of our great southern staple.

I have a great desire to improve my stock of cattle by a cross with some of the best blooded cattle I can find. Will you so oblige me as to inform me through the columns of the Cabinet, at what price I can obtain a good blooded young bull, or a cow with a young bull calf, to be brought out to Apalachicola in the month of October or November, with the name of the owner and the cost to Apalachicola. I presume an animal can be sent out from Philadelphia as cheap as from New York.

ALEXANDER McDONALD.

Eufaula, Ala., 28th June, 1846.

### Settlements in Virginia.

OUR readers have noticed, and perhaps with some interest, what has been said latterly in the Cabinet, respecting the prospects in Virginia of new settlers from the North. A few weeks ago the editor received a letter on this subject from his highly valued friend, EDMUND RUFFIN, of Old Church, Hanover Co., Va., long known as the indefatigable and efficient conductor of the *Farmers' Register*, and now actively and successfully engaged in the improvement of his own estates in Virginia, and stimulating his fellow citizens to similar exertions. He will, we trust, excuse the liberty taken with his letter. The extracts given below, bear so fully on the subject, and are withal so practical, that we could not feel willing to withhold them from our readers.

After referring to a visit of observation paid this spring by some New Jersey farmers to Petersburg, &c., he says:

"I have long been anxious, both in reference to public and private interests, for such *colonization* of our comparatively *waste country*, by the immigration and settlement of a number of the industrious and frugal farmers of the more Northern States. I have felt satisfied that the low price of lands here, added to the great facilities for their high improvement, offered to such men profits very far exceeding such as they can make in their present locations; and perhaps greater advantages—taking in view all results—than even removal to the cheapest or richest lands of the new Western settlements.

"Of what your countrymen themselves saw and highly approved for purchase and settlement, I need not say anything. Their approval, in my opinion, was properly bestowed. But I wish them and others to learn—and to ascertain fully by subsequent examination—that there are other places and plenty of space offering still greater advantages in cheapness of land, and facilities for improvement by marl—though fur-

ther from market and from the supply of town-made putrescent manures, both of which I know were important advantages in the eyes of the gentlemen alluded to. So great, so surpassing all others, are the advantages of having easy access to our marl beds, that I deem them beyond all other advantages without them. And I would strongly urge upon all persons who propose to settle in Virginia, to seek for *marling* lands. Some such lands are near Petersburg, and much more in the adjoining county of Prince George, twelve to eighteen miles from Petersburg, and in other parts of the State. But I refer especially to that neighbourhood because I know it best, it being the place of my birth, long residence, and most extensive and profitable operations in marling and cultivation.

"The prices of such lands within four to seven miles of ship navigation, and 12 to 18 from Petersburg, vary from \$10 to less than \$2 the acre, according to value or demand. Such lands are mostly poor, but easily and highly improvable by calcareous marl; and have plenty of that most valuable of manures, either under them, or at most within two or three miles, and *now* to be dug *gratis*. These lands too are healthy. They are the *ridge* or higher lands between the rivers, on smaller water courses. The marl can usually be applied for less than \$5 the acre, and which will usually add 50 per cent. to the next succeeding crop; and with proper management gives a four-fold increase within ten or fifteen years, even without the addition of other manures.

"The neighbourhood of my present residence also offers great, though different advantages. Hereabout, the ridge lands are more sandy and poorer than those of Prince George, above referred to, and *still more like much land that I saw in New Jersey*; and the marl *under them* is poor and scarce. But along the Pamunkey river, within three to five miles, there is abundance of both green sand and calcareous marl, much of which, if in New Jersey—as your green sand or "marl" does—would sell at a high price, and there be carted twice as far as it need be here, where it is to be obtained for merely the digging. The access to this peculiarly enriching marl, gives a peculiar *intrinsic* value, in my opinion, to all lands near to it. But that has scarcely affected their prices. They however sell higher than better lands elsewhere, because of the vicinity to Richmond—15 to 20 miles—which offers a market for all surplus produce of the farms.

"If fifty or one hundred *suitable* individuals from New Jersey were to form set-

tlements here, their industry, frugal habits, and labour for improvement and cultivation of lands, with the means offered them in cheap land and cheap marl, and other manure, would soon quadruple the productive power of their farms; and such population might serve as much to benefit the country and people around them, as their own fortunes."

The letter goes on to give further details, which perhaps, would too much extend our article. Our correspondent states that he would take pleasure in aiding any in their inquiries, who may be desirous to purchase and settle in his vicinity. He also names his son, Edmund Ruffin, Jr., in Prince George County, and Laurens Wallazz, in the same neighbourhood, as among those who will give information when required.—Ed.

### Premiums of the Pennsylvania Horticultural Society.

THE following will be awarded at the stated meeting on the 18th of next month. Those for this month were given in our last number.

PEACHES—For the best, half a peck to be exhibited, \$3.

For the next best, do. do. \$2.

PEARS—For the best, do. do. \$3.

For the next best, do. do. \$2.

PLUMS—For the best, two dozen to be exhibited, \$2.

For the next best, do. do. \$1.

FIGS—For the best, one dozen to be exhibited, \$2.

For the Farmers' Cabinet.

### Soy.

DR. EMERSON of this city has received from a friend in China, some seeds of the *Dolichos Soja*, a plant from which the Chinese and Japanese prepare their celebrated dark coloured sauce called soy, an article largely consumed by all ranks of people in those populous countries. The consumption is rather limited in the United States, but in England about 1000 gallons are imported annually, in addition to a large quantity counterfeited at home. It is excellent on fish and with soups. The flavour is peculiar, but when once acquired, the taste like that for olives and many other things, becomes very strong. By the Chinese and Japanese, *soy* is not only esteemed for its agreeable but for its wholesome qualities. The notion of its being made for cock-roaches is of course a vulgar error.

The plant is described as having an upright and hairy stem, erect bunches of flowers, and pendulous, bristly pods, each containing about two seeds or beans.

The process of preparing *soy* consists in boiling the seeds until they become soft, and mixing with them an equal weight of wheat or barley meal, coarsely ground. This mixture is fermented, and, a certain proportion of salt and water being added, the whole is allowed to stand for two or three months, care being taken to stir it daily; at the end of this time it is ready for use, and may be kept in jars or bottles.

The best *soy* comes from Japan. When genuine, it is of an agreeable flavour, neither too salt nor too sweet, of a thick consistence, and clear brown colour. When shaken in a glass, it should leave a coat on the surface of a bright yellowish brown colour.

A somewhat similar sauce may be prepared in the following manner: boil a gallon of the seeds of the *Dolichos Soja* till they are soft—and even peas and kidney-beans may be used as a substitute—add an equal quantity of bruised wheat; put this mixture into a warm place for twenty four hours, and add a gallon of common salt and two gallons of water. Shake the whole together, and put it into a stone jar, where it should remain closed up for two or three months, during which time it should frequently be shaken. After this time the liquor should be pressed out through a sieve, and will constitute the *soy*. An inferior kind may be procured by putting salt water upon what remains, and treating it in the same manner.

The seeds or soy-beans are also employed in China and Japan in various ways as food. They are made into a kind of jelly or curd, which is esteemed very nutritious and is rendered palatable by seasoning of different kinds. In Japan, they are put into soups, and are the most common dish of the country, being frequently eaten three times a day. E.

Philadelphia, June 26th, 1846.

Dr. E. has left with us a few of the *Soy* beans, which will be distributed among those who may incline to plant them. As the season is late, it is doubtful whether they would mature this summer; a few however might be tried, and others left to plant next spring.—Ed.

### The Lady's Country Companion.

Mrs. LOUDON is following the example of industry, so ably set by her late husband; and in addition to her numerous works on gardening, in its varied forms, we have now a thorough domestic volume, including advice and instruction in all the duties and recreations of a country gentlewoman. These are arranged in a series of letters to a young friend about to be married, when they commence; and of these letters, many are easy,

natural, unstudied, and interesting. The first is a mere introduction, in which the authoress, like a good counsel, states the case, which is simply, that, as her friend is going to be married to a country gentleman, she ought to learn how to enjoy a country life, and that the authoress is about to teach her; Mrs. Loudon exemplifying in her own person and books—a conclusion to which most rational men have arrived—that the best instructor of females is woman; and especially when the instructions are founded on what the teacher has experienced. And well does the authoress prepare her pupil—no ideal person—for the reception of her lessons by mentioning the difficulties encountered in early life, under somewhat similar circumstances: "I was then," says Mrs. Loudon, "young and thoughtless; I had no sisters; and having like you, been brought up in a town, I had no ideas of the country but as a place where eggs, cream, and fruit were in abundance: where I might keep as much poultry as I liked; and where there were shady lanes and green fields abounding with pretty flowers.

"The place we went to live at had a good house, commanding a splendid view; an excellent garden; three fish-ponds; and about thirty acres of grass land, which enabled us to keep cows and horses, without troubling us with any of the laborious duties of cultivating arable land.

"At first I was enchanted with the change; I was never tired of feeding my poultry, watching the dairy-maid, and managing the fruit and flowers; but alas! I soon found that there are few roses without thorns. My first trouble, was three gentlemen calling on us one day unexpectedly, and my father asking them to stay dinner. We were seven miles from the town where we had formerly lived; and though there was a small town within two miles of us, the road was bad, and the miles very long ones; while the town itself, when we reached it, was one of those provoking places, the shopkeepers of which never have what is wanted, though they always say they had abundance of the required article the week before, and believe they shall have it again the week after. I need not enter into details of my troubles in preparing for this well-remembered dinner. Meat was out of the question; and though I was enabled, by having recourse to the poultry-yard and the dovecot, to give my father's friends enough to eat, no one but a young housekeeper in a similar situation can have any idea of what I suffered. The lesson, however, was not lost upon me; and you may easily imagine that ever afterwards I took care to have a

cooked piece of hung beef, or ham, or some similar substantial article of food in the house, that I might be provided for a similar occurrence.

"The recollection of what I underwent while buying my experience, makes me anxious to spare you, my dear Annie, the pain of a similar ordeal; particularly as it is more disagreeable for a young newly married woman to feel in housekeeping difficulties, than a single one; as it makes you fear your husband had a higher opinion of you than you deserve. In your situation the difficulty is increased by your husband not having lived at the Manor House since the death of his parents, when he was only ten years old; so that he can have no idea of the petty troubles you will be exposed to. Under these circumstances I will do my best to clear the path that lies before you, and to teach you how to enjoy rationally a country life."—*Horticultural Magazine*.

For the Farmers' Cabinet.

#### Diseases of Fruit Trees.

MR. EDITOR,—I am gratified to find that fruit raisers throughout the country, are realizing the importance of the alkalies in preventing many of the diseases of fruit trees. Almost every newspaper that I pick up, contains a narrative of the experience of some fortunate horticulturist, who has applied the alkalies—lime, potash, soda, or magnesia with a happy effect.

Many however, use the remedy in such a costly form, that I am inclined to enter my protest against it. There is no need of using soda in the form of salt or potash, as it is in soap or ley, or lime in whitewash. I say there is no necessity for using these alkalies in these forms. They may be applied in the form of ashes or lime. Nor is there a necessity, in most cases, of applying them with a brush to the body of the tree. If the tree be a valuable one, and very much diseased, or infested with insects, such extra labor may be warranted, but in the majority of instances, lime and ashes—even anthracite or bituminous coal ashes, scattered on the ground or slightly dug or ploughed in, for a short distance around the tree, will be just as effective in keeping the tree free from insects and disease, as the more laborious and expensive process of scrubbing the tree with brine or ley, or whitewashing it with a solution of lime. I do not approve of the use of such substances as common salt, guano, nitrate of potash and other highly concentrated manures, when the more common and cheap forms of alkaline substances will

answer the same purpose just as well. It is a waste of means, which might be profitably applied in other ways. Besides, lime and ashes are more safe applications than salt, guano, &c., there is not so much danger of killing the trees by an excessive use of them.

I attribute many of the diseases of fruit trees to the same cause which produces the "potatoe rot," viz. a *superabundance of carbonic acid*. This extra carbonic acid gives to the sap of the tree that peculiar quality which renders it the proper nutriment of the cryptogamic\* plants, the seeds of some of those cryptogamic plants are present and fusing their proper nutriment, they take root and grow, producing the mossy appearance on the trunks and branches. If an alkaline substance be given to the tree, the sap takes it up and it is thereby rendered fit for the tree, and unfit for the cryptogamic plant, and the consequence is the cryptogamic plant dies, and the trunk of the tree becomes clean, and the tree itself assumes a healthy and vigorous appearance. When the sap is unhealthy it becomes by means of the saccharine fermentation, perhaps, sweet and pleasant to the taste; it is then the favorite food of many insects, and they are not slow in availing themselves of it—but when the alkali gets into the sap, it becomes insipid, and the insects turn from it with disgust; while the tree, which before was sickly, now assumes the lively and fresh appearance of health.

I may be mistaken in these views, Mr. Editor, but I think I am not—at all events, there is abundant evidence in our newspapers that alkaline manures have been effective in ridding the trees of disease and insects. I could quote numerous testimonials, but perhaps it is unnecessary. Yours, &c.,

CHEMICO.

Wilksbarre, June 8th, 1846.

END OF HUMAN GLORY.—A late English paper says there arrived not long since at Hull, a Dutch vessel navigated by a man, his wife and four daughters, loaded with bones gathered from the battle field of Napoleon, to be sold by the bushel, and used for manuring turnips.

HEN HOUSES.—Keep them clean and well white washed. Supply the nests frequently with fresh hay, straw or leaves. This will prevent the accumulation of lice, those great pests to poultry.

\* The principal orders of plants of the cryptogamic class are *ferns, mosses, hepaticæ, lichens, algæ and fungi*.

**JERUSALEM ARTICHOKE.**—This root is cultivated precisely like the potatoe, in hills or drills. At the South and West it is fed off by turning swine on to the fields, who root them up and consume them at pleasure. A winter's supply of food is thus easily provided for their hogs, and the crop fed off the land greatly enriches it. The artichoke is considered one of the best of fertilizers, as it derives a large amount of its carbon and nitrogen from the atmosphere. They should be cultivated extensively in well grown orchards, as they do well in the shade, pulverize the soil without exhausting it, and leave it in a good condition for growing trees. After the fruit is gathered, turn the swine on to feed them off. Rooting them up is nearly as beneficial as ploughing; at the same time the swine destroy nearly all the insects harbouring round the trees, and the manure they leave is equivalent to a good top-dressing. The artichoke is a delicious table vegetable, pared and cut up raw in thin slices with vinegar added to it. Many are also fond of it boiled and mashed like turnips. Frost does not injure the roots, and after the first planting they propagate themselves. The roots of the Jerusalem are ill-shaped, rather large, and of a pure white colour. The kind of artichoke bearing a root with pink streaks or spots on the flesh part, is not as good as the Jerusalem. They grow well in the poorest land.—*American Agriculturist*.

## THE FARMERS' CABINET, AND AMERICAN HERD-BOOK.

PHILADELPHIA, SEVENTH MONTH, 1846.

FROM our exchange papers, and from numerous letters, we learn that, as we would naturally anticipate, through our vast country, the grain harvest has produced varied results, in various districts. While in some, the wheat crop has been heavy, and every way satisfactory, in others, the hopes of the farmer have been disappointed by the extensive ravages of theessian fly. The remarkably dull and wet spell of weather during the first week in this month; operated in our district of country, very inconveniently. Where the wheat was cut, and not secured, we suppose considerable injury was sustained—in some neighbourhoods where it was heavy and not cut, it was much beaten down,—had to be cut with the naked scythe, and was found to have sprouted in the ear. The country, however, through the good Providence of the great Husbandman, who faitheth not to send the rain in his season—summer and winter—seed time and harvest, will yield an abundance of the good things necessary for our daily wants. The crops of grass, are almost

without exception, remarkably fine. Flour remains low: say \$4 to \$4.50—corn 55 to 60 cents.

In little excursions made a fortnight ago to Haddonfield and Woodbury, we were delighted with the great luxuriance of vegetation of every kind. The wheat and grass would vie with those in our very best farming districts. The improvements made in those neighbourhoods within the last twenty years, would astonish our fathers, as indeed they do ourselves. An observant friend remarked recently, that there was now more produce gathered within a circle of one mile radius from Haddonfield, than there was a quarter of a century ago, within one of five miles from the same place. This is certainly gratifying evidence of great progress, and of a disposition in farmers to improve their condition.

THE *New England Farmer* is discontinued. We regret that we no longer find that valuable paper among our exchanges; but all things here have their day, and come to an end. It has lived longer than most of its contemporaries. It was established in 1823 by Thomas G. Fessenden, who continued its Editor, until his death in 1837. The cause of agriculture has been ably advocated, and its interests promoted by this paper, and its Editor, Joseph Breck, may enjoy the satisfaction of believing that it did not "outlive its usefulness."

"PATIENCE" will find her enquiries pretty fully answered by *Chemico*, in his communication on page 368. Her letter was forwarded to him, and he was particularly gratified by the estimation in which she is pleased to hold his essays that have appeared in the Cabinet. The Editor also partakes of this gratification, and promises to be assiduous in his endeavours to furnish to her and others "much delightful reading connected with the improvements in agriculture—the management of poultry—dairies, and by no means forgetting flowers."

THE New York State Agricultural Exhibition and Fair, will be held at Auburn on the 15th, 16th and 17th of the Ninth month next. A long and liberal list of premiums is offered, not very materially differing from those of late years. We have not room for it in detail. A ploughing match will take place on the first day of the show. New York always makes these occasions of great excitement and interest.

THE sixth number of *Colman's Agricultural Tour*, has been received and forwarded to our subscribers. Many highly interesting statements are given on the subject of draining, showing an expenditure of capital and labour that would be frightful to our farmers; and nothing could justify it in Great Britain, but the high value of land, and lowness of wages.

SUBSCRIBERS can have their volume of *Colman's Tour*, and any other books well bound at this office.

THE number for this month—the first of vol. 2, of the *Farmers' Library*, is on our table. Its contents are as usual, varied and valuable. We wish its enterprising publishers and able editor every success. The fore part of the number commences the publication of *Stephens' Book of the Farm*.

**TURNIP SEEDS,**

Of my own raising, from selected Roots,  
(Crop 1846.)

WARRANTED GENUINE.

Early Dutch, (strap leaved), Red Top, do. do., Large Globe, large Norfolk.

**RUTA BAGA,**

*Dickson's Improved Purple Top,*

Also, of crop 1845, Early Stone, Dale's Hybrid, Yellow Aberdeen, Ruta Baga.

Purchasers will profit by obtaining their seeds from the growers themselves, as they only can guarantee their quality.

**D. LANDRETH,**

*Seed and Implement Warehouse,*

No. 65 Chesnut street, below Third, North side.  
July 10th. It.

The quantity of rain which fell in the 6th month, 1846, was a little more than three inches and a quarter . . . 3.30 inches. Rain fell on eighteen days.

*Penn. Hospital, 7th mo. 1st.*

**SHORT ADVERTISEMENTS,**

The subject matter of which, may correspond with the agricultural character of this paper, will be inserted at the rate of one dollar for each insertion of ten lines or less; and so in proportion for each additional line. Payment in advance.

**Agricultural Implement & Seed Warehouse,**

No. 194 $\frac{1}{2}$  Market Street, Philadelphia.

For sale as above. Cultivators from \$3 50 to \$5 50 each; Cultivator Ploughs for working among corn, potatoes, roots of every kind, digging potatoes, &c., &c.; Horse Rakes; Centre-Draught Ploughs for 1, 2, 3 or 4 horses; Cutting Boxes in great variety; Corn Shellers; Grain Fans; Grain Cradles of the best make; Scythes, Snaths, Scythe stones, Rifles, Grass Hooks; improved Barrel Churns, Cheese presses, &c., &c. Garden and Flower Seeds of all kinds, for sale at wholesale and retail, by D. O. PROUTY.

March 15—1f.

**SEED STORE,**

No. 23 Market Street, Philadelphia.

The subscriber keeps constantly a supply of White and Red Clover, and other grass seeds; fresh Perennial Rye-grass, and Lucerne seed. Field seeds, consisting of choice Spring Wheat, Barley, Potatoe Oats, Northern and other seed-corn. Also, in season, Fruit and Shade Trees. Garden and Bird seeds generally. Guano in parcels to suit purchasers.

M. S. POWELL.

Philad., Feb., 1846.

1f.

**COATES' SEED STORE,**

OF MORE THAN FORTY YEARS STANDING,

*Just received the present year's crop of*

**TURNIP SEED,**

Of the most approved varieties for cattle and table use,

WITH A COMPLETE ASSORTMENT OF

**GRASS & GARDEN SEEDS,**

Of the finest Quality and best Varieties.

JOS. P. H. COATES.

No. 49, Market st., Philada.

July 15th.

**PHILADELPHIA****AGRICULTURAL WAREHOUSE,**

No. 291 Market Street, North side, between Seventh and Eighth Streets, Philadelphia.

Thomas Furber has just received from Worcester, Massachusetts, an assortment of Ruggles, Nourse and Mason's improved Eagle, Subsoil and other Ploughs, which have been so much approved by the principal Agricultural Societies in New England the several last years; also Bennett's Cultivators and Stevens' Self-Feeding Hay and Straw Cutter, a late and very valuable improvement in that kind of implement; Grain Cradles, &c.; an assortment of Ruggles, Nourse and Mason's Self-Sharpening Ploughs of the form and model of those above named, are daily expected. T. F. has and will constantly keep a large assortment of Farming Implements, as Fan Mills, Straw and Hay Cutters, Corn Shellers, Grain Cradles, Scythes, &c., together with Garden Tools of all kinds.

May 15th, 1846.

1 yr.

**NEW****Horticultural and Agricultural Ware-house,**

84 Chesnut Street below Third, South side.

The subscriber has for the better accommodation of his customers, opened the above ware-house, with a large stock of Garden and Field Seeds, crop of 1845. Implements and Books on Gardening and Farming; he calls the particular attention of farmers to his pure stock of Sweede Turnips, Field Carrots, Beets and Parsnips, Pruning Shears, Saws and Knives.

March 14th, 1846.—1y.

R. BUIST.

**Agency for the Purchase & Sale of****IMPROVED BREEDS OF CATTLE & SHEEP.**

The subscriber takes this method of informing his friends and the public, that he will attend to the purchase and sale of the improved breeds of cattle, sheep, &c., for a reasonable commission. All letters post paid, addressed to him at Philadelphia, will be attended to without delay.

Jan. 15th, 1846.

AARON CLEMENT.

We keep on hand at this office, and will supply our friends with Agricultural works generally. Among which are

THE FARMER'S ENCYCLOPEDIA, full-bound in leather;—Price	\$3 50
YOUATT ON THE HORSE, with J. S. Skinner's very valuable Additions;	2 00
BRIDGEMAN'S GARDENER'S ASSISTANT;	2 00
THE AMERICAN POULTRY BOOK;	37½
THE FARMER'S LAND MEASURER;	37½
DANA'S MUCK MANUAL;	50
Complete sets of the FARMERS' CABINET, half-bound, 9 vols.	7 50
DOWNING'S Landscape Gardening,	3 50
Downing's Fruits and Fruit Trees of America,	1 50
SKINNER'S Every Man his own Farrier,	50
AMERICAN Poulterer's Companion,	1 25
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