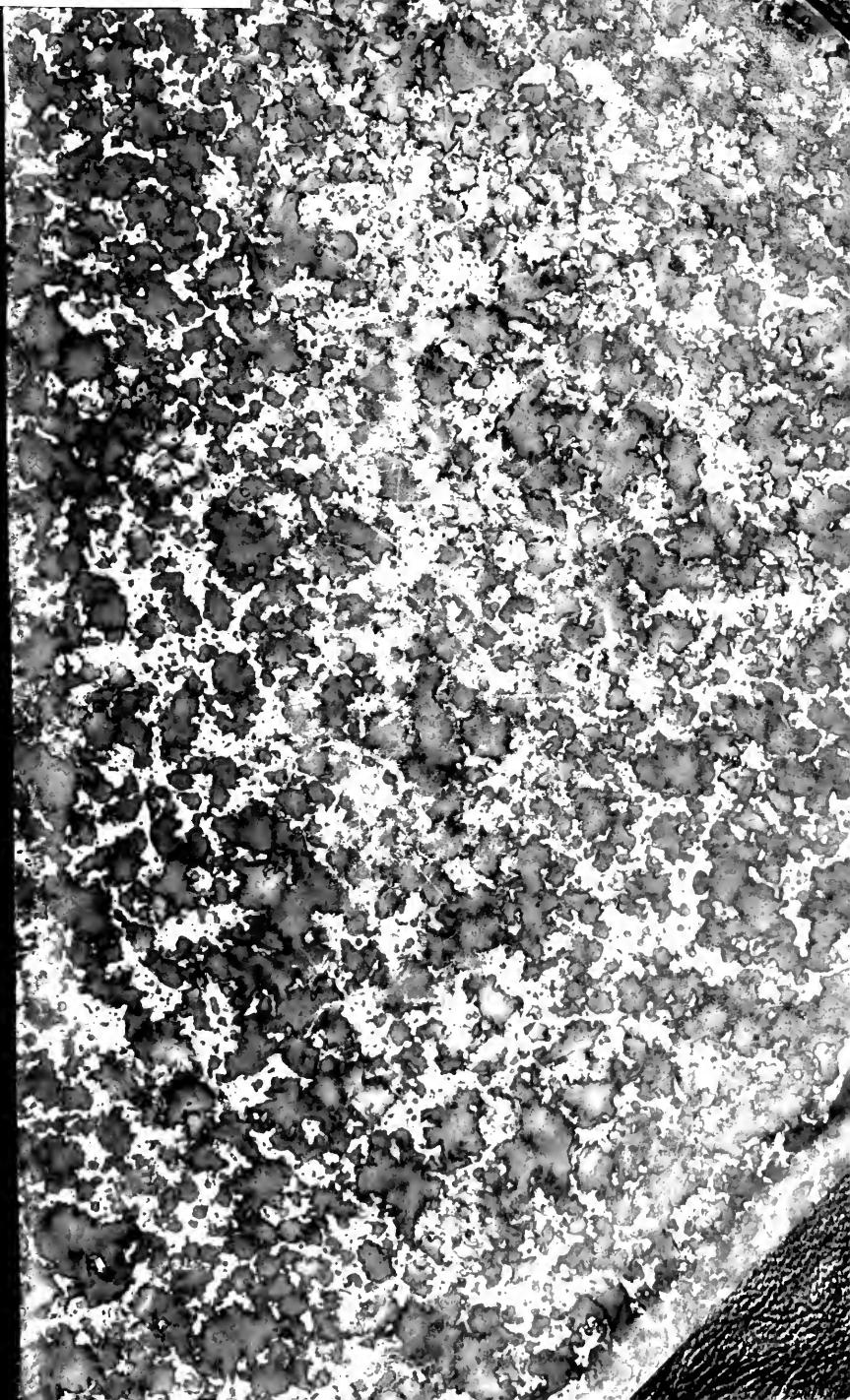


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TRANSACTIONS
FOR THE YEAR 1886,
OF THE
ESSEX AGRICULTURAL SOCIETY,
(ORGANIZED 1818.)
FOR THE
COUNTY OF ESSEX,
IN MASSACHUSETTS,
WITH THE
Sixty-fourth Annual Address,
BY
Rev. JOHN D. KINGSBURY,
OF BRADFORD.

PUBLISHED BY ORDER OF THE SOCIETY.

GLOUCESTER, MASS.:
PRINTED AT THE OFFICE OF THE CAPE ANN ADVERTISER.
1886.

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ADDRESS.

Mr. President:—It is pleasant to speak of Agriculture, the earliest, most constant, most important employment. Agriculture, most enduring art, which still goes on when customs change and races die; renewing its youth with each generation, employing the largest force, aggregating the greatest wealth, and furnishing the basis for all the labor of men. American Agriculture, in the forefront, eager in invention, bold in execution, patient in labor, confident in its resources, with a certain audacity gives its challenge to all the world.

One quarter of the total wealth of our country is employed in cultivating land. The capital invested in farming, including live stock, is twelve thousand millions. Manufacturing, which comes next, is about one third as much. England may boast a larger navy, Russia may be proud of a larger standing army; we "beat our swords into plowshares and our spears into pruning hooks." We study the arts of peace.

Agricultural products are the sure indications of enduring life. Austria turns into the commerce of the world \$322,000,000, next comes Britain with 1280 millions, France 2220 millions, Germany 2280 millions, Russia 2545 millions, and last and highest of all, our own land, 3020 millions. We have fifty-six and three-quarter million

hogs, forty-six million cattle, forty-five million sheep, twelve and a quarter million horses. "Our live stock formed in a column five deep, would reach round the world."

We are self-poised. Not an agricultural machine is usable on our farms which is not either an American invention, or is made usable by our own inventors.

It is pleasant to speak of Agriculture, for above all others it is the art most nearly related to life and character and the homes of men.

In ancient times, it was common to exalt the art, while the laborer was forgotten. Egypt glorified the labor, the plow, the soil, but despised the man. It has not been a rare thing to find greater praise given to the beasts that bare the burdens than to the laboring man. They praised labor in the abstract, they sacrificed to the Gods of the harvest, and glorified the winds and showers and even the harvest utensils. Virgil sang sweetly of the art of husbandry, but he portrayed the peasant poor, ignorant, and held helpless under the will of the autocrat. It has been thought an honorable thing to own the soil, but to till it has been a menial service.

Here lies the secret of the slow growth of Agriculture. Man was ignored. The result was that four thousand years passed and man still used the primitive plow, a crooked stick that stirred the ground and could not make a furrow. The old sickle, which was used by the Egyptians, was the only instrument for cutting grain until almost within the memory of man. The grain drill, which was invented by Jethro Tull so late as 1701, was greatly

improved by President Clap of Yale College. The old scythe for cutting grass was hardly improved till, in 1846, Joseph Jenks of Lynn welded the iron back. Poor tools and few improvements show that the men were not developed.

The Ancients did not ignore this industry. Cato wrote a book on Agriculture. The Roman Senate ordered the translation of the books of Mago of Carthage for the common people. Columella describes a good milch cow, "large belly, broad head, black open eyes, graceful horns, smooth and black, ears hairy, jaws straight, dewlap and tail small." That was very good for the time. We could do better now. The Roman orator, Curius, said, "He is not to be counted a good citizen who cannot content himself with seven acres of land." That was early Rome. In later times they made the farm larger. Pliny said, "The earth takes delight in being tilled by men crowned with laurels and decorated with triumphal honors." That was poor poetry and poorer prose. The truth is, the earth delights in being tilled by the man who knows how to raise a crop. Buonaparte established agricultural societies, planted botanical gardens, and founded agricultural professorships, but he did not establish citizenship for the French peasant.

The history of Agriculture is the history of man. The slow growth of the art is because of the neglect of manhood. The Roman orator declared, "There is nothing more beautiful, nothing more profitable than a well cultivated farm," but he left out the nobler idea of the well cultivated man on the farm. Greece drained lakes and

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feed it with fertilizers, to make it just light enough, just hard and solid enough, so that it may retain moisture and yet not be waterlogged.

It is not a more delicate labor for the farmer's wife to raise the white loaf, spongy and moist and elastic to the touch, than for the farmer to make up the hill where the corn will grow that measures a hundred bushels to the acre. Some wise chemist will teach that the only requisite is the nutriment in the hill. The farmer knows better. He knows that straw, plowed under to rot in the heavy soil, lifting it and filling it with capillary interstices, is as needful as the plant food.

He knows that a heavy crop of India wheat, or of close hard turf plowed under, will recover the worn-out soil, not simply by furnishing nutriment, but by putting the land in condition for growth. Many a pasture is rich in material for plant life, which will not furnish good feed. Plow the hard turf under. Let the under soil mellow in sun and shower. Raise a crop from it. Pulverize it with the hoe, and seed it down with clover and red top, and your herds will rejoice in the abundant feed. You might as well sleep in a bed that has not felt the touch of a woman's hand for a twelvemonth as to expect white clover to grow with sweet leaf and honeyed blossom for your cattle on the hard-packed earth. To give the soil the right porosity, to expose it to the air, to give it the right nutriment, requires wisdom.

The problem becomes more intricate when he studies the elements which make up the products. He needs to know not only what he raises, but *why* he raises it.

It is worth while to know that the nitrogenous elements vary in the different grains. These are called Albuminoids. They produce muscle.

Oats, 8 to 14 in 100,
 Flint Corn, 7 to 13 in 100,
 Sweet Corn, 10 to 15 in 100,
 Shorts and Middlings, 7 to 16 in 100,
 Wheat, 8 to 15 in 100.

It helps in the feeding of stock to know what will fatten and what will give muscle and vigor. And in raising the crops, it is of use to know what will supply the soil with the lacking element.

A crop of clover, with enormous foliage and its great mass of roots filled with nitrogenous elements, easily raised, and plowed under, gives the earth lightness and richness, and makes the soil ready to bring forth in greatest abundance those very things which are most needed.

It is a help to the farmer to know what kinds of grain will produce fat, what are richest in starch and gum and fat-producing substance. The agricultural chemists call them Carb-hydrates. The composition varies as follows :

Flint Corn, 66 to 77 in 100,
 Wheat (same as corn), 66 to 77 in 100,
 Sweet Corn, 61 to 77 in 100,
 Oats, 57 to 66 in 100,
 Shorts and Middlings, 55 to 70 in 100.

Chemistry has aided by suggesting the value of bone dust or bone in solution, which has led to the almost uni-

versal use of superphosphates—concerning which, however, there is such varied opinion. But the variety of opinion is owing to the fact that some superphosphate manufacturers are honest men and others are not. Chemical fertilizers are to be proved by what they will do. By their works ye shall know them.

If a man has an abundance of home-made manure, he is a happy man.

It will appear evident that the man who finds out just what is best to use in renewing the soil will want to do something more than manual labor.

The study of seeds demands attention. The good farmer does not need to be advised on that point. Let me emphasize the fact with an example.

Mr. Hallett, of Brighton, England, chose a single head of good wheat. It was 4 3-8 inches long, and had 47 kernels.

These were planted separately.

From the harvest the best head was selected and planted the same as before.

The result of four harvests was this :

At the first harvest the best plant bore 10 heads, at the second 22, at the third 39, at the fourth 52, and the best head was 8 3-4 inches long.*

It is an illustration of what man can do in developing nature. The world is full of life, but man was placed in the garden to dress and keep it, and the best results are never found without the intelligent and most painstaking industry.

*See U. S. Census Report 1880, vol. x, p. 403.

The apple, most popular, most useful of all fruits, is in natural state a "wilding crab," having had "many a foul curse for its sourness." Under cultivation it is changed to the most delicious flavor. The Baldwins and Greenings and Spitzenbergs and Pippins that hang in beauty on the bending boughs are the product of the farmer's art.

The potato which bursts and opens its snowy grains to grace your table and tempt your taste is another trophy of the farmer's art, for in its wild state it is quite an indifferent plant.

There is a kind of farming which is always a fraud. It is fancy farming—a showy cupola on the barn, a pattern fence along the road, a groom with a striped cap, a carpeted office, a fancy wagon with prancing horses for the market, a patent stall for the last imported cow, a race course, herd books and pedigrees, and a big sign over the barn lest you mistake the place,

"THE HIGHLAND FARM."

The mistake is in the name. It should be the "Highland Buildings."

Farming is not in the cupola and the office, and the herd book and the pattern fence. The true farmer does not despise the luxury of good buildings and equipments. But his pre-eminence is not in these, but in the knowledge of his art.

He knows the nature of every field, how to stir the soil and cast the seed. He knows the signs of opening spring, when the plowshare may first turn the ready soil. He knows the place where the warm sun makes the earth ready for the early salad and the succulent pea. He knows

where to thrust his spade to draw off the water from the dropsical swale, that it may grow into verdure and beauty. He knows the nature of soils, the times and seasons they require. He reads the signs in the heavens.

His crops grow bountifully. The fields vie with each other in the luxury of summer growth, and when the golden days come, it is a joy to see the great harvest gathered in, as one by one the fields yield their increase and patient oxen with measured step bring in the heavy wains.

That man's farm does not need a label nor a pattern fence.

The true American farmer is a model for all the world.

We are thankful to the Old World for what it has given us in the start. We take the Saxony sheep and let them graze in our clover pastures and in the ranches of the West, and it is not uncommon to sell back to the breeders of the Old World, at a decided premium, our improved stock.

About three score years ago, the shorthorns were imported into this county of Essex. They spread rapidly, and in 1873, Mr. Campbell of New York sold a herd for \$380,000, and of this, \$147,000 was paid by English breeders.

It improved men to come away from England to live in the New World. It appears that it is also good for the cattle and sheep, and there is reason for it. The English farmer is a servant. He does the will of his lord. The American farmer is his own master. We have four million farms. Three million of them are carried on by the men

who own the soil. That is the reason of our pre-eminence.

Our farms are increasing in value from their intrinsic worth. From 1850 to 1860 the value doubled. From 1870 to 1880 the increase was thirty-seven per cent.

Notice also our crops. Russia has 158,000,000 acres in grain. We have only 118,000,000. But our crop is greater on the less acreage by more than a million bushels.

The rate of our increasing production is not less marked. In 1850, 867 millions of grain; in 1860, 1200 millions; in 1870, 1400 millions; in 1880, 2698 millions. Look at the corn crop and its enormous aggregate, 1750 million bushels, or at the increase of wheat, in 1850, 100 millions, in 1860, 173 millions, in 1870, 287 millions, in 1880, 459 millions, one quarter of the entire product of the world. Our grain crop of 1880 was equal to half the value of all the gold ever mined in California.

The substantial character of our people is shown by what we raise and send abroad. We import many things. We buy laces, and wine, silk, spices, tea, coffee. But we sell to the world wheat, cotton, petroleum, steam boilers, agricultural tools, butter, cheese, beef, and it is said that the Queen of England comes to Essex county for ice to cool her drink.

The development of Agriculture in the last one hundred years exceeds by far the progress of all the preceding centuries. It is a suggestive fact that this has been the time when greatest progress has been made in bettering the conditions of working men. Labor has dignity. The laborer has rights. Society and the state are not for the few but for all. Learning comes forth from the cloister,

science dispels the fog of superstition, world-wide monarchies give place to the free commonwealth of nations. Men of diverse languages meet in friendly concord, settling disputes of sovereignties. The proud aristocrat retires before the rising generation of free men. The Russian serf goes free. The crescent, proud emblem of imperialism, wanes before the rising cross. The British slave lays down his shackles in the orange groves of the Indies. The dark child of Africa walks through the snowy cotton fields in conscious freedom. The pulse beats strong in the hearts of all the down-trodden of Europe, while multitudes come thronging over the sea, to breathe the air of freedom. It is the grandest of all the centuries. Commerce, "born in the wild-wood, cradled in the deep," spreads its white wings in tempest and calm, bearing evermore over the thoroughfares of the sea the pledges of universal brotherhood, and creates new paths in dark lands before unknown, repeating in the darkest places of earth the Divine command, "Let my people go," and lo! the wilderness and the solitary place is glad and the desert blooms as the rose.

The change is in man. Earth keeps on, ever the same, its sunshine and storm, its rain and dew, its perpetual harvests, giving like a bountiful mother forever, but man has changed; the transformation has been in character.

It is inspiring to look at the part which our American life has had in this ongoing and uplifting. We have no peasantry. We hardly know the meaning of the word. We have to go to the dictionary to learn it.

Fifteen of our Presidents were taken from the farm,

seven of them from hand-to-hand labor on new land. The Father of his Country wrote fr  ely on Agriculture, and he owned one of the first threshing machines that was ever used. Thomas Jefferson had many honors, but among them all there is none that is brighter than this, that he wrote a treatise on the mould board of a plow, and for it received a gold medal from the agricultural society of the Seine.

We have no menial class. At the basis of our society lies this thought, *No labor that is useful is degrading*. False aristocracy rests on the wealth of inheritance, the technicality of tenure, a mere accident of birth, and is always hated and hateful. There is but one nobility. It is found in the man whose character and life command the regard of all who love virtue, the man who gives an equivalent for what he has in wealth or place or power.

We have no peasantry. It is the progeny of feudalism. Our fathers founded the republic. They honored labor. John Winthrop wore the leathern coat, and fed sometimes on corn, and handled the hoe and plow. John Winthrop, distinguished alike for piety and learning, for his knowledge of men and his knowledge of husbandry, for his loyalty to his God and his love of humanity, equally dignified when he sat in state in starched ruff and badge of chief magistracy, or when he tilled the garden or the field he loved so well, — John Winthrop, who landed on the shores of Essex, a Puritan governor and a Puritan farmer, grand progenitor of a race who should be equal in right and privilege and rank, who should exalt all honorable labor

and unite all men by stronger bonds in the peaceful arts of industry.

The dignity of labor ! It lies at the base of all our history. It is the secret of our prosperity.

Greece and Rome had somewhat of glory — reached a high place in history. But both fell because of the ostracism of true manhood, the loss of the true dignity of the working men. It is an idea which belongs to our history and runs through the whole of it that labor is capital. It is a factor in society and the state. The terrible tragedy of history is seen in its dread culmination, when degraded and despairing manhood in the struggle of death reaches upward its arms to grasp the neck of power and drag it to the dust.

In old days, war was an industry. Its reward was plunder. It reduced man to ignominy if he was conquered. It did little less for the victor if he were a common soldier. Victory was the assertion of power, the deceptive success in a contest which was soon to be tried over again. It was not the triumph of aggressive force over evil, and the reduction of the obstacles in the way of human advancement. War itself upheld the aristocracy and degraded labor.

It remained for our day and the men of our time to make the pages of history to glow with the record of another thought. Our eyes have looked on a struggle, the grandest struggle the world has ever seen, in which war was for principle. The old monarchies fell in their efforts to repress rising humanity. It was our nation that first sounded the note of war and went down to the field of

blood for the one sole purpose of uplifting degraded manhood to conscious freedom and break off forever the shackles from labor.

Ignorance is opposed to all progress. In the laborer it necessitates clumsy tools, heavy, hard to handle. Ignorance repels machines, regards as an innovation what eases the burden of man. The yeomanry of Britain, so late as 1830, went about destroying the threshing machine. That would never occur on this side the water.

American ideas are abroad. Our life flows in the currents of the world. Races are uplifted by the ongoing of our generations.

The factor of American competition is not only in soil and climate, nor simply in ploughs and reapers. It is not confined to methods and processes. It is also a competition of manhood.

It is the man on the farm, the man with the plough and reaper, the man with thought and skill, eager in invention, with energy of will, carrying thought into action, the American farmer, acute, alert, aspiring, he is the man who changes the aspect and the forces of Agriculture,—the *man* conscious of knowledge, understanding his art, himself a responsible unit in social and political life, choosing his place, casting his ballot, owning his land.

Essex county has 2847 farms, averaging 66 acres. Of these 2561 are cultivated by the owners. The farms of our county are valued at \$16,000,000. The product from them is two and a quarter millions a year. We gather every year 5,000 bushels barley, 104,000 bushels corn, 7,000 bushels oats, and our orchard products aggregate

\$195,000, and for the market garden \$300,000, and it is our own. Our 4500 horses, 1500 oxen, 12,000 cows and 6,000 swine show the best breeding. Our farming is the work of intelligent men. It is a wise saying, "That state is perfectly secure whose soil is owned by its well-meaning citizens."

Notice the contrast,—Ireland ! that green isle of the sea, with a soil deep, rich, easily worked, but owned by the aristocrats,—her poor peasantry compelled to give rent so great that they cannot taste the luxury they create. They raise fat cattle and touch them not, raise grain and eat it not. They live in hovels, squalid and wretched, the floor of earth and the roof of thatch, their table spread with potatoes and herbs, their lives bound, aspirations blotted out, their duty to work, their lot to suffer and die. What wonder that their industry is rude, their progress backward, and their very religion hatred of the upper classes, and their prayer and longing and purpose to be free from social oppression.

The conservative says, "Change is impossible ;" "The land owner is lord, his right unimpeachable, his prerogative greater than all the rights of humanity : " "To change will be revolution : " "The law must stand though man may die." But the progressive statesman takes sides with humanity. He sees in the thatched cottage of the Irish tenant a man, with sacred rights more enduring than the tenure of laws ; sees in the mind and heart, made dormant by the long fruitless toil, the sign of mighty forces which shall come forth to energize the nation and exalt the commonwealth and add lustre to the history of the world, when

England shall listen to her great prime minister and honor herself by making the Irish peasant a man.

The American farmer is not afraid of innovations. He welcomes new discoveries. He is often deceived by the new patent rights. He has a painful experience with the patent bee-hive and the patent churn, the horse-power pitching fork, the patent milking-stool and milking-tubes, the potato digger and the combination feeding trough and the lightning rod. But he remembers the horse rake and the mower, the thresher and the cultivator, the hay tedder and the seed drill. He easily forgets the faulty machines in his storeroom as he rides like a prince on the sulky plough. He easily forgives the last agent of a worthless patent when his horse rake gathers in swift winrows the rustling hay before the coming storm.

In the World's Exhibition in 1852, there was nothing of greater importance than the American Reaper. The grandest problem solved at that time was how to cut the grain of the world's increasing harvest.

The ancient Hebrews could thresh as much grain as the farmer who lived a hundred years ago, six to twelve bushels a day. The horse-power thresher came, cleaning up six hundred bushels, and the steam-power two thousand more, the combined harvesters sending to market the grain from forty acres in a day.

In the old time the farmer could possibly transport his grain a hundred miles. Now the grain of eastern Oregon goes five hundred miles over land and then half way round the globe to find its market.

Agriculture is eminently a progressive art.

The old Spaniards thought they lived on the borders of the world. The Pillars of Hercules were placed on their coin with this legend: "*Ne Plus Ultra*,"—Nothing Beyond. But one day a bold navigator passed through the narrow straits and out over the open sea, and he thrilled mankind with the discovery of a New World. The old Spaniards struck off the little negative and left the motto grander by far, "*Plus Ultra*,"—More Beyond.

That grander motto has become the watchword of the advancing century. Every art, every science, all parties, all societies, and every form of associated labor, takes the new motto. The American farmer, stimulated by all past success, holding fast to all that has been gained in experience, looks hopefully to the future, expecting still larger and better things; new methods, new machinery, new discoveries, by which the art shall be advanced and the earth shall be made to yield yet more abundantly for the sustenance of men.

SIXTY-SIXTH ANNUAL CATTLE SHOW AND FAIR.

The Cattle Show and Fair of this Society was held in Newburyport on the 28th, 29th and 30th days of September, 1886.

The first day of the Fair was a violent rain storm, which prevented the appearance of stock that was expected. The Society, equal to the emergency, extended the time another day for receiving entries and added a day longer for holding the Fair, changing what would have been a partial failure into a success, the exhibits on the Show Ground exceeding the year previous 42 entries and in the Exhibition Hall 55 entries. The show of Cattle and Horses in point of numbers was not up to the year previous; that of Agricultural Implements and Poultry was larger and far better. The Plowing Match on the third day of the Fair was not as satisfactory, being on poor land and having a trifle over half the number of contestants as last year.

In the Exhibition Hall, the exhibits were arranged in a manner very pleasing and attractive, and their quality compared favorably with previous exhibitions. The attendance after the first day was good.

The Annual Address was given on the second day at the Pleasant street church, by Rev. John D. Kingsbury of Bradford, afterward the Annual Dinner was served in Cadet Hall, followed by speeches from Hon. C. C. Dame, Mayor of Newburyport, Hon. A. C. Varnum, President of Middlesex North Agricultural Society, and Delegate of State Board of Agriculture, Hon. George B. Loring, Judge Mason of the Superior Court, Sheriff Herrick, James P. King, Esq., and others.

The entries in the several departments of the Fair were as follows : —

STOCK, IMPLEMENTS, ETC., ON FREE SHOW GROUNDS.

	Entries.	From Different Cities and Towns.
Fat Cattle,	4	3
Bulls,	15	7
Milch Cows,	7	3
Heifers, First Class,	4	3
Heifer Calves, First Class,	1	1
Heifers, Second Class,	16	5
Heifer Calves, Second Class,	2	1
Working Oxen and Steers,	9	3
Steers,	8	2
Town Teams,	1	1
Brood Mares,	10	5
Stallions, First Class,	1	1
Stallions, Second Class,	3	2
Family Horses,	9	7
Gentlemen's Driving Horses,	8	7
Farm Horses,	3	3
Draft Horses,	9	3
Pairs Farm Horses,	3	3
Pairs Draft Horses,	3	2
Colts for Draft Purposes,	10	7
Colts for General Purposes,	30	11
Swine, First Class,	7	3
Swine, Second Class,	3	1
Sheep,	2	1
Poultry,	82	8
Ploughing,	14	7
Agricultural Implements,	43	10
Carriages,	10	5

Total, 317 entries, from 21 different cities and towns.

IN EXHIBITION HALL.

	Entries.	Different Places.
Dairy,	12	3*
Bread, Honey and Preserves,	70	13
Pears,	323	16
Apples,	311	20
Peaches, Grapes and Assorted Fruits,	99	16
Flowers,	116	12
Vegetables,	321	21
Grain and Seed,	37	11
Counterpanes and Afghans.	75	8
Carpetings and Rugs,	47	9
Articles manufactured from Leather,	2	2
Manufactures and General Mdse.,	28	6
Fancy Work and Works of Art,	242	13
Work of Children, under 12 years,	41	6

Total, 1724 entries, from 29 different cities and towns.

Grand Total, 2041 entries, from 33 different towns and cities, viz.:—Amesbury, 146; Andover, 18; Beverly, 14; Boxford, 52; Bradford, 50; Danvers, 55; Essex, 41; Georgetown, 23; Gloucester, 10; Groveland, 35; Haverhill, 55; Ipswich, 7; Lynn, 39; Lynnfield, 1; Marblehead, 2; Methuen, 16; Middleton, 1; Newbury, 365; Newburyport, 738; North Andover, 3; Peabody, 42; Rockport, 2; Rowley, 73; Salem, 21; Salisbury, 58; Swampscott, 1; Topsfield, 9; Wenham, 10; West Newbury, 140; out of the County, 5; Unknown, 9.*

DAVID W. Low, *Sec'y.*

*The exhibitors and places from which 9 butter exhibits came are unknown. from over-carefulness of entry clerk to prevent judges knowing.

REPORTS OF COMMITTEES.

FAT CATTLE.

The Committee on Fat Cattle have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$10. First premium to J. P. Little, Amesbury, for pair oxen, Devons, 6 years old, weight 4250 pounds.
- \$8. Second premium to J. P. Little, Amesbury, for pair oxen, Herefords, 5 years old, weight 4050 pounds.
- \$4. Third premium, to Furmer H. Greeley, Salisbury, for pair oxen 6 years old, weight 3500 pounds.

Ephraim A. Dane, Edward Kent, R. T. Jaques—*Committee.*

STATEMENT OF J. P. LITTLE.

The Devon cattle at Fair time I had owned fifteen months, the Herefords between eleven and twelve months. For the first four months the Devons did all the ox work on the farm. Since that time the four have done the ox work on the farm, drawing in eighty tons of hay each year and hoisting it with a fork on to the mows.

Besides the work on the farm they have done considerable outside teaming, drawing wood, salt hay, manure from the village, &c. During the month previous to the Fair they were worked reclaiming a meadow, pulling trees, ploughing, &c.

In regard to the manner of feeding, they have not been to pasture any since I owned them. I commenced in the early Autumn of 1885 to feed on fodder corn ; fed with that nearly all the time, with very little hay all Winter ;

then commenced feeding with different kinds of hay, with two quarts of meal per day each, until the first of March, when I commenced feeding four quarts per day each until the present time. I give them clear corn meal dry, twice a day, two quarts at night and two in the morning.

Have seen to the feeding of them myself, and have taken the best of care of them. They were partly fed with green fodder corn this last Fall, the same as the year before. I think that feeding different kinds of hay is better than it is to confine them to one kind. They eat some salt hay every day and relish it.

BULLS—THOROUGHBREDS.

The Committee on Bulls, Thoroughbreds, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$10. First premium, to Francis Gulliver, Andover, for Jersey bull, "Chrome Gold," No. 11,222, dropped August, 1883.
- \$5. Second premium, to H. H. Hale, Bradford, for Jersey bull, "Cicero, Jr.," No. 8,344, 4 years old.
- \$10. First premium, to Ben : Perley Poore, West Newbury, for Short Horn, "Crave Neck," 2 years old June 5, 1886, bred by Judge Bradley.
- \$3. Second premium, to Wm. C. Cahill, Danvers, for Ayrshire, "Brown Mars, Jr.," dropped July 22, 1885.
- *\$5. First premium, to H. H. Hale, Bradford, for Jersey, "Byron G.," No. 14,455, 1 year old.
- *\$2. First premium, to D. A. Massey, Danvers, for Ayrshire bull calf, "Queer," No. 882, dropped Nov. 9, 1885.

†Your Committee recommend a gratuity of \$2 for the Holstein bull entered by S. P. Hale of Newbury.

Wallace Bates, Richard Newell, Elbridge Mansfield, T. K. Bartlett, Joshua H. Chandler—*Committee*.

*The last two awards were made by Edward Kent, J. M. Rollins, T. G. Ordway — *Supplementary Committee*.

†The Trustees did not suspend the rules for award of gratuity recommended.

MILCH COWS.

The Committee on Milch Cows respectfully submit the following report :

T. N. Cook of Newburyport entered two grade Jersey cows and one Ayrshire cow. He was awarded

\$10. First premium, for milch cow ;

\$10. First premium, for butter cow ;

\$4. Second premium, for butter cow.

\$15. Special premium, was awarded to Jere. Cashman, Newburyport, for best milch cow of any age or breed.

\$4. Second premium, to same, for milch cow.

\$10. First premium, to Francis Gulliver, Andover, for Jersey cow, "Fanny G.," No. 26,005.

\$4. Second premium, to same for Jersey cow, "Alpha Maid," No. 23,635.

Maj. Ben : Perley Poore of Indian Hill, West Newbury, exhibited his thoroughbred Short Horn cow, "Pearl." This cow is a very fine specimen of her class, and judging from the size of her udder and the fine calf by her side, she would have been entitled to the special premium of \$15 for the best milker of any age or breed, had her owner entered her as competitor for premium.

It is a matter of regret that so few milch cows are entered for premiums at our Essex county fairs. Of the various branches of agriculture in New England, dairying,

or the production of milk, butter and cheese, is the most important, and must occupy the very first position in the farming of the future.

With an abundance of the purest water gushing from almost every hillside, and the short, sweet grass that may be had in profusion if farmers will take care of their pastures, and, more than all else, markets at our very doors, it seems as though the farmers of the old Bay State ought at least to supply the larger part of the 10,000,000 pounds of butter that are annually furnished us by other States of the Union.

Within a very few years, some people have discovered that butter does not improve with age; that it is never better than when it first comes from the churn; that butter made and consumed in midwinter is much better and has a much finer aroma, if it is properly made, than that made in the preceding June or September and consumed after it has been kept for months. This education of the sense of taste is progressing, and hence the demand for "gilt edge" butter is increasing.

The facilities afforded by improved machinery are such that the farmer, by the outlay of a few hundred dollars, can entirely relieve the good wife from the cares and hard work incident to the manufacture of butter by the old-fashioned method of the shallow pan system, if that can be called a system which was so uncertain in its results.

The paramount importance of dairying to the farmers of this county being conceded, it seems as though milch cows are as deserving of consideration, to say the least, as the "gentleman's driving horse," or the lank nag whose record of two twenty and seven-eighths causes her owner to swell with pride. The owners of horses would refuse to bring their stock to our fairs for exhibition, and very properly, unless covered pens were provided. On the

other hand, farmers are expected to exhibit their milch cows in pens without any shelter whatever. Is it any wonder that the thrifty farmer, who would not allow his milch cows to lie out of doors during the night in cool but fair weather, utterly refuses to confine his stock in open pens and run the risk of exposing them to a cold equinoctial storm, such as prevailed on the first day of the Essex County Fair? As might be expected, very few milch cows are exhibited, there is no competition, and two or three exhibitors carry off all the premiums.

J. D. DODGE, *For the Committee.*

STATEMENT OF T. N. COOK.

To the Committee on Milch Cows:

GENTLEMEN:—We enter for premium our Milch cow, "Quack," grade Ayrshire, six years old. Calved July 5, 1886; driven Sept. 12, 1886, and from July 7 to July 30, averaged 20 1-4 quarts of good milk per day. Manner of feeding, 3 qts. of meal, 3 qts. of shorts, wet, per day; pasture.

Yours,

T. N. COOK.

STATEMENT OF T. N. COOK.

To the Committee on Milch Cows:

GENTLEMEN:—We enter for premium our Milch cow "Shaker," seven years old, Jersey. Calved Jan. 2, 1886, calves again Dec. 10, 1886. From May 24 to May 30, inclusive, gave 14 quarts of milk per day. Made in seven days 13 1-2 lbs. of butter. Manner of feeding, 3 quarts of meal, 3 quarts of shorts, wet, per day; pasture.

Yours,

T. N. COOK.

STATEMENT OF T. N. COOK.

To the Committee on Milch Cows:

GENTLEMEN:—We enter for premium our Jersey cow,

yellow and white, four years old. Calved Sept. 1, 1886. From Sept. 12 to Sept. 19, gave 13 quarts of milk per day; made 10 1-4 lbs. of butter in seven days. Manner of feeding, 2 quarts of meal, 3 quarts of shorts (wet); pasture.

Yours, T. N. COOK.

Milk Statement of Jere. Cashman not received from Committee, it having been lost.

HEIFERS, FIRST CLASS.

The Committee on Heifers, First Class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- \$4. Second premium, to Francis Gulliver, Andover, for Jersey heifer, "Orange Lady," No. 22,170, in milk, dropped Aug. 2, 1883.
- \$4. First premium, to Francis Gulliver, Andover, for Jersey heifer calf, "Winnie Chrome," dropped Feb. 27, 1886.
- \$4. First prize, to D. A. Massey, Danvers, for Ayrshire calf, "Mars Dora 2d," dropped July 20, 1884.
- \$2. Second premium, to D. A. Massey, Danvers, for Ayrshire heifer, "Crocus 4th," dropped Sept. 15, 1884.

Maj. Ben: Perley Poore entered a nice Short Horn heifer, worthy of a first premium, but not entered for one, only for exhibition.

Andrew Dodge, S. F. Newman, Eben True, Frank P. Todd—*Committee*.

HEIFERS, SECOND CLASS.

The Committee on Heifers, Second Class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- \$10. First premium, to P. A. Perkins, Newbury, for three year old heifer in milk, grade Ayrshire.
- \$4. Second premium, to O. F. Lewis, Salisbury, for three year old, grade Jersey.
- \$4. First premium, to E. S. Toppan, Newburyport, for three year old Short Horn.
- \$2. Second premium, to Elbridge Tenney, Newbury, for twenty-six months old, grade Jersey.
- \$4. First premium, to T. K. Bartlett, Newburyport, for twenty months old, Dutch.
- \$2. Second premium, to J. F. Smith, Salisbury, for fourteen months old, grade Jersey.
- \$4. First premium, to Jere. Cashman, Newburyport, for calf three months old, grade Jersey.

John Swinerton, T. J. King, J. H. Perkins — *Committee.*

WORKING OXEN AND CATTLE.

The Committee on Working Oxen and Steers have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$12. First premium, to C. U. Burbank, Amesbury, for one pair working oxen.
- \$10. Second premium, to Carlton Little, Newbury, for one pair working oxen.
- \$8. Third premium, to Wm. Bryant, West Newbury, for one pair working oxen.
- \$10. First premium, to R. T. Jaques, Newbury, for one pair four year old steers.

F. R. Allen, Hiram Young, G. F. Drew — *Committee.*

TOWN TEAMS.

The Committee on Town Teams have attended to their

duty, and respectfully report to the Secretary that they have made the following awards :

\$20. First premium, to Town of West Newbury, for town team of oxen.

Justin E. Bradstreet, Edward P. Perley, Richard W. Ricker — *Committee*.

STEERS.

The Committee on Steers have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

\$6. First premium, to C. U. Burbank, Amesbury, for pair two year old steers, weight 2750 lbs.

\$5. Second premium, to James Noyes, Newbury, for one pair two year old steers, weight 2330 lbs.

\$5. First premium, to Wm. W. Perkins, Newbury, for pair yearling steers, weight 1410 lbs.

\$4. Second premium, to Edwin Ilsley, Newbury, for pair yearling steers, weight 1280 lbs.

\$4. First premium, to Mrs. M. L. Moody, West Newbury, for pair steer calves, eleven months old.

The cattle were all very good. There were no three year olds, and as there were but two premiums offered for each class, we had to pass some by, but hope they will not be discouraged, but try again another year and win the premium card.

Respectfully submitted,

S. P. HALE, *Chairman*.

STALLIONS, FIRST CLASS.

The Committee on Stallions, First Class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

\$8. First premium, to H. H. Hale, Bradford, for size and good qualities.

The colts entered in this class did not include horses four years old and upwards, of which there were no entries.

The three year old imported Percheron stallion of H. H. Hale of Bradford came within the list of premiums offered, and the committee consider him of great value to the County, and have awarded him the first premium in the class to which he belongs.

The colt of Mr. Parkhurst, a two year old half-bred Percheron, has fine size and shape and action; and the committee, finding no premium for colts of this age, have awarded him a gratuity of \$8.*

George B. Loring, Peter Holt, Jr., Edward Harrington, H. F. Longfellow—*Committee*.

*The Trustees declined to suspend the rules to allow a gratuity, as it belonged in the Colt class for draft purposes.

STALLIONS, SECOND CLASS.

The Committee on Stallions, Second Class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

\$10. First premium, to C. C. Hewitt, Newburyport, for stallion for driving purposes.

No others worthy of premium, on account of unsoundness.

Benj. W. Bartlett, R. T. Jaques, Albert Titcomb—*Committee*.

BROOD MARES.

The Committee on Brood Mares have attended to their

duty, and respectfully report to the Secretary that they have made the following awards :

- \$10. First premium, to C. N. Maguire, Newburyport, for mare and foal.
- \$6. Second premium, to E. E. Bartlett, Newburyport, for mare and foal.
- \$4. Third premium, to Frank Perkins, Newbury, for mare and foal.

A. J. Stockbridge, Paul T. Winkley, Jr., B. A. Follansbee—*Committee*.

FAMILY HORSES.

The Committee on Family Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$10. First premium, to S. P. Hale, Newbury, for dark brown horse, nine years old, weight 1050 lbs.
- \$6. Second premium, to John C. Tarlton, West Newbury, for bay horse, nine years old, weight 1050 lbs.
- \$4. Third premium, to Peter Holt, Jr., North Andover, for gray horse, six years old, weight 1200 lbs.

Chas. H. Gould, Wm. R. Roundy, J. A. Lamson, Wm. B. Carleton—*Committee*.

GENTLEMEN'S DRIVING HORSES.

The Committee on Gentlemen's Driving Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$10. First premium, to Peter Holt, Jr., Andover, for white mare, eight years old, weight 1050 lbs.

\$6. Second premium, to Jere. Cashman, Newburyport,
for seal brown gelding, five years old, weight 1140
lbs.

\$4. Third premium, to C. U. Burbank, Amesbury, for
bay gelding, five years old, weight 925 lbs.

Nine entries : six appeared on the ground.

A. C. Estes, Albert Kimball, C. N. Maguire—*Committee.*

FARM HORSES.

The Committee on Farm Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

\$10. First premium, to J. A. Ilsley, Georgetown, for
farm horse, thirteen years old, weight 1220 lbs.

\$6. Second premium, to J. Otis Winkley, Newbury-
port, for farm horse, eight years old, weight 1060
lbs.

\$4. Third premium, to Michael Reddy, Ipswich, for
Gray Mare, weight 1200 lbs.

John M. Danforth, C. N. Maguire, W. E. Merrill—
Committee.

DRAFT HORSES.

The Committee on Draft Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

\$10. First premium, to Peter Holt, Jr., North Andover,
for white draft horse, six years old, weight 1250
lbs.

\$6. Second premium, to Wm. W. Perkins, Newbury,
for mare, eleven years old, weight 1200 lbs.

- \$4. Third premium, to John Ronan, Newburyport, for bay horse, weight 1160 lbs.

Nathan F. Abbott, C. K. Ordway, D. A. Pettingell, George M. Wouson, Andrew Curtis—*Committee*.

PAIRS OF FARM HORSES.

The Committee on Pairs of Farm Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$12. First premium, to Walter F. Dodge, North Beverly, for pair farm horses.
 \$8. Second premium, to C. N. Maguire, Newburyport, for pair farm horses.

J. Otis Winkley, J. N. Rolfe, H. M. Goodrich—*Committee*.

PAIRS OF DRAFT HORSES.

The Committee on Pairs of Draft Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$12. First premium, to Charles Bennett, West Gloucester, for pair draft horses, five years old, weight 2510 lbs.
 \$8. Second premium, to Jere. Cashman, Newburyport, for pair bay horses, weight 2600 lbs.
 \$4. Third premium, to Jere. Cashman, Newburyport, for pair brown horses, weight 2500 lbs.

Your Committee would recommend that there be more distinction between Draft and Farm Horses. The pair of Mr. Bennett would come within the grade of Farm Horses, as not being used to heavy work as much as the others.

A. H. Knights, E. F. Little, James Noyes, Henry Nason, J. M. Rollins—*Committee*.

COLTS FOR DRAFT PURPOSES, FIRST CLASS.

The Committee on Colts, for Draft, First Class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

\$10. First premium, to Harry H. Hale, Bradford, for black mare, three years old, weight 1500 lbs.

No others worth special mention.

Benj. W. Bartlett, Frank W. Evans, Frank P. Todd—*Committee*.

COLTS, FOR DRAFT, SECOND CLASS.

The Committee on Colts, for Draft, Second Class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

\$6. First premium, to E. E. Bartlett, Newburyport, for colt one year old, weight 895 lbs.

\$4. Second premium, to A. J. Stockbridge, Rowley, for yearling mare colt, weight 800 lbs.

\$6. First premium, to M. B. Chesley, Amesbury, for colt, two years old, weight 925 lbs.

\$4. Second premium, to R. Jaques, West Newbury, for colt two years old, weight 1035 lbs.

Jere. Cashman, E. P. Barrett, D. Bradstreet—*Committee*.

COLTS FOR GENERAL PURPOSES, FIRST CLASS.

The Committee on Colts for General Purposes, First

Class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$10. First premium, to O. N. Fernald, Danvers, for bay mare colt, four years old, weight 1000 lbs.
- \$6. Second premium, to F. W. Evans, Newburyport, for bay filly, four years old, weight 875 lbs.
- \$4. Third premium, to C. C. Cook, Bradford, for mare colt, four years old, weight 950 lbs.
- \$8. First premium, to Geo. H. Whipple, Lynn, for "Jennie D.," three years old, weight 1020 lbs.
- \$5. Second premium, to Daniel Tenney, Newbury, for chestnut gelding, three years old, weight 900 lbs.

O. S. Butler, D. A. Massey, Henry Nason, F. Gullivar—*Committee*.

COLTS FOR GENERAL PURPOSES, SECOND CLASS.

The Committee on Colts for General Purposes, Second Class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$6. First premium, to Woodbury Smith, Rowley, for two year old colt, weight 975 lbs.
- \$4. Second premium, to Harry H. Hale, Bradford, for two year old colt, weight 930 lbs.
- \$6. First premium, to B. W. Bartlett, Rowley, for one year old stallion colt.
- \$4. Second premium, to O. N. Fernald, Danvers, for one year old bay colt, weight 705 lbs.

Nathaniel Shatswell, James Noyes, W. P. Fisher, C. C. Hewett, John Parkhurst—*Committee*.

SWINE, FIRST CLASS.

The Committee on Swine, First Class, have attended to

their duty, and respectfully report to the Secretary that they have made the following awards :

- \$8. First premium, to Wm. W. Perkins, Newburyport, for grade breeding sow.
- \$5. Second premium, to S. P. Hale, Newbury, for grade breeding sow with 11 pigs.
- \$8. First premium, to Michael Reddy, Ipswich, for Jersey red sow with 7 pigs.
- \$8. First premium, to Edward S. Knights, Newbury, for grade Berkshire boar.
- \$5. Second premium, to Wm. W. Perkins, Newburyport, for litter of 8 graded Yorkshire pigs.

M. B. Chesley, Andrew Dodge, C. U. Burbank—*Committee.*

SWINE, SECOND CLASS, OR SMALL BREEDS.

The Committee on Swine, Second Class, or Small Breeds, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$8. First premium, to W. W. Perkins, Newbury, for litter of weaned pigs.
- \$8. First premium, to W. W. Perkins, Newbury, for grade Yorkshire breeding sow.

P. T. Winkley, Daniel M. Davis, Asa T. Newhall,
Committee.

SHEEP.

The Committee on Sheep have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$10. First premium, to Matthew H. Toomey, Newbury, for Coltswold sheep.
- \$8. First premium, to Matthew H. Toomey, Newbury, for Coltswold buck.
- N. W. Moody, J. S. Todd, E. P. Perley—*Committee*.
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POULTRY.

The Committee on Poultry have attended to their duty, and respectfully report to the Secretary through the Judge that the following awards have been made :

- Diploma. First premium, to E. E. Bartlett, Newburyport, for best breeding pen of Partridge Cochins.
- Diploma. First premium, to Eben Smith, Newburyport, for breeding pen Brown Leghorns.
- \$2.00. First premium, to J. W. Wilson, Amesbury, for pair of White Cochins chicks.
- 2.00. First premium, to J. W. Wilson, Amesbury, for Buff Cochins chicks.
- 2.00. First premium, to E. E. Bartlett, Newburyport, for Partridge Cochins.
- 1.00. Second premium, to Joseph Parsons, (Byfield), Newbury, for Buff Cochins chicks.
- 2.00. First premium, to W. L. Whipple, Newburyport, for White Leghorn chicks.
- 2.00. First premium, to Patrick M. Haley, Newburyport, for Plymouth Rock chicks.
- 1.00. Second premium, to Patrick M. Haley, Newburyport, for Plymouth Rock chicks.
- 2.00. First premium, to E. M. Woodman, Newbury, for W. C. B. Polish chicks.
- 2.00. First premium, to J. W. Wilson, Amesbury, for Dark Brahma chicks.

- 2.00. First premium, to Charles E. Marshall, Rowley, for Houdan fowls.
- 2.00. First premium, to Charles E. Marshall, Rowley, for Houdan chicks.
- 2.00. First premium, to D. T. Rowe, Newburyport, for Light Brahma chicks.
- 1.00. Second premium, to C. S. Bartlett, Newburyport, for Light Brahma chicks.
- 2.00. First premium, to N. A. Massey, Newburyport, for Silver Spangled Hamburg chicks.
- 2.00. First premium, to E. W. Buswell, Salisbury, for Wyandotte chicks.
- 1.00. Second premium, to E. W. Buswell, Salisbury, for Wyandotte chicks.
- 2.00. First premium, to Wm. P. Perkins, Danvers, for Pekin ducks (old).
- 2.00. First premium, to Wm. P. Perkins, Danvers, for Pekin ducks (young).
- 2.00. First premium, to Ben : Perley Poore, West Newbury, for dressed ducks.
- 2.00. First premium, to Ben : Perley Poore, West Newbury, for dressed chickens.
- 1.00. First premium, to Mrs. A. M. Perkins, Newbury, for best dozen eggs.

The Judge would recommend notice of the Guinea hens exhibited, for which no premium is offered, belonging to John J. Quill.

WM. F. BACON, *Judge*.

NOTE. — Premiums were awarded on a score of not *less* than 176 points for first premium pairs and 166 points for second premium pairs of fowls and chicks.

PLOUGHING WITH DOUBLE TEAMS.

The Committee on Ploughing with Double Teams have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$12. First premium, to Noyes & Little, Newbury, for ploughing with 2 yoke of oxen, "Eagle" plough.
- \$10. Second premium, to Wm. P. Coffin, Newbury, for ploughing with 2 yoke of oxen, common plough.
- \$9. Third premium, to Wm. W. Perkins, Newbury, for ploughing with 2 yoke of oxen, "Eagle No. 20" plough.

Aaron Low, Daniel H. Hale, Edward G. Dole, Allen Smith—*Committee*.

PLOUGHING WITH HORSES.

The Committee on Ploughing with Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$10. First premium, to Charles N. Maguire, Newburyport, for ploughing with pair of horses.
- \$7. Second premium, to S. F. Newman, Newbury, for ploughing with pair of horses.
- \$5. Third premium, to Walter F. Dodge, North Beverly, for ploughing with pair of horses.

J. N. Rolfe, William Thurlow, John Cashman, T. G. Ordway—*Committee*.

PLOUGHING WITH THREE OR FOUR HORSES.

The Committee on Ploughing with three or four Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$10. First premium, to J. Kent Adams, Newbury, for ploughing with four horses, steel Hussey No. 50 plough.
- \$10. First premium, to Frank Perkins, Newbury, for ploughing with three horses, steel Eagle No. 50 plough.

Isaac F. Knowlton, George F. Averill, Nathan A. Bushby—*Committee*.

PLOUGHING WITH SWIVEL PLOUGH.

The Committee on Ploughing with Swivel Ploughs have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$10. First premium, to Jonas M. Rollins, Danvers, for ploughing with two horses and Granger Swivel plough.

C. J. Peabody, Ebenezer Smith—*Committee*.

PLOUGHING WITH SULKY PLOW.

The Committee on Ploughing with Sulky Plough have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$10. First premium, to A. J. Stockbridge, Rowley, for ploughing with Cassidy Sulky plough.

The Committee wish to remark that the work done by Mr. Stockbridge compared favorably with that done by the other kind of ploughs. The work was commenced at 17 1-2 minutes past ten and finished at 16 minutes of 11.

Wilbur F. Proctor, Calvin Rogers, Amos Poor—*Committee*.

AGRICULTURAL IMPLEMENTS.

The Committee on Agricultural Implements have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$10. Diploma and first premium, to J. C. Stanley, Newburyport, for best collection.
- \$5. First premium, to G. E. Daniels, Rowley, for farm wagon.
- \$5. First premium, to Geo. E. Daniels, Rowley, for horse cart.
- \$3. Gratuity, to Geo. E. Daniels, Rowley, for hay wagon.
- \$5. Gratuity, to Wm. Little, Newbury, for hay wagon.
- \$3. Gratuity, to George E. Daniels, Rowley, for double sled.
- \$2. Gratuity, to C. S. Huse, Newburyport, for root cutter.
- \$5. Gratuity, to F. S. Wright, Pomfret, Ct., for road machine.
- \$5. Gratuity, to E. K. Preston, Beverly Farms, for hoisting machine.
- \$2. Gratuity to W. H. Stevens, West Newbury, for incubator.
- \$2. Gratuity to T. P. Harriman, Andover, for horse shoes.

Aaron Low, G. A. Randall, James Noyes, Andrew Dodge, *Committee*.

CARRIAGES.

The Committee on Carriages have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$2. Gratuity to T. W. Lane, Amesbury, for patent spring road wagon.
 - \$5. Gratuity to T. W. Lane, Amesbury, for light top buggy.
 - \$3. Gratuity to Gilman A. Andrews, Salem, for market wagon.
 - \$2. Gratuity to P. M. Lougee, Newburyport, for duplex gear.
 - \$5. Gratuity to William Poor, Andover, for meat wagon.
- Henry Hobbs, David Stiles, Aaron Sawyer—*Committee*.

DAIRY.

The Committee on Dairy have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$10. First premium, to No. 9, Elbridge Tenney, Newbury (Byfield), for 7 lbs. butter.
- \$8. Second premium, to No. 2, W. K. Cole, West Boxford, for 5 lbs. butter.
- \$6. Third premium, to No. 11, Oliver F. Lewis, Salisbury, for 5 1-2 lbs. butter.

E. H. Potter, N. Longfellow, F. W. Sargent—*Committee*.

STATEMENT OF ELBRIDGE TENNEY.

Seven lbs. of butter, made from the milk of two grade Jersey heifers, Daisy and Pansy, who are 22 months old. Daisy came in the 14th of May and Pansy the 22d of May. Their feed has been one quart of Indian meal and one quart of shorts apiece in the morning, and what they could get in the pasture. I have no place to set my milk or make my butter, only in a corner room in the house. I am 72 years, 9 months old, and do my own work.

STATEMENT OF W. K. COLE.

I enter for the Society's premium a five pound box of butter. This butter is made from the milk of grade Jersey cows. The milk is strained in shallow five quart pans and allowed to stand in the Dairy from 36 to 48 hours ; it is then skimmed and the cream put in a jar and thoroughly stirred together, and when enough has collected for a churning, it is churned until it becomes hard, when the buttermilk is drawn off and cold fresh water is turned in, when it is churned two or three minutes longer. It is then taken from the churn and washed, and the buttermilk *thoroughly worked out*, when it is salted, about 1 oz. of salt to the pound of butter, the salt being worked in by hand. It is then immediately put up in five-pound boxes and in balls, and is ready for the market. The milk is kept in a cool place, about 50 degrees. The butter contains no artificial coloring, and we have never had occasion to use any ; in fact I never saw any.

STATEMENT OF OLIVER F. LEWIS.

Dairy butter, grade Jersey. Milk set in pans, cream taken off soon as milk sours. Churned with Dash churn. Butter washed, salted 1-2 oz. to pound, with very little working. Milk set in milk-room, opening from kitchen.

 BREAD, HONEY AND CANNED FRUIT.

The Committee on Bread, Honey and Canned Fruit have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$3. First premium, to F. E. de Jean, Newburyport, for white bread.
- \$2. Second premium, to Alice J. Bartlett, Newburyport, for white bread.

- \$1 Third premium, to J. S. Todd, Rowley, for white bread.
- \$2. First premium, to Delia Craven, Bradford, Graham improved bread.
- \$1. Second premium, to Ellen Keefe, Newburyport, for Graham improved bread.
- 50 cts. Gratuity, to R. S. Tibbets, Newburyport, for steamed cereals.
- \$3. First premium, to John Preston, Georgetown, for honey.
- \$1. Gratuity, to Alfred Green, Newbury, for honey.
- \$3. First premium, to Lizzie Wilson, North Beverly, for collection of jellies and preserves.
- \$2. Second premium, to Mrs. N. E. Ladd, Groveland, for collection of jellies and preserves.
- \$1. Gratuity, to Mrs. W. Taylor, Amesbury, for jelly.
- 50 cts. Gratuity, to Albert Kimball, Bradford, for ten year cider.
- 50 cts. Gratuity, to George H. Plummer, Newbury, for elderberry wine.
- \$1. Gratuity, to Eliphalet Griffin, Newburyport, for 6 bottles grape wine.
- 50 cts. Gratuity, to Mrs. M. de F. Bayley, Newburyport, for mustard.

N. T. Kimball, Mrs. J. Henry Hill, Mrs. Charles B. Emerson, F. W. Sargent, Mrs. L. M. Sargent—*Committee*.

NOTE.—No bread recipes received from Committee.

STATEMENT OF JOHN PRESTON.

I enter for premium ten pounds of comb and one pound of extracted honey. This honey was gathered from fruit blossoms in the month of May by hybrid bees, a cross between Black and Italians, and stored in honey boxes placed on racks over brood frames in Langstroth hives.

PEARS.

The Committee on Pears have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$3. First premium, to Edwin Bates, Lynn, for Bartlett.
- \$3. First premium, to Abel Stickney, Groveland, for Belle Luerative.
- \$3. First premium, to Edwin Bates, Lynn, for Beurre Bosc.
- \$3. First premium, to Silas Plumer, Newbury, for B. de Anjou.
- \$3. First premium, to Edwin Bates, Lynn, for Duchess.
- \$3. First premium, to J. H. Hill, Amesbury, for Dana's Hovey.
- \$3. First premium, to J. H. Hill, Amesbury, for Lawrence.
- \$3. First premium, to Edwin Bates, Lynn, for L. Bon de Jersey.
- \$3. First premium, to W. Huff, Newburyport, for Marie Louise.
- \$3. First premium to James M. Estes, Peabody, for Onondaga.
- \$3. First premium, to A. J. Hubbard, Peabody, for Paradise d'Antomne.
- \$3. First premium, to Silas Plumer, Newbury, for Seckel.
- \$3. First premium, to Patrick Nasey, Salem, for St. Michael Archange.
- \$3. First premium, to J. D. Foote, Haverhill, for Sheldon.
- \$3. First premium, to R. S. Griffith, Newburyport, for Urbaniste.
- \$3. First premium, to David A. Pettingell, Danvers, for Vicar of Winkfield.

- §3. First premium, to J. Henry Hill, Amesbury, for Winter Nellis.
- §3. First premium, to Edwin Bates, Lynn, for Mt. Vernon.
- §3. First premium, to J. Henry Hill, Amesbury, for Langlier.
- §6. First premium, to Edwin Bates, Lynn, for plate of Duchess, 24 specimens.
- §8. First premium, to J. Henry Hill, Amesbury, for best collection of varieties recommended for cultivation by this Society.
- §6. Second premium, to E. F. Webster, Haverhill, for second best collection.
- §4. Third premium, to John O'Brien, Bradford, for third best collection.
- §1. Gratuity, to W. E. Ladd, Groveland, for B. de Anjou.
- §1. Gratuity, to T. K. Bartlett, Newburyport, for Bartlett.
- §1. Gratuity, to J. Hood, Danvers, for Beurre Bosc.
- §1. Gratuity, to J. T. Griffin, Newburyport, for Duchess.
- §1.50. Gratuity, to T. K. Bartlett, Newburyport, for Beurre Hardy.
- §1. Gratuity, to G. J. Johnson, Rowley, for Onondaga.
- §1. Gratuity, to Walter B. Allen, Lynn, for Seckel.
- §1. Gratuity, to T. P. Hale, Rowley, for B. de Anjou.
- §1.50. Gratuity, to W. B. Little, Newbury, for Souvenir de Congress.
- §1.50. Gratuity, to M. Stevens, Newburyport, for Beurre Clairgeau.
- §1. Gratuity, to B. F. Stanley, Newburyport, for Sheldon.
- §1. Gratuity, to George Pettengill, Salem, for Vicar of Winkfield.

- \$1. Gratuity, to George C. Evans, Rowley, for L. Bon de Jersey.
- \$1. Gratuity, to Edwin Bates, Lynn, for B. Diel.
- \$1. Gratuity, to John O'Brien, Bradford, for Lawrence.
- \$1.50. Gratuity, to E. Bates, Lynn, for Howell.
- \$1. Gratuity, to Philip B. Adams, Newburyport, for Howell.
- \$1. Gratuity, to George Pettingell, Salem, for Beurre Bosc.
- \$1. Gratuity, to A. J. Hubbard, Peabody, for Marie Louise.
- \$1.50. Gratuity, to C. M. Lunt, Newbury, for Keiffer.

There were three hundred and twenty-four (324) plates presented by one hundred and eight (108) contributors. One hundred and seventeen (117) plates were of the varieties recommended for cultivation in Essex county. There were three (3) collections of the varieties recommended, comprising fifty-eight (58) plates, and six (6) dishes of twenty four (24) specimens each. The balance were on the "miscellaneous" table.

*The Committee would recommend that the following varieties be dropped from the list recommended for cultivation in Essex county: St. Michael Archangel, Mount Vernon and Winter Nelis; and that Howell, Beurre Hardy and Beurre Clairgeau be added to the list.

George Pettingell, W. H. B. Currier, Benj. F. Stanley, Geo. H. Plummer—*Committee*.

*The recommendations of the Committee were adopted by the Trustees at November meeting.

APPLES.

The Committee on Apples have attended to their duty,

and respectfully report to the Secretary that they have made the following awards :

- \$3.00. First premium, to Edwin P. Noyes, Newbury, for Baldwins.
- 3.00. First premium, to F. A. Whitman, Wenham, for Danvers Winter Sweet.
- 3.00. First premium, to George Buchan, Andover, for Granite Beauty.
- 3.00. First premium, to C. M. Lunt, Newbury, for Red Russet.
- 3.00. First premium, to G. W. Gage, Methuen, for McCarty.
- 3.00. First premium, to D. M. Cole & Son, Boxford, for Roxbury Russet.
- 3.00. First premium, to W. W. Perkins, Newbury, for Tolman Sweet.
- 3.00. First premium, to T. K. Bartlett, Newburyport, for Drap d'Or.
- 3.00. First premium, to B. F. Huntington, Amesbury, for Sweet Baldwin.
- 3.00. First premium, to C. C. Blunt, Andover, for Hurlburt.
- 3.00. First premium, to Wm. Burke Little, Newbury, for R. I. Greening.
- 3.00. First premium, to Wm. Burke Little, Newbury, for Smith Cider.
- 3.00. First premium, to George B. Austin, West Boxford, for Porter.
- 3.00. First premium, to D. Bradstreet, Topsfield, for Pickman Pippin.
- 3.00. First premium, to F. H. Adams, Rowley, for Hunt's Russet.
- 3.00. First premium, to John Taylor, Amesbury, for Gravenstein.

- 3.00. First premium, to J. H. Hill, Amesbury, for King of Tompkins County.
- 3.00. First premium, to John O'Brien, Bradford, for Hubbardston.
- 1.50. First premium, to S. G. Ashton, Lynn, for Hyslop Crab.
- .75. Gratuity, to F. A. Whitman, Wenham, for Crab Apple.
- .50. Gratuity, to Charles W. Rogers, Rowley, for Crab Apple.
- .50. Gratuity, to Joseph Thurlow, Newburyport, for Crab Apple.
- 1.50. Gratuity, to T. J. King, West Newbury, for President.
- 1.50. Gratuity, to C. F. Pousland, Salem, for Glory of the West.
- 1.50. Gratuity, to Albert Kimball, Boxford, for Ordway.
- 1.50. Gratuity, to E. F. Webster, Haverhill, for Blush.
- 1.00. Gratuity, to F. P. Hale, Rowley, for Hunt's Russet.
- 1.00. Gratuity, to David W. Low, Gloucester, for Mother.
- 1.00. Gratuity, to David W. Low, Gloucester, for Minister.
- 1.00. Gratuity, to T. K. Bartlett, Newburyport, for Nonesuch.
- 1.00. Gratuity, to C. L. T. Atwater, Newburyport, for Duchess of Oldenburg.
- 1.00. Gratuity, to J. O. Winkley, Newburyport, for Williams.
- 1.00. Gratuity, to B. F. Huntington, Amesbury, for Ladies' Sweet.
- 1.50. Gratuity, to C. W. Woods, Newburyport, for Sea-view.

- 1.00. Gratuity, to P. M. Hsley, Newbury, for Hubbardston.
- 1.00. Gratuity, to R. Jaques, Newbury, for Seek No Further.
- 1.00. Gratuity, to W. K. Cole, Boxford, for Dutch Codlin.
- 1.00. Gratuity, to James Noyes, Newbury, for Roxbury Russet.
- 1.00. Gratuity, to Isaac P. Noyes, Newburyport, for Rolfe.
- 1.00. Gratuity, to David Smith, Newburyport, for Hubbardston.
- 1.00. Gratuity, to John Swinerton, Danvers, for Fall Harvey.
- 1.00. Gratuity, to W. H. Stevens, West Newbury, for Moody.
- 1.00. Gratuity, to M. W. Bartlett, West Newbury, for Alexander.
- 1.00. Gratuity, to C. H. Poor, Bradford, for Sweet Rambo.
- 1.00. Gratuity, to E. G. Plumer, Newbury, for R. I. Greening.
- 1.00. Gratuity, to J. M. Lunt, Newbury, for Golden Russet.
- 1.00. Gratuity, to Valley Farm, West Gloucester, for Sweet Russet.
- 1.00. Gratuity, to C. B. Anderson, Boxford, for Green Sweet.
- 8.00. First premium, to J. H. Hill, Amesbury, for best collection of varieties recommended for cultivation.
- 6.00. Second premium, to S. B. George, Groveland, for collection.
- 4.00. Third premium, to T. C. Thurlow, West Newbury, for collection.

6.00. First premium, to T. J. King, West Newbury, for best 24 apples, Gravenstein.

The Committee regret that they were unable to give premiums or gratuities to many deserving plates of Apples on account of lack of funds.

Aaron Low, Geo. W. Chadwick, Daniel Plummer, Thomas Hale — *Committee*.

PEACHES, GRAPES AND ASSORTED FRUITS.

The Committee on Peaches, Grapes and Assorted Fruits have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- \$2.00. First premium, to D. D. Tilton, Newburyport, for Native Seedling peach.
- 1.00. Gratuity, to Edwin Bates, Lynn, for Seedling peach.
- 1.00. Gratuity, to George Pettingell, Salem, for Blood Seedling peach.
- 1.00. Gratuity, to D. D. Tilton, Newburyport, for Imperial peach.
- 3.00. First premium, to James G. King, Newburyport, for Concord grapes.
- 3.00. First premium, to S. M. Titcomb, West Newbury, for Worden grapes.
- 3.00. First premium, to James N. Estes, Peabody, for Brighton grapes.
- 3.00. First premium, to C. P. Savory, Groveland, for Hartford Prolific grapes.
- 3.00. First premium, to P. M. Ilsley, Newbury, for Delaware grapes.
- 3.00. First premium, to S. M. Titcomb, West Newbury, for Martha grapes.

- 3.00. First premium, to George Walker, Amesbury, for Moore's Early grapes.
- 6.00. First premium, to Aaron Low, Essex, for Cold House grapes.
- 4.00. Second premium, to George W. Gage, Methuen, for Cold House grapes.
- 7.00. First premium, to George W. Gage, Methuen, for best collection of grapes.
- 1.50. First premium, to E. A. Goodwin, Amesbury, for Niagara grapes.
- 1.50. Gratuity, to Rufus Goodwin, Haverhill, for Concord grapes.
- 1.50. Gratuity, to J. W. Goldthwait, Salem, for Brighton grapes.
- 1.50. Gratuity, to M. W. Bartlett, West Newbury, for Delaware grapes.
- 1.50. Gratuity, to Samuel Cammett, Amesbury, for Martha grapes.
- 1.50. Gratuity, to Mrs. Sarah J. Woodward, West Newbury, for Hartford grapes.
- 4.00. First premium, to Abigail Perkins, Newbury, for best basket of assorted fruit.
- 3.00. Second premium, to A. J. Hubbard, Peabody, for basket second best fruit.
- 1.00. Gratuity, to Wallace Bates, Lynn, for Pocklington grapes.
- 1.00. Gratuity, to Augustus Very, Danvers, for Diana grapes.
- 1.00. Gratuity, to C. P. Savory, Groveland, for Isabella grapes.
- 1.50. Gratuity, to Harry Noyes, Newbury, for Iona grapes.
- 1.50. Gratuity, to Samuel Cammett, Amesbury, for Clinton grapes.

- 1.50. Gratuity, to Edwin Bates, Lynn, for Lombard plums.
- 1.00. Gratuity, to J. Otis Winkley, Newburyport, for Lombard plums.
- 1.00. Gratuity, to T. C. Thurlow, West Newbury, for Riene Claude plums.
- 1.50. Gratuity, to Isaac P. Noyes, Newburyport, for Champion quince.
- 1.50. Gratuity, to E. F. Webster, Haverhill, for Orange quince.
- 1.00. Gratuity, to C. R. Todd, Newburyport, for Orange quince.
- .50. Gratuity, to E. H. Richardson, Rowley, for Orange quince.
- .75. Gratuity, to Lizzie Peirson, Newburyport, for blackberries, Lawton.
- .75. Gratuity, to Mrs. J. Henry Hill, Amesbury, for strawberries, Miner's Prolific.

J. Henry Hill, B. F. Huntington, Thomas P. Hale —
Committee.

FLOWERS.

The Committee on Flowers have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$3.00. First premium, to Mrs. T. W. Goodwin, Newburyport, for foliage plants.
- 3.00. First premium, to Mrs. T. W. Goodwin, Newburyport, for parlor bouquets.
- 2.00. First premium, to Mrs. T. W. Goodwin, Newburyport, for hand bouquets.
- 3.00. First premium, to Wm. Merrill, West Newbury, for cut flowers.

- 2.00. Second premium, to Wm. H. Bayley, Newburyport, for cut flowers.
- 1.00. First premium, to Mrs. T. W. Goodwin, Newburyport, for 4 Ferns in pots.
- 1.00. First premium, to Mrs. T. W. Goodwin, Newburyport, for 4 Coleus in pots.
- 1.00. First premium, to Mrs. T. W. Goodwin, Newburyport, for 1 Begonia in pot.
- 1.00. First premium, to Greenleaf Dodge, Newburyport, for best plant not from greenhouse.
- 1.00. First premium, to Mrs. A. R. Gillett, Newburyport, for bouquet of garden flowers.
- 1.00. First premium, to Miss L. C. Bayley, Newburyport, for basket of garden flowers.
- 1.00. First premium, to E. & C. Woodman, Danvers, for Carnation Pinks.
- 1.00. First premium, to Wm. H. Bayley, Newburyport, for Zinnias.
- 1.00. First premium, to William Tenney, Newburyport, for Everlastings.
- 2.00. First premium, to William Merrill, West Newbury, for floral design.
- 5.00. First premium, to Mrs. C. N. S. Horner, Georgetown, for native plants.
- 3.00. Second premium, to Eben True, Jr., Amesbury, for native plants.
- 2.00. First premium, to A. Shirley Ladd, Groveland, for arrangement native flowers and autumn leaves.
- 1.00. First premium, to William B. Coffin, Newburyport, for roses, 3 varieties.
- .50. Gratuity, to Miss Lizzie Libby, Newburyport, for box Coleus.
- 3.00. Gratuity, to T. C. Thurlow, West Newbury, for evergreens, etc.

- 1.00. First premium, to T. J. King, West Newbury, for garden dahlias.
- 1.00. First premium, to T. J. King, West Newbury, for bouquet dahlias.
- 1.00. Gratuity, to William Graves, Newburyport, for *Amaranthus tricolor*.
- 1.00. Gratuity, to Charles Adams, Newbury, for *Amaryllis*.
- 1.00. Gratuity, to Miss A. Edwards, Newburyport, for collection pansies.
- .50. Gratuity, to Wm. P. Lunt, Newbury, for plate pansies.
- .50. Gratuity, to Mrs. D. R. Parker, Groveland, for verbenas.
- .50. Gratuity, to A. Shirley Ladd, Groveland, for verbenas.
- 1.00. Gratuity, to Thomas Capers, Newburyport, for Guernsey lily.
- 1.00. Gratuity, to Mrs. C. N. S. Horner, Georgetown, for Essex county ferns.
- .50. Gratuity, to Miss H. M. Smith, Newburyport, for autumn leaves and flowers.
- .50. Gratuity, to Miss Winifred Pingree, Newburyport, for native grasses.
- .50. Gratuity, to J. C. Smith, Newburyport, for cut flowers.
- 1.50. Gratuity, to J. L. Willey, Lynn, for collection dahlias.
- .50. Gratuity, to David Mighill, Boxford, for wild flowers.
- .50. Gratuity, to Mrs. C. W. Nelson, Georgetown, for *Begonia*.
- .50. Gratuity, to Wm. Merrill, West Newbury, for snapdragon.

- .50. Gratuity, to Mrs. C. D. Rowe, Newburyport, for cross of wild flowers.
- .50. Gratuity, to Mrs. P. H. Lunt, Newburyport, for choice plant.
- .50. Gratuity, to Thomas Capers, Newburyport, for gladiolus.
- 1.50. Gratuity, to J. A. Kenniston, Newburyport, for collection dahlias.
- 1.50. Gratuity, to Fred. Hibbs, Amesbury, for collection.

The display of Flowers and Foliage Plants at our annual exhibitions is every year increasing in extent and general excellence. This year, owing to the severe drought, the contributions were not so numerous, nor the specimens as perfect, as in some previous seasons; but the exhibit on the whole was a good one—very creditable to a County Fair—especially one that has always been considered more agricultural than horticultural. The hall arrangements were very creditable to those who had them in charge, and we think the plan for displaying the flowers a good one. The Society has very generously, during the past year, furnished stands and bottles for exhibiting specimens, and as more will soon be needed, we suggest that bottles with wider mouths would be more convenient and better adapted to the purpose.

As most of our income is derived from the sale of tickets to the Hall—and one of the greatest attractions (if not *the* greatest) in the Hall is the Flower Department—the wisdom of these appropriations is evident. We would suggest the importance of increasing these appropriations from year to year, offering higher premiums, not for more but *better* specimens of the various plants and flowers, for which premiums are offered.

Many exhibitors appear to be ignorant or careless in regard to the rules by which committees are governed.

These rules and regulations are all to be found in the printed premium list of the society, which can be obtained of the Secretary, or from any Committee. For instance, a premium is offered for the best twelve dahlias: some person may exhibit hundreds of specimens in our general collection; unless twelve separate dahlias are set apart by themselves, they are not considered as competing for a premium. No Committee can look through a large collection and select out twelve flowers, which in their opinion are better than any other twelve in the Hall, and do this through the whole list, in the very short time allowed them. The printed rules should be studied by every exhibitor who expects to compete for a prize. If this was done there would be less of fault-finding and disappointment.

The labor of many of the Hall Committee is very great during the limited time allotted to them; and we would make this suggestion to be thought over, and possibly to be acted upon at some future time, viz., that all the afternoon, until evening of the first day, be allowed the Hall Committees to examine and award the premiums; and that during such examination, everyone except the Committees and proper officers be strictly excluded from the room. Also that the exhibition at the Hall be continued another day, making two whole days and two evenings, in which it will be open to the public.

T. C. Thurlow, Mrs. C. N. S. Horner, Mrs. L. H. Bowdoin, Wm. Huff, *Committee*.

VEGETABLES.

The Committee on Vegetables have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- \$3. First premium, to J. C. Stanley, Newburyport, for Boston market tomato.
- \$3. First premium, to T. G. Bradley, West Newbury, for Ruta Baga turnips.
- \$3. First premium, to William Huff, Newburyport, for parsnips.
- \$3. First premium, to Wm. Huff, Newburyport, for purple top turnips.
- \$3. First premium, to William Huff, Newburyport, for Hubbard squashes.
- 50 cts. Gratuity, to William Huff, Newburyport, for sweet potatoes.
- \$2. Second premium, to T. K. Bartlett, Newburyport, for Stone Mason cabbage.
- \$1.50. Gratuity to T. K. Bartlett, Newburyport, for yellow Ruta Bagas.
- \$3. First premium, to T. K. Bartlett, Newburyport, for white Ruta Bagas.
- \$3. First premium, to S. F. Newman, Newbury, for Savoy cabbages.
- \$3. First premium, to S. F. Newman, Newbury, for Fottler Drumhead cabbages.
- \$2. Second premium, to S. F. Newman, Newbury, for Brunswick cabbages.
- \$3. First premium, to S. F. Newman, Newbury, for red onions.
- \$3. First premium, to Alfred Green, Newbury, for Beauty of Hebron potatoes.
- \$3. First premium to B. F. Huntington, Amesbury, for Clarke's No. 1 potatoes.
- \$3. First premium, to B. F. Huntington, Amesbury, for Pearl of Savoy potatoes.
- \$3. First premium, to W. Burke Little, Newbury, for Early Rose potatoes.

- \$3. First premium, to E. G. Nason, West Newbury, for
Turban squashes.
- \$3. First premium, to Wm. H. Greenleaf, Salisbury, for
Marrow squashes.
- \$3. First premium, to W. H. Greenleaf, Salisbury, for
Essex Hybrid squashes.
- \$3. First premium, to Wm. H. Greenleaf, Salisbury, for
cauliflowers.
- \$3. First premium, to W. K. Cole, West Boxford, for
cranberries.
- \$2. Second premium, to J. M. Danforth, Lynnfield, for
cranberries.
- \$2. First premium, to W. P. Smith, Rowley, for White
Plume celery.
- \$3. First premium, to M. Andrews, West Newbury, for
red cabbages.
- \$3. First premium, to R. Jaques, Newbury, for white
flat turnips.
- \$3. First premium, to Aaron Low, Essex, for Cardinal
tomatoes.
- \$3. First premium, to W. Burke Little, Newbury, for
turnip beets.
- \$3. First premium, to Wm. W. Perkins, Newbury, for
Stone Mason cabbage.
- \$3. First premium, to Aaron Low, Essex, for Corey
sweet corn.
- \$3. First premium, to Aaron Low, Essex, for Perry's
Hybrid Sweet corn.
- \$3. First premium, to G. B. Austin, West Boxford, for
Marblehead squashes.
- \$3. First premium, to E. & C. Woodman, Danvers, for
Livingston tomatoes.
- \$3. First premium, to Aaron Low, Essex, for best col-
lection tomatoes.

- 50 cts. Gratuity, to Wm. H. Bayley, Newburyport, for White Plume celery.
- \$3. First premium, to S. F. Newman, Newbury, for Danvers onion.
- 50 cts. Gratuity, to Stephen P. Hale, Newbury, for Clarke's No. 1 potatoes.
- \$3. First premium, to B. F. Huntington, Amesbury, for Short Horn carrot.
- \$1. Gratuity, to B. F. Huntington, Amesbury, for collection of potatoes.
- \$2. First premium, to John J. Nason, Amesbury, for water melon.
- \$3. First premium, to John J. Nason, Amesbury, for Danvers Intermediate onion.
- 50 cts. Gratuity, to Richard Jaques, Newbury, for Clarke's No. 1 potatoes.
- 50 cts. Gratuity to Richard Jaques, Newbury, for Beauty of Hebron potatoes.
- 50 cts. Gratuity to Richard Jaques, Newbury, for Sunrise potatoes.
- \$3. First premium, to Richard Jaques, Newbury, for Flat onions.
- \$1. Gratuity to Richard Jaques, Newbury, for parsnips.
- \$2. Second premium, to Richard Jaques, Newbury, for Savoy cabbage.
- 50 cts. Gratuity to R. T. Jaques, Newbury, for Danvers onions.
- 50 cts. Gratuity, to W. W. Perkins, Newbury, for Silver Skin onion.
- \$2. First premium, to W. W. Perkins, Newbury, for musk melons.
- \$2. First premium, to W. W. Perkins, Newbury, for nutmeg melons.
- 50 cts. Gratuity to W. W. Perkins, Newbury, for Egyptian beets.

- \$1. Gratuity, to Edwin Bates, Lynn, for mammoth squash.
- \$3. First premium, to Edwin Bates, Lynn, for Mangold Wurtzels.
- \$1. Gratuity, to William Thurlow, Newburyport, for collection of potatoes.
- 50 cts. Gratuity, to James Noyes, Newbury, for Clarke's No. 1 potatoes.
- \$1. Gratuity, to James Ilsley, Newbury, for string of onions.
- 50 cts. Gratuity, to C. M. Bayley, Newburyport, for White Plume celery.
- 50 cts. Gratuity, to S. W. Goldthwait, Danvers, for celery.
- \$1. Gratuity, to J. F. Dale, Danvers, for collection of herbs.
- \$2. Second premium, to S. A. Jaques, West Newbury, for Red cabbage.
- \$1. Third premium, to Andrew Lane, Rockport, for cranberries.
- 50 cts. Gratuity, to O. F. Lewis, Salisbury, for cranberries.
- 50 cts. Gratuity, to M. P. Holland, Newburyport, for Boston Market celery.
- \$1. Gratuity, to Daniel W. Bradstreet, Rowley, for Belle potatoes.
- \$1. Gratuity, to M. M. Ridgway, West Newbury, for Danvers onion.
- \$1. Gratuity, to M. M. Ridgway, West Newbury, for Queen of the Valley potatoes.
- \$2. Second premium, to Charles R. Anderson, Boxford, for cauliflowers.
- 50 cts. Gratuity, to Wm. P. Smith, Rowley, for canteloupe melons.

- 50 cts. Gratuity, to M. Walsh, Groveland, for Beauty of Hebron potatoes.
- 50 cts. Gratuity, to Mrs. Samuel Stevens, Plum Island, for cranberries.
- 50 cts. Gratuity, to C. H. Poor, Bradford, for turnip beet.
- 50 cts. Gratuity, to Daniel Plummer, Newbury, for Essex potatoes.
- \$1.50. Gratuity, to G. W. Marsh, Newburyport, for Danvers onion.
- 50 cts. Gratuity, to G. W. Marsh, Newburyport, for Mammoth peppers.
- 50 cts. Gratuity, to Cornelius Sullivan, Newbury, for Queen of the Valley potatoes.
- \$1. Gratuity, to M. B. Chesley, Amesbury, for collection of potatoes.
- 50 cts. Gratuity, to M. B. Chesley, Amesbury, for Danvers Flat onion.
- 50 cts. Gratuity, to Wm. B. Foster, Beverly, for Sweet potatoes.
- \$8. First premium, to Aaron Low, Essex, for best collection of vegetables.
- \$6. Second premium, to Robert Thornton, Salisbury, for second best collection of vegetables.

THOMAS CAPERS, *Chairman*.

GRAIN AND SEED.

The Committee on Grain and Seed have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$1.00. First premium, to S. M. Titcomb, West Newbury, for peck shelled corn.

- 1.00. First premium, to E. G. Nason, West Newbury, for peck Bald wheat.
- 1.00. First premium, to C. K. Ordway & Son, West Newbury, for peck Silver Hull buckwheat.
- 5.00. First premium, to S. Longfellow, Groveland, for one trace Field corn.
- 3.00. Second premium, to E. G. Nason, West Newbury, for 25 ears Field corn.
- 2.00. Third premium, to G. H. Plumer, Newbury, for 25 ears Field corn.
- *3.00. First premium, to Enoch C. Curtis, Amesbury, for 25 ears Yellow Rice Pop corn.
- *2.00. Gratuity, to John J. Mason, Amesbury, for one trace White Rice Pop corn.
- 1.00. Gratuity, to J. H. Tenney, Rowley, for Improved Canada corn.
- 8.00. First premium, to J. J. H. Gregory, Marblehead, for collection of seed (200 varieties).
- 3.00. Second premium, to Aaron Low, Essex, for collection of seeds (189 varieties).

James P. King, Rufus Kimball, M. W. Bartlett, N. N. Dummer, E. L. Wildes—*Committee*.

*NOTE.—John J. Mason would have received first premium for Pop Corn had he complied with the rules of the Society by not having more than the number of ears for which premium was offered. The awards were changed by the Trustees.

COUNTERPANES AND AFGHANS.

The Committee on Counterpanes and Afghans have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$4.00. First premium, to Mrs. Reuben Jackman, Ipswich Bluffs, for silk quilt.

- 2.00. Second premium, to Miss A. W. Currier, Newburyport, for silk quilt.
- 1.00. Gratuity, to Miss Kate Buckley, Newburyport, for silk quilt.
- 1.00. Gratuity, to Mrs. J. F. Rose, Newburyport, for quilt.
- 1.00. Gratuity, to Mrs. George Peckham, Newburyport, for quilt.
- 1.00. Gratuity, to Annie H. Knight, Newbury, for silk quilt.
- .50. Gratuity, to Mrs. Mary A. Beason, Newburyport, for quilt.
- 1.00. Gratuity, to Miss L. C. Ireland, Newburyport, for silk quilt.
- 1.00. Gratuity, to Miss Alice K. Noyes, Newbury, for silk quilt.
- 2.00. Gratuity, to Mrs. Sarah D. Peabody, Topsfield, for silk quilt.
- 1.00. Gratuity, to Mrs. James P. Folsom, Georgetown, for quilt.
- 1.00. Gratuity, to Mrs. J. R. Chase, Newburyport, for quilt.
- 1.00. Gratuity, to Mrs. John Caldwell, Newburyport, for silk quilt.
- 1.00. Gratuity, to Mrs. F. Adams, Newburyport, for silk quilt.
- 1.00. Gratuity, to Miss Nellie Stanley, Newburyport, for silk quilt.
- 4.00. Gratuity, to Mrs. Wm. E. Prescott, Georgetown, for afghan.
- 1.00. Gratuity, to Miss Sarah Bogardus, Newburyport, for afghan.
- .50. Gratuity, to Mrs. Frank A. Whitman, Wenham, for afghan.

- 1.00. Gratuity, to Miss Susie Meader, Newburyport, for afghans.
- .50. Gratuity, to Mrs. Daniel D. Adams, Newbury, for afghans.
- .50. Gratuity, to Mrs. Wm. S. Coffin, Newburyport, for afghan.
- .50. Gratuity, to Mrs. A. J. Haynes, Newburyport, for quilt.
- .50. Gratuity, to Abby J. Quill, Newburyport, for quilt.
- .50. Gratuity, to Mrs. Wm. S. Coffin, Newburyport, for quilt.
- 1.00. Gratuity, to Annie G. Mumford, Newburyport, for afghan.
- 1.00. Gratuity, to Mrs. J. H. Bartlett, Newburyport, for afghan.
- .50. Gratuity, to Carrie L. Porter, Newburyport, for quilt.

Miss Clara A. Hale, Mrs. T. C. Thurlow, Mrs. A. W. Smith—*Committee*.

CARPETS AND RUGS.

The Committee on Carpets and Rugs have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$4.00. First premium, to John H. Balch, Newburyport, for velvet carpet.
- 3.00. First premium, to Mrs. Cyrus K. Ordway, West Newbury, for rug.
- 2.00. Second premium, to Mrs. Moses E. Cook, Newburyport, for braided rug.
- .75. Gratuity, to Mrs. T. N. Cook, Newburyport, for drawn-in rug.

- .50. Gratuity, to Mrs. Jere. Lunt, Newburyport, for log cabin rug.
- .50. Gratuity, to Mrs. George H. Plummer, Newbury, for rug.
- .75. Gratuity, to Mrs. J. C. Lang, Newburyport, for 2 lamb's tongue rugs.
- .75. Gratuity, to Mrs. George Jackson, Newburyport, for braided rug.
- .50. Gratuity, to Mrs. Reuben Jackman, Ipswich Bluffs, for button rug.
- .50. Gratuity, to Mrs. E. P. Bradley, Newburyport, for knit rug.
- .50. Gratuity, to Mrs. S. Page Lake, Newburyport, for lamb's tongue rug.
- .75. Gratuity, to Mrs. Henry Page, Newburyport, for felt rug.
- .50. Gratuity, to Mrs. S. J. Woodward, West Newbury, for woven rug.
- 1.00. Gratuity, to Mrs. D. P. Nelson, West Newbury, for kid rug.
- .50. Gratuity, to Mrs. M. C. Bridges, West Newbury, for button rug.
- .50. Gratuity, to Miss Annie True, Amesbury, for rug.
- 1.00. Gratuity, to Mrs. Charles Pool, Rockport, for rug.
- .50. Gratuity, to Miss L. Bradbury, Newburyport, for rug.
- .50. Gratuity, to Mrs. William Pearson, Newburyport, for rug.
- 1.00. Gratuity, to Mrs. Elbridge Tenney, Newbury, Byfield, for rug.
- .50. Gratuity, to Mrs. Hector Little, Newburyport, for rug.
- 1.00. Gratuity, to Mrs. J. R. Chase, Newburyport, for rug.

- .50. Gratuity, to Mrs. George L. Gillett, Newburyport, for rug.
- .50. Gratuity, to Mrs. M. E. Brown, Georgetown, for rug.
- .50. Gratuity, to Miss Carrie Abbott, Newburyport, for kid rug.
- .50. Gratuity, to Miss Minnie Page, Newburyport, for rug.
- .50. Gratuity, to Mrs. R. H. Wigglesworth, Newburyport, for rug.
- .50. Gratuity, to Miss Nellie B. Moulton, Newburyport, for rug.
- .75. Gratuity, to Miss Mary C. Noyes, Newburyport, for knit Smyrna rug.
- .50. Gratuity, to Miss Mary Cottrell, Newburyport, for button rug.
- .50. Gratuity, to Miss Mary Bent, Newburyport, for lamb's tongue rug.

William H. Bayley, Mrs. Aaron Low, Mrs. Isaac P. Noyes, Mrs. J. N. Rolfe — *Committee*.

ARTICLES MANUFACTURED FROM LEATHER.

The Committee on Articles Manufactured from Leather have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$5. First premium, to Thomas Hill, Georgetown, for best carriage harness.

There was a collection of shoes, but no evidence that they were manufactured in the county.

William Hilton, I. N. Lane — *Committee*.

MANUFACTURES AND GENERAL MERCHANDISE.

The Committee on Manufactures and General Merchandise have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$3.00. First premium, to W. H. Noyes & Bro., Newburyport, for samples of combs.
- 2.00. Gratuity, to C. H. Richardson, Newburyport, for cough drops.
- .50. Gratuity, to J. R. Fogg, Amesbury, for wringer.
- 1.00. Gratuity, to F. A. Silloway, Newburyport, for upholstery.
- 1.00. Gratuity, to Edward H. Clarkson, Newburyport, for case of bird's eggs.
- 1.00. Gratuity, to Frank E. Coffin, Newburyport, for sewing machine.
- 3.00. Gratuity, to John Carter, Newburyport, for case fancy goods.
- 1.00. Gratuity, to Mrs. N. A. Paine, Newburyport, for fancy hair work.
- 2.00. Gratuity, to N. N. Dummer, Rowley, for manufactured grains.
- .50. Gratuity, to Edward Lunt, Newburyport, for felt slippers.
- .50. Gratuity, to S. H. Fowle, Newburyport, for one case candy.
- 1.00. Gratuity, to G. H. Plumer, Newburyport, for case fancy velvets.
- 1.00. Gratuity, to Robertson & Drummond, Newburyport, for furs.
- .50. Gratuity, to Alice Brown, Newburyport, for case beetles from Java.

2.00. Gratuity, to Wm. Duchemien, Newburyport, for plaiting and basting machine.

Benjamin Akerman, Charles N. Ballou, Charles F. Horton, Isaac P. Noyes—*Committee*.

FANCY WORK AND WORKS OF ART.

The Committee on Fancy Work and Works of Art have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$1.00. Gratuity, to Miss Mattie F. Jaques, Newburyport, for water color.
- .50. Gratuity, to Miss Grace L. Bailey, Newbury, Byfield, for oil painting.
- .50. Gratuity, to Miss Ethel Reed, Newburyport, for crayon.
- .50. Gratuity, to Mrs. H. W. Roberts, Newburyport, for water color.
- .50. Gratuity, to Miss M. E. Couch, Newburyport, for china platter and dish.
- .50. Gratuity, to Miss H. A. Pike, Newburyport, for decorated china.
- .50. Gratuity, to Miss N. P. Rogers, Newbury, Byfield, for plush banner.
- .50. Gratuity, to Mrs. G. H. Fenderson, Newburyport, for oil painting.
- .50. Gratuity, to Miss E. Angerine Welch, Georgetown, for 3 water colors.
- .50. Gratuity, to Miss M. E. Couch, Newburyport, for oil painting.
- .50. Gratuity, to Miss S. L. Knox, Newburyport, for painting.
- .50. Gratuity, to Mrs. C. H. deRochemont, Newburyport, for oil painting.

- 2.00. Gratuity, to Mrs. Kirkpatrick, Newburyport, for painting of pansies.
- .50. Gratuity, to E. A. Williams, Newburyport, for water color.
- 2.00. Gratuity, to Miss L. E. Merrill, Newburyport, for flower painting.
- 1.00. Gratuity, to Miss Mabeth Hurd, Newburyport, for crayon portrait.
- .50. Gratuity, to Miss E. C. Lunt, Newburyport, for animal study.
- 1.00. Gratuity, to Mrs. Dr. Leslie, Amesbury, for study of pansies.
- .50. Gratuity, to Miss F. H. Pettingell, Amesbury, for putty modelling.
- .50. Gratuity, to Miss Nellie Clarkson, Newburyport, for arbutus.
- .50. Gratuity, to Miss Annie K. Tuck, Newburyport, for dog's head.
- .50. Gratuity, to Miss Grace G. Rogers, West Newbury, for oil painting.
- 1.00. Gratuity, to Miss Nellie Coffin, Newburyport, for crayon panel.
- .50. Gratuity, to Miss Margaret A. Pike, Newburyport, for plaque (oil).
- .50. Gratuity, to George Duchemin, Newburyport, for wood carving.
- .50. Gratuity, to Mrs. E. C. Greenville, Newburyport, for breast pin.
- .75. Gratuity, to Mrs. George Stevens, Newburyport, for lace apron.
- .50. Gratuity, to Miss Belle Kennedy, Newburyport, for floral paper basket.
- .50. Gratuity, to Mary E. Buckley, Newburyport, for mantle lambrequin.

- 1.00. Gratuity, to Mary E. Welch, Newburyport, for fancy panel.
- .75. Gratuity, to Mary E. Welch, Newburyport, for child's sacque.
- .50. Gratuity, to Mrs. S. A. Stevens, East Salisbury, for two lambrequins.
- .50. Gratuity, to Lucy J. Henry, 14 years old, Newburyport, for tidy.
- .75. Gratuity, to Mrs. E. B. Storer, Newburyport, for knit tidy.
- 1.00. Gratuity, to Miss H. S. Hart, Newburyport, for fancy table cover.
- .75. Gratuity, to Margaret E. Pike, Newburyport, for table cover.
- .50. Gratuity, to Annie J. Moynihan, Newburyport, for sofa pillow.
- .75. Gratuity, to Mary E. McQuade, Newburyport, for table cover.
- .50. Gratuity to Mrs. Eliza Rogers, 82 years old, West Newbury, for 5 fancy pin balls.
- 1.00. Gratuity to Mrs. G. H. Moulton, Newburyport, for table scarf.
- .50. Gratuity, to Edna Bryant, Newburyport, for motto.
- .50. Gratuity, to Gertrude Johnson, Newburyport, for butterflies in frame.
- .50. Gratuity, to S. J. Pike, Newburyport, for 2 bureau covers.
- .75. Gratuity, to Lillian W. Grenlief, Newburyport, for towel tidy.
- .75. Gratuity, to Maggie McCarty, Groveland, for table scarf.
- .50. Gratuity, to Annie N. Dearborn, Newburyport, for hand-knit edging.

- .50. Gratuity, to Mrs. J. L. Colby, Newburyport, for
table scarf.
- .50. Gratuity, to Miss I. Romily, Newburyport, for
toilet set and chair.
- .50. Gratuity, to Miss L. L. Lamprey, Newburyport,
for thermometer case.
- .50. Gratuity, to Miss L. L. Lamprey, Newburyport,
for tidy.
- 1.00. Gratuity, to Mrs. E. M. Moulton, Newburyport,
for table scarf.
- 2.00. Gratuity, to Lizzie H. C. Folsom, Georgetown,
for window lambrequin.
- .50. Gratuity, to Lizzie H. C. Folsom, Georgetown,
for framed wreath.
- .75. Gratuity, to Gertie S. Lunt, Newburyport, for
fancy handkerchief.
- .50. Gratuity, to Stella Neal, Newburyport, for sea
moss.
- .50. Gratuity, to Miss Lizzie Jaques, Newbury, for fire
screen.
- .75. Gratuity, to Ida M. Jaques, Newburyport, for
panel in K. P.
- .50. Gratuity, to Mrs. Avery, Newburyport, for hand-
kerchief.
- .50. Gratuity, to Miss Mary A. Creasy, Newburyport,
for table scarf.
- .75. Gratuity, to Miss Josephine Doyle, Newburyport,
for fire screen.
- .50. Gratuity, to Miss Alice C. Plumer, Newburyport,
for table scarf.
- .50. Gratuity, to Mrs. S. E. Blaisdell, Newburyport,
for work box.
- .75. Gratuity, to Georgie Thurlow, Newburyport, for
guitar brush holder.

- .50. Gratuity, to Miss J. Lydston, Newburyport, for night robe.
- .50. Gratuity, to Mrs. Somerby N. Noyes, West Newbury, for hand-knit tidy.
- .50. Gratuity to Mrs. M. W. Batchelder, Lynn, for linen covers.
- .50. Gratuity, to Ella W. Ferguson, Newburyport, for worsted wreaths.
- .50. Gratuity, to Alice Brown, Newburyport, for sachet boots.
- .50. Gratuity, to E. J. Parker, Newburyport, for hair wreath.
- .50. Gratuity, to Mrs. Levi Senior, Newburyport, for worsted flowers.
- 1.50. Gratuity, to Miss Mary Jones, Newburyport, for table cloth.
- .75. Gratuity, to Nellie L. Stanley, Newburyport, for fancy table.
- .50. Gratuity, to L. Nellie Pierce, Newburyport, for sofa pillow.
- .50. Gratuity, to Susan E. Merrill, Newburyport, for hammered brass.
- .50. Gratuity, to George H. Smith, Haverhill, for fish scale pin.
- .50. Gratuity, to Kate M. Buckly, Newburyport, for piano cover.
- .50. Gratuity, to Mary F. Brown, Newbury, for 5 table mats.
- .50. Gratuity, to Delia A. Frost, Newbury (Byfield), for box paper flowers.

Theodore L. Castlehun, Mrs. A. J. Haynes, Miss Delia C. Noyes, Miss Viola F. Winkley, Mrs. Peter Holt, Jr.
—*Committee.*

WORK OF CHILDREN UNDER TWELVE YEARS OF AGE.

The Committee on Work of Children under Twelve Years of Age have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$3.00. First premium, to Marion DeJean, Newburyport, for silk quilt.
- 2.00. Second premium, to May F. Carney, Newburyport, for piano cover.
- .50. Gratuity, to Mary Casey, Newburyport, for child's saeque.
- .50. Gratuity, to Ida Poor, Georgetown, for daisy quilt.
- 1.00. Gratuity, to Hattie Burke, Newburyport, for table cover.
- .50. Gratuity to Anna Furguson, Newburyport, for table cover.
- .50. Gratuity, to Mary McQuade, Newburyport, for afghan.
- .50. Gratuity, to Lulie Frost, Newburyport, for tidies.
- .50. Gratuity, to Satie Swasey, Newburyport, for knitted mat.
- .50. Gratuity, to Shirley Ladd, Groveland, for collection of woods.
- 1.00. Gratuity, to Agnes Burke, Newburyport, for pillow sham.
- .50. Gratuity, to Emma Sprague, Newburyport, for quilt.
- .50. Gratuity, to Nettie Woods, Newburyport, for afghan.
- .50. Gratuity, to Winnie Evans, Newburyport, for easels.

- 1.00. Gratuity, to Hollis Scates, Georgetown, for oil paintings.
- .50. Gratuity, to Willie Swasey, Newburyport, for shell work box.
- .50. Gratuity, to Ernest and Fred Hood, Salem, for calico quilt.
- .50. Gratuity, to Gertie Carleton. Rowley, for burlap rug.
- .50. Gratuity, to Drussie Brown, Georgetown, for lamp mats.

There were forty-one entries for premiums.

Mrs. G. H. Plumer, Mrs. Bartlett, Mrs. S. Noyes —
Committee.

IMPROVING WET MEADOW AND SWAMP LANDS.

The Committee on awards for "Improving Wet Meadow and Swamp Land," in submitting their report, beg leave to say, that they are impressed with the importance of the object contemplated in offering the premiums for the most successful of these experiments. Throughout the county, in both woodland and pasture, may be found vestages of once cultivated fields, an evidence of a decrease in the acreage of tillage land during the present century. It is probable that the rocky moss grown pastures could not with the present price of labor be cultivated profitably, but many acres of woodland give evidence by the rapid growth of wood, of a strength of soil that would well repay the cost of clearing and reclaiming. Meadow land long abandoned to hassocks, bushes and water grasses, which, if properly drained, worked and fertilized, will produce a sure and profitable crop of hay, when higher land subject to droughts often disappoints the owners in the quantity produced.

It has been said that he who causes two blades of grass to grow where but one had grown is a public benefactor, and we may safely conclude that the man who reclaims a swamp or worthless meadow and increases its value two or three fold, contributes to the public welfare ; and when the outlay is fully met by the crops produced in two or three years, yielding the increased value of the land as net profit, it affords encouragement for others to go and do likewise. Four entries were made the present year, last year there was but one, showing an increasing interest in this enterprise. The first was by B. H. Farnum, of North Andover, who entered a little more than one acre of land, which three years since was wet and comparatively worthless meadow, has by means of thorough drainage and cultivation produced the present year three tons of excellent Timothy hay and five hundred pounds of oat fodder. The land and crops were examined by your Committee, who recommend the award of \$15, first premium, to B. H. Farnum of North Andover.

The second entry was by William W. Perkins of Newbury, who entered two acres from which a heavy growth of wood and timber had been removed, the stumps and roots taken out with much hard and persevering labor ; ploughed, liberally fertilized, and planted two years with potatoes, and two excellent crops obtained, the income of which has apparently met the cost of the whole outlay, while the value of the land is greatly increased ; but it does not appear that the woodland was ever wet or that drainage was required at all, for this reason, in the opinion of your Committee, it could not be called swamp land.

The third entry was Luther Tidd of Georgetown ; this was an acre of common brook meadow, treated with sand and fertilized, and appeared in a promising

condition, but the experiment having been in progress but one year, it does not come within the rules. The fourth entry was by S. A. Jaques of West Newbury, who entered an acre of swamp land of deep peat muck; this was first drained by cutting a wide and deep ditch around the lot; a heavy growth of wood was cut seven years since from the lot, the stumps and hassocks removed, the whole worked entirely by hand for three years, producing two extraordinary crops of potatoes, grown without manure or fertilizers of any kind. The fertilizers applied the third year were not required by the soil or not adapted to the crops, hence the failure of the onions and root crops; the cabbage succeeded better. Taking the three years together, the crops paid a large profit upon the labor bestowed, beside greatly increasing the value of the land. Your Committee recommend the award of \$10, second premium, to S. A. Jaques of West Newbury.

Respectfully submitted, for the Committee,

J. SCOTT TODD, *Chairman*.

STATEMENT OF B. H. FARNUM.

To Essex Agricultural Society:—

The piece of land which I enter for premium contains an acre and one fourth as near as I can measure. It was given to me by my father. He had previously cut off a thick growth of maple trees, blueberry bushes and alders. Twenty years ago it was ploughed, the roots dug out and burned, a ditch dug on two sides, levelled with bog hoes and harrow, and sowed to grass seed without any manure except the ashes which came from the burning roots. It was so soft oxen could not be used only on one side near the ditch. The grass seed on a narrow strip near the ditch came up and did nicely, but a large portion of the piece produced a poor quality of meadow grass, very hard

to cut. I let it go as it was except a narrow strip near the ditch which I have ploughed occasionally. I commenced to reclaim a piece on the other side of the ditch, where my success was so good that it encouraged me to go back and commence again on the piece which I now enter for premium. In '83 I dug the ditch as deep as the water and rocks would admit, varying from two to six feet deep and from three and one half to four feet wide. I ploughed it, using a pair of wheels where the oxen could not go in the furrow, and applied a heavy coat of barn manure in the drills. I planted the driest part with potatoes, and the rest with sweet corn. In November I ploughed it with a side hill plough, with the intention of seeding down, but before I got it level enough the ground froze. In March, '84, I sowed on ten bushels of hen manure just as it came from the roost. When warm weather came the weeds and grass came up thick, and grew very fast; I ploughed it in June. I think the weeds were six inches high; I turned them under and without any more manure, sowed it to oats and grass seed, with the exception of a few rods where the sod was not rotted enough to level. I planted again with sweet corn. Had a very heavy crop of oats, was obliged to move a part of them to higher ground to dry. In 1885 we estimated the crop of grass on the part that was seeded down at two tons. The few rods that were not seeded down to grass I ploughed and again planted with sweet corn. In 1886 the few rods that had been planted with corn were ploughed with side hill plough and sowed to oats and grass seed. I think the grass on the part that was seeded down in 1884 was the heaviest crop of grass I ever raised. We estimated the hay to weigh three tons and the oats five hundred pounds.

DR.

Estimated expense for 1883 :

Value of land,	\$50 00
To 40 rods ditch at .50,	20 00
“ ploughing with oxen and horse and two men, three days,	19 50
“ harrowing and furrowing,	2 50
“ 12 loads manure, 30 bushels each,	24 00
“ 2 bushels potatoes,	1 50
“ 12 qts. corn,	25
“ planting, two men, two days,	3 00
“ cultivating the whole and hoeing potatoes,	2 25
“ digging potatoes,	2 00
“ ploughing and harrowing in November,	12 00

Estimated expense, 1884 :

To hen manure,	4 00
“ ploughing, two men and yoke of oxen, one and one-half days, at \$1.50,	6 75
“ harrowing,	2 00
“ 2½ bushels oats, at .70,	1 75
“ grass seed,	2 25
“ harrowing and levelling and sowing oats,	2 00
“ manure for corn,	6 00
“ planting fodder corn and seed,	2 00
“ harvesting oats,	12 00

Estimated expense, 1885 :

To manure for fodder corn,	6 00
“ ploughing and planting corn,	2 00
“ making 2 tons hay,	8 00

Estimated expense, 1886 :

To ploughing,	\$1 00
“ manure,	3 00
“ one-half bushel oats,	30
“ harrowing and levelling,	75
“ harvesting oats,	1 25
“ making 3 tons hay,	12 00
	<hr/>
Total expense,	\$210 05

CR.

Estimated value of crop, 1883 :

By 20 bushels potatoes,	15 00
“ fodder corn,	10 00

Estimated value of crop, 1884 :

By oats,	24 00
“ fodder corn,	10 00

Estimated value of crop, 1885 :

By 2 tons hay,	32 00
“ fodder corn,	10 00

Estimated value of crop, 1886 :

By 3 tons hay,	\$48.00
“ 500 lbs. oats,	3.00
“ present value of land,	200.00
	<hr/>

Total value of crops and land, \$352.00

First value of land and total expenses, 210.05

Balance, \$141.95

NOTE.—Present value of land, per acre, \$160 00

Value of 4 years' crops, “ 121 60

Total, \$281 60

First value of land, per acre,	\$40 00	
Expense on land and crops per acre,	128 04	
	<hr/>	\$168 04
Balance per acre,		<hr/> \$113 56

B. H. FARNUM.

STATEMENT OF STEPHEN A. JAKUES, WEST NEWBURY,
"RECLAIMING SWAMP LAND."

It was a heavy growth of wood seven years ago. There is about five acres in the piece. I dug a ditch around the whole to drain it.

In 1883 I had the stumps and hassocks cut out of one measured acre, cost \$40; I then dug it over by hand, cost \$20; I planted it with Clark No. 1 potatoes, without manure, cost \$6; six bushels of seed, \$3.60; I cut the seed in quarters, hoed once, \$9; harvested 148 bushels of salable and 40 bushels of small potatoes, cost \$12.

In 1884 I dug over the same piece by hand, holed it for potatoes, cost \$11; planted it the 4th of June with Clark No. 1 potatoes, without manure, cut them one eye in a piece, dropped two pieces in a hill, used four bushels, cost \$2.40; cost of planting, \$1.50 per day, \$6; hoed once, \$7.50; harvested Oct. 15th, 145 bushels of large, 45 bushels of small potatoes.

In 1885 I had the same piece of land dug over by hand, cost \$5; planted with Clark No. 1 potatoes, seven bushels of seed, cost \$3.50; holed by hand, \$3; cut the seed two eyes in a piece, dropped two pieces in a hill, without manure; hoed once, \$8; harvested in October 147 bushels large, 38 bushels small potatoes, cost \$15.

In the Fall of 1885 plowed the same piece of land with a pair of horses. Used an Oliver Chill Plow. The horses walked on the land side; if they stepped on the furrow

they would go down ; I got them in twice. Let the land lay over Winter just as I ploughed.

In the Spring of 1886 I raked it over by hand, cost \$6 ; I then spread Dole Fertilizer, one-half ton, \$17.50 ; I sowed three-fourths of it with onions, \$3 ; the rest sowed with beets, parsnips, turnips, sugar beets, mangold wurtzels, carrots and celery—all a failure. I then set out with cabbages, seed cost 15 cents ; hoed once, 75 cents ; transplanting, \$6 ; harvested one-half acre, 19,562 pounds.

Soil, muck and peat.

RECAPITULATION FOR ONE ACRE.

1883.—Cost cutting out stumps, etc.,	\$40.00
Digging,	20.00
Seed potatoes,	3.60
Planting and hoeing,	9.00
Harvesting,	12.00
	<hr/>
	\$84.60
Crop—148 bush. salable potatoes, 40 bush. small potatoes.	
1884.—Cost digging over, etc.,	\$11.00
Seed potatoes,	2.40
Planting,	6.00
Hoed once,	7.50
	<hr/>
	\$26.90
Crop—145 bush. large potatoes, 45 bush. small potatoes.	
1885.—Cost digging over,	\$5.00
Seed potatoes,	3.50
Holing,	3.00
Hoeing,	8.00
Harvesting,	15.00
	<hr/>
	\$34.50
Crop—147 bush. large potatoes, 38 bush. small potatoes.	

1886.—Raking over land cost	\$6.00
Half ton Dole fertilizer,	17.50
Sowing onion seed,	3.00
Cabbage seed,	.15
Hoed once,	.75
Transplanting,	6.00
	<hr/>
	\$33.40

Crop from one-half of land—19,562 pounds cabbages ; the other crops a failure.

REPORT OF THE COMMITTEE ON GRAIN CROPS.

But two entries have been made in this department. Mr. J. J. H. Gregory of Marblehead made entry of a fine piece of rye, and Mr. Oliver P. Killam of Boxford, of a superior crop of corn.

Mr. Gregory's rye crop, as per statement, shows conclusively that there is yet a profit in growing the grains in New England. Here we see that with an outlay of \$48.25, which includes \$10 for fertilizers, and also the cost of getting the crop to market, he secures a crop of 57 1-2 bushels of rye, worth 75 cents per bushel ; and 8,131 pounds of straw, worth \$20 per ton ; or a total receipt of \$124.48, with a net profit of \$76.23—which is only another proof showing that good treatment is the one thing essential to the successful growing of all the grains in competing with the fertile prairies of the West.

Your committee have for several years advocated the growing of more grain in this State, and in my report of one year ago I called attention to the fact that a generous treatment of our grain crops would so increase the

yield that we should have very little trouble from Western competition.

Mr. Killam's statement on Corn Crop shows that good yields of corn can yet be secured in Essex County, by a proper selection of soils, and with only an ordinary quantity of manure.

Of the benefits to be derived from the growing of corn in Massachusetts too much cannot be said. Many of our farmers may be seen at the grain mills every day after their supply of meal. This, I believe, is all wrong; for while at the mills they are paying 60 cents per bushel, they can grow a crop of corn of better quality and at less cost, besides raising a crop of fodder on the same land more valuable than a crop of grass.

Mr. Killam's field yielded a crop of 88 bushels per acre—a good crop certainly, yet crops of 60 or even 50 bushels per acre can be grown with profit, as our President and other successful corn growers have shown; and these yields are not more than may ordinarily be expected if suitable soil is selected and fairly dressed.

Your Committee have awarded premiums as follows:

- 10.00. First premium, to James J. H. Gregory, Marblehead, for rye crop.
- 10.00. First premium, to Oliver P. Killam, Boxford, for corn crop.

Respectfully submitted,

JOHN Q. EVANS,

For the Committee.

STATEMENT CONCERNING A CROP OF RYE RAISED BY MR.
J. J. H. GREGORY, IN THE TOWN OF
MIDDLETON, OCTOBER, 1886.

The crop of 1884 was cabbage, which was manured with part barn manure, part fertilizer, the latter in the hill, four cords of the former and about six hundred weight of the latter.

In 1885 the crop was cabbage seed, about six cords of barn manure being used, one half in the drill and one half broadcast. About eight hundred pounds of fertilizer, consisting mostly of phosphoric acid (soluble) and potash, was applied in the hill. The soil is a good loam. After the cabbage seed was gathered, in September, it was ploughed seven inches deep, and six hundred pounds of fertilizer, composed of soluble phosphoric acid in the form of bone, nitrogen as sulphate of ammonia, and potash in the form of muriate, was scattered broadcast by a broadcast spreader; after which, and by the same machine, two bushels of rye to the acre was sown. The piece was then thoroughly harrowed and rolled.

The cost of the crop was as follows :

Ploughing one acre, man and 2-horse team,	\$2.50
Cost of fertilizer,	10.00
Cost of seed,	2.00
Applying fertilizer and seed,	1.50
Harrowing the same,	1.00
Rolling,	1.00
Cutting crop by scythe,	3.00
Binding and getting to barn,	6.00
Threshing by hand,	15.00
Getting straw to market,	5.00
Getting grain to market,	1.25
	<hr/>
	\$48.25

The receipts were :

For straw, \$1 per 100 lbs., 8,131 lbs.,	\$81.31
For grain, 75 cts. per bu., 57 $\frac{23}{56}$ bu.,	43.17
	<hr/>
Value of crops,	\$124.48
Expenses,	48.25
	<hr/>
Profit,	\$76.23

After harvesting the rye, the land was ploughed, a dressing of six hundred pounds of fertilizer, rich in potash, was spread broadcast, and Hungarian was sown. There was a good crop, though it was affected by the dryness of the season. It was my intention to follow it with another crop of rye, but I regret that my teams were too much occupied to enable me to carry out the plan.

Two other pieces were in rye at the same time as the one offered for premium, each of which had fertilizers applied before sowing, and all three crops were so nearly alike in yield that there was no choice between them.

It strikes me that the lesson to be learned from these experiments is, that it may pay to manure our land, especially for rye, and not, as is customary, let the crop depend wholly for food on the leavings of the one that preceded it.

Yours, J. J. H. GREGORY,
Marblehead, Mass.

This is to certify that on an acre of rye raised on the farm of J. J. H. Gregory, at Middleton, there was grown, by weight, 3,225 lbs., or 57 $\frac{23}{56}$ bu., and 8,131 lbs. of straw, or 4 tons, 131 lbs.—the grain having been weighed at the barn and the straw on the town scales.

Middleton, Oct. 26, 1886. S. A. JONES.

STATEMENT OF OLIVER P. KILLAM OF BOXFORD.

The crop of 1884 English hay, fifteen hundred lbs. to

the acre ; no manure used. The crop of 1884 same, no manure was used, about twelve hundred lbs. to the acre. The soil a dark loam ; ploughed once six inches deep and thoroughly harrowed with wheel and tooth harrow. Cost of ploughing and harrowing \$9 per acre. Amount of manure, 25 loads per acre of 30 bushels to the load, all spread and ploughed under, all fresh from barn cellar. The value of manure on the ground, \$2 per load. The corn was planted May 25th by hand, 3 1-2 feet each way, with one spoonful of phosphate in each hill, planted with eight quarts of eight-rowed yellow corn ; cost of seed and planting, \$3 per acre. The cultivator was run three times each way with very little hoeing up to July 4th. Cost of cultivating and hoeing, \$4 per acre. The corn was cut and stooked 16 hills to a stook the 8th of September. Cost of harvesting, including husking, \$12 per acre. As the Committee did not give me any order, I measured two rods on one side where it was a fair average per acre, and husked it the 26th day of October, it being very sound and dry, weighing 44 lbs. to the rod. My whole field is about 3 acres ; I tried it on other parts of the field outside of this acre, and it amounted to about 40 lbs. to the rod. I think the condition it was in it would hold out at 40 lbs. to the bushel, making 176 bushels of ears to the acre.

I certify that the above statement is correct.

OLIVER P. KILLAM, *Competitor*.

This may certify that I measured two rods on one side of the acre and helped get it in and husk it, and saw it weighed, and the above statement is all right.

JOHN EMACK.

REPORT OF COMMITTEE ON ROOT CROPS.

The committee selected to examine the Root Crops entered for the Society's premiums, have attended to that duty, and report eighteen entries, from twelve competitors, viz. :

John H. George, Methuen, Onions and Potatoes.

Walter Smith & Co., Methuen, Sweede Turnips.

Benj. H. Farnham, Andover, Cabbages—withdrawn.

Ansel W. Putnam, Danvers, Potatoes.

Asa T. Newhall, Lynn, Onions and Squashes.

J. E. Page, Superintendent of Pickman farm, Salem, Cabbages.

Cyrus K. Ordway, West Newbury, Carrots.

Stephen A. Jaques, West Newbury, Cabbages and Potatoes.

Daniel Carleton, Andover, Cabbages.

J. W. Blodgett, East Saugus, Mangold Wurtzels.

J. W. Blodgett, East Saugus, Squashes, withdrawn.

M. B. Faxon, Saugus, Potatoes.

James Manning, Topsfield, Onions, Turnips, Carrots.

It is the opinion of your committee that onions, squashes and potatoes ought all to be entered by Sept. 15, as, if entered at a much later date, the probability is that the committee may not be able to see those crops before harvesting.

Although it has required considerable time and expense, your committee feel that we have been amply repaid for our trouble, as we have had the pleasure of visiting some of the best farms and farmers of Essex County, and in every case have been cordially received, and had their several systems of farming freely explained to us.

John H. George's crop of onions was a very heavy one, raised on reclaimed swamp land, with no other drainage

than an open drain around the field. At the time of our visit, Aug. 31, the onions were fully ripe, and of excellent quality, with scarcely a scullion on the half acre; while on the adjoining farm, on high land, a field sown at the same time and out of the same lot of seed, the onions stood up nearly as green as ever, and were at least three weeks later.

Mr. George called our attention to a trial of seed purchased of several different parties who claim to sell a good article. The result was, some did not come up at all, some very sparing, while others that did grow were large necked and coarse, with not one good lot among the whole. This shows that the selection of seed is of vital importance, and we can recommend no better seed, of any variety of vegetable, than that grown by our Essex County seedsmen.

While in Methuen, we examined the crop of turnips of Walter Smith & Co., although rather early in the season to judge. The outlook was for a fair crop.

At Danvers we were highly entertained by Ansel W. Putnam's explanation of the manner in which he conducted his farm. As he showed us his crops, each department was taken up and the methods of cultivation explained by one, whose many articles in the agricultural press have taught us to look up to, as an experienced farmer; but we had never had the pleasure of listening to his farm talks so direct, and we know that this was a day well spent.

His crop of potatoes was not a large one, but his object in entering his crop was to bring his report before the Society, showing experiments he has been making for the past few years. Although we cannot award a premium for his crop, we earnestly request that his excellent report be printed in the Transactions, believing the information therein given is of great value.

On Sept. 15 we visited Asa T. Newhall's onion crop, which was raised on land similar to that of Mr. George's, it being reclaimed meadow land. Mr. Newhall's onions, at the time of our call, were perfectly ripe, and of excellent quality and of medium size; they were very thick, however, pressing out so the rows seemed to be in places scarcely six inches apart.

The contest between Mr. Newhall and Mr. George appeared to be very close, the one raised by the use of a compost, at the rate of eight cords to the acre, the other on commercial fertilizers, at the rate of one ton per acre.

The committee did not venture to intimate, even to each other, which of the contestants would win. When the statements came in they showed a difference of fifteen bushels on the half acre, with a record of 1090 and 1120 bushels per acre, the difference being only about one-half cent in cost per bushel.

In 1871 Mr. Gregory came down to Newbury to see a crop of 970 bushels to the acre. He said, "This is a remarkable crop, worth a journey of thirty miles to see."

In 1886 there are at least three crops in the county—one of 1080, one of 1090, and the other 1123 bushels per acre, and *all* first quality onions. We believe this never has been excelled, and perhaps *never* will be.

The Society may well be proud of these results, and of the fact that the producers of these enormous crops are members of its association. These are no chance crops, but were especially prepared for large results by men who are educated, and are educators at our Institute meetings.

At the same time we looked over a field of squashes, raised among early potatoes, which have since been entered for premium by Mr. Newhall, and by his statement we notice that he has a heavy yield of squashes, and not content with two crops, has a fair chance to get a nice lot of turnips for third crop.

At Mr. Page's, on the Pickman farm, at Salem, we found a fine piece of cabbages which promised a large crop. Your Committee selected a number of average heads and weighed them, then taking the number of heads in a row, and estimating the whole piece on that basis, found the crop to weigh 26,672 lbs. ; the heads were of very even size, with scarcely a vacancy on the half-acre.

Our next visit was to West Newbury, which is one of the best farming towns in the county ; we first called on C. K. Ordway, whose farm contains many acres of intervale land situated on the banks of the beautiful Merrimac. He showed us the product of his dairy, in the shape of a splendid lot of home-made cheese, which sells at twenty cents per lb. Also large fields of excellent corn, and in fact he was not satisfied until he had made us familiar with nearly all his farm operations, all of which are conducted in a business-like manner. Our object was to examine a field of carrots ; the variety raised was the Long Orange, which in our view are not as profitable as the Danvers Medium. He has a fair field however, although he thinks it will fall short of last year ; this season has not been a good carrot season in any section.

Just here I would like to say a word in favor of the Guerande carrot, a new variety. I purchased some seed of Mr. Gregory last spring, and on four rows, twenty rods long, I harvested Nov. 2, fifty-eight bushels, weighing 3,364 lbs. ; this would make, sowing the rows sixteen inches apart, 83,130 lbs., or 41 1-2 tons to the acre. My method of cultivation is to sow a single row between every other row of strawberries, and I suppose that the yield would not be as large if sown in a field, with rows sixteen inches apart. This is just the variety to plant between strawberries, as it is easily pulled, not requiring any digging at all.

Mr. Jaques, who presents potato and cabbage crops for our consideration, has been foremost to take advantage of the draining of Ash swamp, by Judge Bradley, who owns some three hundred acres of this land, which he is reclaiming; we see no reason why this swamp is not capable of producing as large crops as those of Mr. Newhall and Mr. George. There are many hundred acres in the township which might be reclaimed, we think, at a great profit, yielding many tons of English hay, where now grow bushes and coarse grasses; none of this land is rougher than that which Mr. Jaques has had the pluck to grapple with; he has cropped this meadow without using any manure with the exception of twelve hundred lbs. phosphate; with what success his statement will show.

At North Andover we had a pleasant visit with Mr. Carleton, who presented his cabbage crop for our inspection, and if the premiums he has received are evidence of his skill in this branch of his farming, he certainly understands how to raise cabbage. In order to get medium sized heads, which are more salable in the market than overgrown ones are, he plants thick and thus gets a large crop, and although very low prices rule this season, he makes a fair show of profit.

Our last call was on Mr. Manning at Topsfield; although too late to see his onions in the field, we were in season to examine his carrots and turnips; the turnips were of fine quality, but his yield is doubtless diminished by the hard freeze which occurred a few days before, killing many of the leaves, thereby stopping in a measure, the growth. His crop of onions was a good one and showed evidence of good farming, as did all his crops.

Never before we think, in the history of the Society, has there been so many entries by so many competitors, showing an increased interest in high cultivation, and of friendly rivalry among our farmers.

Nathaniel Dole, one of our number, resigned at the outset; the remainder of the Committee have visited, with two exceptions, that of Mr. Blodgett's, whose crop was examined by Mr. Warren, and that of Mr. Faxon's, who was not aware that it was customary for the Committee to visit the crops, so did not enter until after the potatoes were dug and a part of them sold, our first notice of his entry being when we received his statement.

The other crops have been thoroughly examined by a full committee, and we recommend the following awards, viz. :

To Asa T. Newhall, Lynn, crop of onions, first premium,	\$10.00
" John H. George, Methuen, crop of onions, second premium,	5.00
" John H. George, Methuen, crop of potatoes, first premium,	10.00
" Stephen A. Jaques, West Newbury, crop of potatoes, second premium,	5.00
" J. E. Page, Supt. Pickman Farm, crop of cabbage, first premium,	10.00
" Daniel Carleton, Andover, crop of cabbage, second premium,	5.00
" J. W. Blodgett, East Saugus, crop of Mangolds, first premium,	10.00
" Walter Smith & Co., Methuen, crop of turnips, first premium,	10.00
" James Manning, Topsfield, crop of turnips, second premium,	5.00
" Cyrus K. Ordway, West Newbury, crop of carrots, first premium,	10.00
" Asa T. Newhall, Lynn, crop of squashes, first premium,	10.00

B. F. Huntington, David Warren, C. D. Ordway, A. M. Bodwell—*Committee.*

STATEMENT OF ASA T. NEWHALL.

The following is a statement concerning a crop of onions raised by Asa T. Newhall in the city of Lynn, 1886, on 84 square rods of land.

The crop of 1884 was, on a portion of the land, onions, and potatoes on the balance. Stable manure was used, at the rate of about eight cords per acre. The crop of 1885 was onions, excepting a small portion, which was planted to cabbages where the onions failed to come up. Coarse stable manure was applied, at the rate of about eight cords per acre, being spread upon the land as teamed from the city stables during the Winter and Spring, the land having been ploughed the Fall previous.

The nature of the soil is muck, which has been treated with several dressings of sand and some coal ashes at intervals during the past twenty-five years, being a portion of a reclaimed meadow. It was ploughed about six inches in depth in the Fall of 1885. The only manure used was Ames' Bone Fertilizer, applied in the Spring on the larger portion, and Stockbridge Onion Manure on balance, each at the rate of one ton per acre, at a cost of \$35 per ton for Ames, and \$45 per ton for Stockbridge. Harrowed in with a wheel harrow, and smoothed with Thomas harrow, then dragged preparatory for sowing.

Sowed middle of April, one portion Yellow Globe Danvers and balance Red Globe Danvers, at the rate of six pounds of seed per acre. There was no perceptible difference in the crop grown on the two respective fertilizers used; but there was a slight difference in the crop in favor of the Red over the Yellow variety, where both were grown under the same conditions.

The cultivation was, hoeing five times and weeding twice. *The product was 30,680 pounds, or 590 bushels of 52 pounds each, on 84 square rods.

The method of harvesting was, pulling three rows to one side, then running a scuffle over the space where pulled, removing the scattering weeds, continuing this process until completed.

The cost of the crop was as follows :

800 lbs. Ames Fertilizer,	\$14.00
250 lbs. Stockbridge Fertilizer,	5.60
Ploughing in Fall of 1885,	1.50
Harrowing in the fertilizers,	1.50
Smoothing and dragging,	1.00
3 1-8 lbs. seed, at \$2.50 per lb.,	7.81
Sowing seed,	.75
Hoeing five times,	4.00
Weeding twice,	10.00
Hauling and harvesting,	9.25
Topping, at 2 1-2 cts. per bu., 590 bu.,	14.75
Interest,	4.00
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	\$74.19*

I hereby certify that the land upon which grew the crop of onions entered for premium by Asa T. Newhall, measures eighty-four rods.

FRANK NEWHALL.

Lynn, Sept. 11, 1886.

I hereby certify that I weighed the onions raised and entered by Mr. A. T. Newhall for premium, and the total weight after being topped was 30,680 pounds.

Lynnfield, Oct. 20, 1886.

MICHAEL LYNCH.

*NOTE.—Product, per acre, 1123 3-4 bushels onions.

Expenses, per acre, \$141 31

STATEMENT OF JOHN H. GEORGE OF METHUEN, ON
ONION CROP.

Crop of 1884 was potatoes, manured 6 cords to the acre. 1885, potatoes, manured 4 cords to the acre broadcast, with 400 lbs. fertilizer to acre in drill. Soil, peat-meadow, not ploughed for two years, cultivated twice, brush harrowed twice, dragged; cost of preparation, 1-2 day one man and one horse, \$1.50. Went over it twice with a Kemp manure spreader, putting on 8 cords of compost to the acre, worth \$4 a cord on the land. The seed was sown April 14th, 4 1-2 lbs. to the acre of Yellow Danvers, bought of Charles W. Mann of Methuen, at a cost of \$3.50 per lb.; cost of seeding, 1-2 day's work, 1 man, 75 cts.; hoed with a wheel hoe 5 times, 2 1-2 days' work, one man, \$3.75; weeded three times, 6 days' work for one boy, \$6.00; harvested in September; cost of harvesting, 5 cts. per bushel; yield 545 bushels measured; basket even full weighs 52 lbs.

RECAPITULATION.

Dr.

Preparation of soil,	\$1.50
Manure, 4 cords,	16.00
Seed and sowing,	8.62
Hoeing,	3.75
Weeding,	6.00
Harvesting,	27.25
Interest and taxes on land,	6.00
	<hr/>
	\$69.12*

Cr.

545 bushels onions, at 90 cents,	490.50
Less	69.12
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Balance,	\$421.38*

I hereby certify that I measured 1-2 acre of land planted to onions for John H. George, to be entered for premium with the Essex Agricultural Society.

DANIEL H. ROWELL.

Methuen, Oct., 1886.

*NOTE.—Product, per acre,	
1090 bushels of onions,	\$981 00
Expense, per acre,	138 24
	<hr/>
Balance,	\$842 76

STATEMENT CONCERNING A CROP OF POTATOES RAISED
BY JOHN H. GEORGE OF METHUEN, 1886.

The land on which this crop was raised is a peat meadow, planted for two years past to potatoes. What manure has been used has been put into the hill, not exceeding four cords to the acre. This year (1886), in March, before the frost was out of the ground, I went over the piece once with a Kemp manure spreader, which put on four cords to the acre of barn manure (horse and cow). When the frost was out, ploughed in the manure, furrowed the land, and put 600 pounds fertilizer to the acre in the drill; dropped the potatoes, covered them by horse, brush-harrowed them twice, cultivated them once, horse-hoed once, and one man's work one day with hand hoe, the only hand work done from time of planting to time of digging. The yield was 204 bushels.

Preparation of 1-2 acre of land for potatoes.

Dr.

Ploughing 1-2 day, 1 horse, 1 man,	\$3.00
Manure on the land, 2 cords at \$6,	12.00
Furrowing,	.75

Fertilizer, 300 lbs.,	5.00
Six bu. small potatoes, planted whole, 40 cts.,	2.40
Dropping and covering, with horse,	1.00
Brush harrowing twice,	1.00
Cultivating and horse-hoeing,	1.50
1-2 day's work, 1 man,	.75
Digging, 4 cts. bu.,	8.16
Interest and taxes on land,	6.00
	<hr/>
	\$41.56
<i>Cr.</i>	
1-2 manure used,	\$11.00
204 bu. potatoes, 50 cts. per bu.,	102.00
	<hr/>
	\$113.00
	41.56
	<hr/>
Balance,	\$71.44

I herby certify that I measured 1-2 acre of land planted to potatoes for John H. George, to be entered for premium with the Essex Agricultural Society.

DANIEL H. ROWELL.

Methuen, Oct., 1886.

NOTE.—Product per acre, 408 bu. potatoes,	\$204.00
Cost of production, per acre, less half manure,	61.12
	<hr/>
Balance, per acre,	\$142.88

STATEMENT OF STEPHEN A. JAKES OF WEST NEWBURY.
POTATO CROP.

The crop of 1885 was potatoes, sixty bushels; no manure was used. The crop of 1886 was potatoes; Dole fertilizer, two hundred pounds to the acre, was used; soil is muck and peat.

Dug over by hand, six inches deep, \$5.00 ; holed it for the seed ; cost of preparation, \$3.00 ; Dole fertilizer, spoonful in the hill, \$3.50 ; planted May 25th, in hills ; seed four and one-half bushels of potatoes, Clark No. 1 ; cost of seed and planting, \$8.25 ; hoed by hand once ; cost of cultivation, \$5.00 ; harvested the first of October, dug by hand ; cost of harvesting, \$15.00 ; amount of potatoes, 320 bushels ; cost of crop, \$39.75.

STEPHEN A. JAUQUES.

This will certify that I have measured one-half acre of reclaimed land, planted with potatoes last season by S. A. Jaques of West Newbury.

ROBERT A. AMEND.

West Newbury, Oct. 16, 1886.

NOTE.—Product, per acre, 320 bushels potatoes, at	
same value as Mr. George's,	\$160.00
Cost per acre,	39.75
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Profit per acre,	\$120.25

STATEMENT OF J. E. PAGE, ON CABBAGES.

The piece of cabbage entered by me contains one-half acre. The soil is a gravelly loam. For the past two years the crop has been potatoes, manured with a compost of muck, night soil and barn manure applied broadcast. Last Fall the piece was sown with rye, which in May last was cut and put into the silo. The land was then ploughed and rolled, and a compost of loam, livers and halibut heads and horse manure, was applied broadcast, and well worked into the soil with a Climax harrow. June 11 it was planted with Warren's Stone Mason seed, in rows three, and hills two feet apart. Three hundred pounds of Ames fertilizer was put in the hills. The piece was horse and hand hood three times.

The cost of the crop was as follows :

Ploughing and preparing land,	\$3.00
Seed and planting,	5.60
Cultivating and hoeing,	13.00
Fertilizer,	5.50
Four cords of manure and spreading,	26.00
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	\$53.10

J. E. PAGE, Sup't.

Pickman Farm, Salem, Oct. 22, 1886.

I hereby certify that I have this day measured one-half acre of cabbages for J. E. Page, (Pickman Farm), to be entered for premium in the Essex Agricultural Society.

CHAS. A. METCALF, Surveyor.

Salem, Nov. 2, 1886.

NOTE.—Cost of crop, per acre, \$106.20.

STATEMENT OF DANIEL CARLETON, OF NORTH ANDOVER, ON CABBAGE CROP.

The half acre of cabbage entered by me was grown on land that had been in grass for several years. The soil is a gravelly loam ; no fertilizer had been applied while in grass. Sixteen loads per acre of barn manure were spread upon the sod, last April, and ploughed under to the depth of about six inches. The land was harrowed three times with the Acme harrow. The rows were marked off three and a half feet apart, and eight hundred pounds of Cumberland phosphate per acre sown in the furrows. The furrows were made as shallow as possible and the phosphate slightly covered with the hoe. The seed was sown by machine, May 22. About three-fourths of a pound of Fottler's cabbage seed per acre was used. The plants were thinned so as to stand about sixteen inches apart in

the rows. By having the plants stand thick in the rows I get heads of the right size to suit my customers; were I raising them for Boston market I should put them further apart. In Lawrence very large heads are hard to sell. The piece was hoed by hand three times, and the horse hoe used once a week until the cabbages were too large for the team to go between the rows. The drouth affected a part of the piece in the latter part of the season, so that the crop did not look as well at the time of the committee's visit as it did a month earlier.

As it was impossible to harvest and dispose of the whole of the crop in season to make a report, I followed the suggestion of the committee, and measured off a half acre of fifty rows of equal length, and then cut the cabbages from every tenth row and trimmed them for market. From these five rows I sold twenty-one barrels of cabbages, that would weigh considerable over one hundred pounds per barrel; this would give a yield of four hundred and twenty barrels per acre, which at the present low price of fifty cents per barrel, amounts to \$210 per acre. I intend to keep a part of the crop a while by cutting the heads off and laying them on grass land one head deep in the same position as they grew, on the south side of a double wall, and covering them with pine needles. Whether they are worth more than present prices for that purpose remains to be proved.

The cost of the crop per acre I make as follows:

Ploughing and preparing land,	\$10.00
Seed and sowing,	3.00
Cultivating and hoeing,	20.00
800 lbs. phosphate and sowing same,	15.00
Value of manure when spread,	40.00
Marketing (estimated cost at wholesale),	75.00
Interest on land,	6.00
	<hr/>
	\$169.00

Leaving a profit of \$41, at 50 cents per barrel, for the crop.

DANIEL CARLETON.

North Andover, Oct. 27, 1886.

STATEMENT OF J. W. BLODGETT.

MANGOLD CROP.

The following is the account of my mangold crop entered for premium :

The land consists of a black loam with sandy sub-soil. The crop grown on this land, season of 1885, was Hubbard squashes, manured by spreading about four cords of glue waste to the acre, and four cords of stable manure per acre in the hills.

Season of 1886, the land was ploughed and harrowed in May, then manured with stable manure, about ten cords per acre, which was then harrowed with disc harrow. It was then ploughed in ridges twenty-eight inches apart; the ridges were then levelled with the Meeker smoothing harrow. May 29th, sowed one row of mangolds to each ridge, of the long red variety. When the plants were of suitable size, they were thinned to ten inches apart.

Harvested Oct. 15th. *The result from one half acre of ground was 43,875 lbs., by estimation, one sample row being weighed.

Cost of cultivation, &c. :

Use of land,	\$5.00
Ploughing and harrowing,	2.50
Ridgeing and sowing,	3.50
Cultivating between plants,	3.00
Hoeing, weeding and thinning,	12.00
Pulling and topping,	10.50
Storing,	10.50

Five cords manure and spreading,	32.00
Two and one-half pounds seed,	1.00
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	\$80.00*

J. W. BLODGETT.

East Saugus, Oct. 30, 1886.

*NOTE.—Products, per acre, 87,750 lbs., or 43 7-8 net tons of mangolds.

Expense of crop, per acre,	\$160 00
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This certifies that I have measured a piece of land on which J. W. Blodgett grew mangolds this season, and find it contains one-half acre, and the mangolds to weigh 43,875 pounds, by estimation, one sample row having been weighed.

HARRISON NOURSE.

East Saugus, Oct. 30, 1886.

STATEMENT OF WALTER SMITH & CO., OF METHUEN.

TURNIP CROP.

The turnip crop (Ruta Bagas) was produced on one-half acre of land, which in 1884 was in grass, run out. In 1885 the crop was oats, fertilized with 500 pounds of phosphate, and in 1886 one and a half cords of barn-yard manure was used.

Cost of cultivating twice with one man and

horse, 1 hour each time, 2 hours,	\$.60
Thinning with 2 men, 1 day,	3.00
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	\$3.60

Products—232 1-2 bush. Swedes or Ruta Bagas, \$104.62.

WALTER SMITH & Co.

As witness thereof.

COLIN WHITELY, Methuen, Mass.

STATEMENT OF JAMES MANNING, ON TURNIP CROP.

I sowed turnip seed July 28th. I dug four rows from half acre measured, and got 32 bushels from twenty-five rows of turnips, which would be 200 bushels in the half acre. I put on two cords of composted manure in drill, \$21; seed, 30 cents, half pound; ploughing, 75 cents; sowing, 50 cents; thinning, \$1; cultivating and harvesting, \$2.50. The price I am selling them for is 50 cents a bushel—would be \$100. Profit, \$82.95.

NOTE.—Products, 400 bushels turnips per acre,	\$200 05
Expenses, per acre,	34 10
	<hr/>
Profit, per acre, exclusive of land rent value,	\$165 90

STATEMENT OF CYRUS K. ORDWAY OF WEST NEWBURY.

CARROT CROP.

This crop of carrots I offer for premium was raised on land that was in carrots last year. Last spring I put on 2 1-2 cords of barn-yard manure and ploughed it about eight inches deep and sowed it to carrots. The seed was the Danvers Long Orange of my own raising. Hoed and weeded the crop three times during the season, and thinned to about five inches the second weeding. Finished harvesting the crop Oct. 21. Weighed the entire crop on the public scales and had 18,000 pounds.

COST OF CROP.

Manure, 2 1-2 cords,	\$25.00
Ploughing and harrowing,	2.50
Raking and sowing,	2.00
Seed, one pound,	.85
Hoeing and weeding,	20.00
Harvesting,	12.00
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Total,	\$62.35*

Products—9 tons carrots, \$12 per ton,	108.00*
Less cost,	62.35
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	\$45.65

Allowing half the value of the manure remaining in the land,	12.50
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The result will be a profit of	\$58.15*
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Respectfully submitted,

C. K. ORDWAY.

I certify that I measured the land on which the above crop of carrots was raised and that it contained ninety square rods, and no more.

RICHARD NEWELL.

*NOTE.—Crop, per acre, 16 tons carrots,	\$192 00
Expenses, per acre, (less half value manure),	88 62
	<hr/>
Profit per acre, exclusive of rent value of land,	\$103 38

STATEMENT OF ASA T. NEWHALL, ON SQUASH CROP.

The following is a statement concerning a crop consisting of Essex Hybrid and Hubbard squashes raised by Asa T. Newhall in the city of Lynn, 1886, on (300) three hundred square rods of land.

The crops of 1884 consisted of potatoes, followed by squashes, on one-half the field, and sweet corn, followed by winter rye, on balance. One application of manure at the rate of about eight cords per acre of stable and barnyard manure for both crops, excepting the use of 200 pounds of Ames fertilizer per acre used in the drill for squashes.

The crops of 1885 consisted of beets, sweet corn, followed by barley for fodder purposes, and cabbages follow-

ing the removal of the rye that was sowed the Fall previous. Six cords of stable manure per acre was applied for corn, and eight cords per acre on the portions planted to beets and cabbages.

The soil is a dark loam with gravelly sub-soil. It was ploughed about eight inches in depth in the Fall of 1885, and eight cords of manure per acre applied during the Winter and early Spring, while the frost was in the ground, and early in April cross-ploughed from four to five inches deep, and planted to early Sunrise and Early Essex potatoes, in sections of four rows furrowed a uniform width of three feet, except leaving a space of four feet between each four furrows, to be utilized for planting the squash later, which brought the squash rows a uniform width of thirteen feet apart. Used 400 pounds per acre of Ames fertilizer in the drill for potatoes, which yielded a crop of (70) seventy barrels per acre, which were dug and put upon the market from the 5th to the 15th of July, at an average price of \$2.75 per barrel.

The squashes were planted the 17th day of June by the use of about two cords per acre of a compost of barn manure, night soil and meadow mud, which had received several "turnings," and the day before using a few barrels of ashes and also a few of air-slacked lime (two barrels of each to the cord of the original compost) were thoroughly mixed through the heap as stated. The squashes were planted June 17th, having the *appearance* of being planted in drill rather than in hill, the compost being put in hills about five feet apart, and with the hoe levelled along the furrow, leaving a space of only about two feet between the ends of the hills; the seed was pricked into the hills (in a direct line) about six inches apart. Were cultivated once and hoed once—two hours' work cultivating for one man and horse, and one day's work for one

man hoeing, was all the cultivation they received or needed. As the vines grew slowly the first two weeks, showing a slim prospect for a crop, I pursued a course which I have previously tried with satisfactory results, viz: sowing turnips between the squash rows immediately after digging the potatoes, when the weather or bugs seemed to be against the squash. The day following the sowing of the turnips, in this instance, there was a bountiful fall of rain, and squash and turnips soon seemed to enter into a contest for supremacy, with chances in favor of the former; and while, later in the season, every yard of land seemed utilized by the squash crop, nevertheless, the vines being cut severely by the early frost seemed to give the turnips (which were still in the "race") a chance, and the present prospect, at this date, with favorable weather a few weeks longer, will give a fair crop of turnips.

I am undecided as to what would be considered a *just* charge for the manure, under the existing circumstances, and leave my estimate to your discretion.

I had used and sold a small quantity of the crop of squashes before entering for premium, of which no account has been made in the accompanying certificate of weight, which gives what was on the 300 square rods at harvesting. I have stored about one-half the crop for Winter market.

I submit the cost of crop, as follows:

One-half the interest on land,	\$6.00
One-half the cost of ploughing in Fall of 1885,	2.00
One-half the cost of ploughing in Spring of 1886,	3.00
One-half the value of manure, at \$6 per cord,	
applied for potato crop,	45.00
Manure used in hill, at \$6 per cord, for squash	
crop,	22.50
Furrowing and preparation of hills,	3.00

Planting,	1.50
Cultivating and hoeing,	2.00
Cutting and storing,	11.00
Five pounds seed,	5.00
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	\$101.00

ASA T. NEWHALL.

This is to certify that sixteen loads of squashes raised by Asa T. Newhall of Lynn, on land measured by Oscar Stowell, and entered for premium offered by Essex Agricultural Society, weighed (38,470) thirty-eight thousand four hundred and seventy pounds net weight.

C. M. NEWHALL, Weigher.

Lynnfield, Oct. 4, 1886.

I hereby certify that the land upon which grew the crop of squashes entered for premium by Asa T. Newhall of Lynn, measures just three hundred (300) square rods.

Lynnfield, Oct. 25, 1886.

OSCAR STOWELL.

NOTE.—Product per acre, 20,517 lbs. squashes. Cost of production per acre, \$53.96.

STATEMENT OF ANSEL W. PUTNAM.

To the Committee on Root Crops:

GENTLEMEN:—The experiment in potato growing, to which I have called your attention, is one of a series, conducted for the purpose of finding, if possible, a system of cultivation and a variety of seed, so well adapted to high, dry land, and dry weather, as to make potato growing on such land reasonably safe.

The land is mostly a gravelly loam, but part of it is grav-

el with the loam left out. In the spring of 1884 it was in grass and was top-dressed with barn manure, five cords to the acre ; was ploughed after haying and seeded with barley ; the sod was backset in December, and oats sown on the furrows in the spring of 1885. After the oat fodder was harvested, five cords of barn manure to the acre was ploughed in, and barley sown for a fall crop. In the spring of 1886, five cords of manure to the acre was ploughed in about six inches deep ; the land was well harrowed and marked out with a Chandler horse hoe, rows three feet apart, furrows about three inches deep. In the latter part of April one-half acre was planted with Early Sunrise potato seed, whole, and about the size of hen's eggs, dropped two feet apart in the row and covered with a hand hoe, one hoe full of soil making a little mound over each potato ; the base of the mound was on a level with the under side of the potato, and about two inches of soil over the seed ; when the potatoes were about coming up, Stockbridge potato fertilizer was sifted over the mounds, about an ounce to each, or at the rate of 400 lbs. to the acre. Every fifth row not fertilized when the leading sprouts were one or two inches high, sprouts, mounds and fertilizer were covered by making a full ridge with the horse hoe, high enough to put about five inches of soil on the seed ; when the plants were twelve or fifteen inches high, a narrow cultivator was run between the rows, the horse hoe used to kill the weeds on the sides of the ridges, and the hand hoe on the top of the ridges between the plants.

The bugs were checked in their work by a weak solution of Paris green, applied with the same cart, cask, force pump and hose used for spraying apple trees.

The potatoes were harvested about the middle of July, the land was ploughed, and one bushel of barley sown on

the half acre. A load weighed on Oct. 16th, (a dry, windy day,) showed the product to be 75 lbs. of green barley fodder to the rod, making three tons on the half acre.

COST OF POTATO CROP.

Seed, 5 bushels of small potatoes,	\$1.00
Dropping and covering,	2.00
Manure,	7.50
Fertilizer,	2.00
Ploughing, cultivating and horse hoeing,	4.00
Hand hoeing,	1.00
Killing bugs,	1.50
Harvesting,	5.00
Rent of land,	3.00
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	\$27.00

BARLEY CROP.

Manure,	2.50	
Seed,	1.00	
Ploughing and seeding,	2.00	
Harvesting,	2.00	
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	\$34.50	
Returns—10 bush. potatoes,	\$10.00	
50 " " "	40.00	
19 " small potatoes,	3.80	Profit, 34.30
3 tons green fodder,	15.00	
	<hr/>	
	\$68.80	<hr/>
		\$68.80

Three fourths an acre in the same field was planted with a later variety of potatoes, original name unknown. I call it the late Sunset; the preparation of this land, cultivation, &c., the same as the other. The seed was mostly good sized potatoes, cut so as to average one oz. to a piece.

Cost of production,	\$42.75
Profits,	37.65
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	\$80.40

RETURNS.

104 bushels at 75 cents,	\$78.00
12 " " 20 "	2.40
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	\$80.40

This crop could have been sold for 80 cents per bushel at the time they were dug, but as I prefer to hold them for seed, I make the returns at 75 cents per bushel; they may or may not be worth it in the spring. The barley sown on this part of the field being later than the other, was about half a crop, and just about paid expenses.

Some of the conclusions to which my experiments in potato growing have led are, that it is not well to plant potatoes on dry land, until after the sod is well decomposed by the cultivation of some other crop. After the sod is well rotted, the labor of growing and harvesting is reduced about one half, and the chances for success about doubled. Trying to subdue a witch grass or June grass sod with a potato crop, has with me often proved to be hard and unprofitable work. I think it best to plough in all the manure on dry land; this gives an opportunity to get the manure out and spread before the land is in condition to plough and plant, and consequently we have no manure to handle in planting time.

I make and use on 20 acres of land, about 50 cords of manure annually; this at \$8.00 a cord, makes \$20.00 for each acre. The crops on each acre are charged as part of their cost with \$20.00 for plant food each year. I applied to this land \$40.00 worth of manure each year for three years, charging the crops with only \$20.00; I do

this trusting the grass to be grown on the land to pay the remainder of the manure bill.

The farmer has an advantage of the market gardener in growing cultivated crops. The farmer cultivates for the purpose of putting his land in good condition to grow grass, and can safely trust the grass crops to pay a large per cent. of the cost of manure, and also of cultivation. The gardener, if his land is in cultivated crops every year, must charge the crops of each year with the cost of all the labor and manure applied that year.

I think it safer on dry land to plant two feet apart in the row, than nearer. I think it safer to use good sized seed, cut to ounce pieces, than to use whole seed of any size; there is but little danger on such land of growing the tubers too big; the danger is from too many small ones which whole potatoes are sure to give, unless all the conditions are very favorable. By covering each seed with a single hoe full of soil, and leaving it in a mound, the rain and air have a chance to warm the seed and give it a good start; the mounds were well filled with roots before the potatoes were up. I feel confident that it is better to do all the filling up to be done before the plants make much growth above ground; it is much less labor to do it then, and the branches which produce the crop begin to start very soon after the potatoes are up.

The most satisfactory idea I have found, while seeking for more light on potato growing, is the idea that a large part of the eggs laid by the bugs can be prevented from hatching by an early and vigorous growth of vines.

For several seasons I have planted a few early potatoes in the garden, under conditions which made an early and rapid growth of vines. The bugs came early, laid eggs early—kept coming and kept laying—but not an egg hatched before the vines were done growing, then in a

short time the outside leaves were well covered. My explanation is, that only the eggs that were laid on the outside leaves, where the heat of the sun could reach them, hatched, and that millions that were laid in the first part of the season, like many early set hens' eggs, did not hatch.

I think the reason why, in the early part of the season, the most bugs are found on the small, weak plants, is not because more eggs are laid on them, but because all that are laid have a chance to hatch.

I have seen it stated that some of the best potato growers about New York City have of late made it a practice to manure heavy, seed high, and let the bugs go. I think the reason why it is safe for them to do this is, because by so doing they destroy many of the eggs.

To have first quality eating potatoes, a large per cent. of the foliage must remain uninjured by bugs, Paris green or rust, until the potatoes are well matured. When the leaves wilt and droop they have done their work—the crop is then in its best condition to dig; the drying of the stalk while yet connected with the tuber, seems to detract from its eating qualities.

Wire worms and white grubs don't eat potatoes before they are ripe. I suppose up to that time they live on the green and tender roots of the plant.

The farmer needs a different variety of potato from the one best for the market gardener. The early varieties get ripe, the tops die, the worms begin to eat, and the weeds get possession of the land before the farmer, who has haying to do, can get ready to dig them.

A variety that will bear heavy seeding and not set too many tubers, one that will grow stocky vines which will stand up stout and strong through hot, dry weather,—one that will grow foliage enough to completely shade the

ground, and thereby keep well ahead of the weeds and bugs,—one that by keeping green and thrifty until well into August will keep the weeds and worms in check until the farmer is ready to harvest,—is, in my opinion, the variety the farmer wants for a part of his crop, at least. The Late Sunset comes nearer to what I want a potato to do than any variety I have ever grown, but it has some failings, and I must prospect more before I can recommend it very highly.

The fertilizer used produced 20 bushels per acre for \$10 worth used. If we trust the grass to pay one-half of the bill, 25 cents worth of fertilizer gave a bushel of potatoes—10 3-4 cents worth of barn manure produced a bushel. I have never made an experiment with a fertilizer which has not proved our cellar manure to be worth \$20 or more per cord.

The excuse I make for calling the attention of the committee to so small a crop of potatoes is the fact that they were grown under conditions of drought and rust, which caused a large part of the crops in our town to fail to pay expenses of cultivation.

ANSEL W. PUTNAM.

Asylum Station, Mass.

This certifies that I measured two lots of land for Ansel W. Putnam. The lot planted with early potatoes is 20 rods long by 4 rods wide—contents 80 square rods. The lot planted with late potatoes is 21 rods long by 5 3-4 rods wide—contents 120 3-4 rods.

JOSHUA W. NICHOLS.

Asylum Station, Nov. 1, 1886.

REPORT OF COMMITTEE ON ORNAMENTAL
TREES.

To the Trustees of the Essex Agricultural Society,

GENTLEMEN :—Your committee were duly notified by the secretary of two entries "for the best lot of ornamental trees"—one by Albert Emerson, Haverhill, sugar maples on westerly side of Hilldale avenue; and the other by Benjamin P. Ware, Marblehead, a varied collection of trees situated on his farm.

They would report that they have awarded the prize of \$10 to Benjamin P. Ware of Marblehead; and would add words of praise of Mr. Emerson's trees, there being no second prize.

A visit was made to Mr. Emerson's on August 11th, where we saw a thrifty lot of sugar maples of quite uniform size, growing in a clay soil and under generally favorable circumstances. The committee were well pleased with the appearance of the trees, and also that their owner had showed a public spirit in setting them where they were doing a double duty by increasing the attractiveness and beauty of the adjacent lands, and also offering grateful shade to those passing on the highway during the heat of summer.

Mr. Emerson's appreciation of trees was shown also in the belt of natural forest growth—chiefly oaks—which he had preserved as a division between two fields, and as a sheltered passage for his cows from their pasture to the spring, which was at the farther end of the belt where it widened into a grove. This belt was fenced in, and was so located that the cattle passed within easy sight of the house on their way to the water. These trees were another picturesque feature, lending shelter to the animals, and preserving a growth of woods around the spring,

which is the surest way of continuing its flow. Such springs, the sources of our purest water, are too fast disappearing with the increase of our population. The laying out of roads and digging for water, gas and sewer pipes, generally taps their underground currents and destroys them.

Mr. Emerson's grass land and crops were looking well, and he was justly proud of a fine half-acre of asparagus.

A most delightful drive was enjoyed, at Mr. Emerson's invitation, to the town of Atkinson in New Hampshire, with beautiful and extensive scenery on either side. On the return, a brief stop was made at the farm of E. A. Emerson, the son of our host, and the committee inspected his "Bucanan" wind-mill, which had just been completed to supply his barn and house with water.

Your committee would acknowledge the kind attentions that were shown them by Mr. Emerson and his family, which were fully appreciated.

On Wednesday, August 18th, the committee met at Marblehead to examine the entry made by Mr. Ware. Some of the members having arrived before the stated time, enjoyed a pleasant half-hour along the bluff, overlooking the beach, where a magnificent view of the ocean was had. We also examined "Gun-rock," with its sounds resembling the muffled explosions of cannon, as the seas in turn advanced and broke their force in an under-cavern of the huge rocks. A singular geological formation was interestingly explained by Mr. Ware, with the theory of its origin.

The committee, being soon together, commenced an examination of the trees upon the place. Several hundred had been planted on the farm, along both public and private roadsides, and also in groups and plantations. These consisted of a variety of deciduous and evergreen trees.

Some maples and ashes, on the side of the approach to the house, were in especially good condition and have probably given as grateful shade as any on the place, since they border the roadway from the fields and railway station to the buildings; and who appreciates such protection from the sun more than those returning from the scenes of bodily or mental work, on a hot summer's day?

The trees between the house and ocean were a good specimen of what can be accomplished by planting in groups, where the exposure is considerable, and where the planting of the trees rather close together for mutual protection is the only way to secure mature trees.

Between the house and barns a mixture of evergreens and deciduous trees were appropriately located on a hill-side, and formed a useful and interesting collection.

Quite a long avenue, which divides Mr. Ware's farm from his brother's, was lined with a row of maples on either side, and a third row down the centre, forming a double roadway. One side of this roadway was incomplete when your committee saw it, but the trees had been set out in advance and were doing well.

We also examined a thrifty line of willow trees that had been planted as a wind-break to a fruit orchard.

There were a large variety of trees throughout the estate, and your committee saw Norway, Sugar, Sycamore, White and Cut-leaved maples, White ash, Horse-chestnut, Elms, Willows; Scotch, Austrian and White pines, with some Larch trees; also some Thorn-acacia hedges, and some few others.

The desirability of lessening the number of trees where they formed rows at the side of roadways, was discussed by your committee, both at Mr. Emerson's and at Mr. Ware's, but shade and shelter in the heat of summer was what these were planted for, and a continuous shadow had

been secured after a number of years waiting, which would be broken by taking away every other tree for the sake of preserving the natural form of each individual.

Where trees are planted for ornamental purposes every other one in a row should be removed when the trees approach near each other ; and this same principle should be followed when trees are planted in ornamental groups.

For timber, trees should be grown sufficiently near together to prevent the growth of limbs, and encourage height and size in the trunk.

After our return to the house, having completed our tour of inspection, we were shown by Mr. T. C. Thurlow samples of twenty varieties of maple leaves, and their individual characteristics were explained and discussed with interest.

Your committee are indebted to Mr. Ware for a very pleasant day and a most hospitable reception.

It is proper to call special attention, in this connection, to the general object to be sought in offering these prizes for trees. It should be to encourage people to plant trees and to bring to public notice as many examples as possible of beneficial and successful tree planting, for forest, shade or ornamental uses, in the hope and expectation of inducing more people each year to plant them. The names of those engaging in this good work should be brought before the public for commendation.

Where such an interest has not existed I have known of its being started, and later developed, by the receipt from a friend of seventy-five seedling trees, sent by mail, postage paid, for only one dollar for the whole seventy-five. These were carefully set out as the friend directed, and succeeded well. The recipient of these trees got more in a similar way, and also became a good patron of the nearest home nursery.

The writer has bought a number of hundred trees in this way which have arrived in good order, and a very small proportion have died. They were purchased of Robert Douglas & Sons, Waukegan, Illinois; they were about eight inches tall, came in a slightly moist condition, and were wrapped first in oiled paper and then in brown wrapping paper. Trees have been sent in this condition from Waukegan to Australia, and grown well when planted in Australian soil.

Farmers' Clubs, and especially Village Improvement Societies, that desire to develop an interest in general tree planting, should adopt some such plan as the foregoing. Eventually we should see in our villages samples of trees growing about our homesteads which might be novel in the locality, and beautiful in form, foliage or coloring.

Quite a variety of trees can be thus secured, and they are mostly the more desirable trees for general planting; but a few trees that can be well introduced to produce pleasing effect in ornamental planting are also thus sent by mail. White ash, White and Red pine, Hemlock and Norway spruce and Catalpa are among those that the writer has thus bought.

Trees should not be planted thickly around buildings, to shut out the rays of the sun, which are necessary for a healthful condition of atmosphere in our homes, in summer as well as in winter. Too many trees are as injurious as too many closed blinds to our health; and we all know full well what the unpleasant chill of an unused chamber, or spare parlor is, which is kept too long shut up or unused.

There are villages and towns in Massachusetts which are famed for their many beautiful trees, but which are being threatened with suspicion of malaria from the too dense foliage that covers their roadsides and home grounds.

Judicious planting is beneficial, both in a healthful and financial point of view, and should be given every encouragement.

Your committee were not called upon to visit any plantations of six hundred or more trees, but the present offer of the Society is wise, and it might even be well to offer a prize for a still larger plantation, in view of the increased interest in encouraging the preservation of forests around the sources of our water supplies.

A prize for over six hundred and not over two thousand trees might be substituted for our present large offer; and a prize for over two thousand trees might be added. Probably very few would enter for the latter, but the object is good, and good objects is what this Society seeks to encourage.

Your committee would respectfully submit this report, trusting that it will meet with the approval of the Board of Trustees.

FRANCIS H. APPLETON, Chairman.

STATEMENT OF BENJAMIN P. WARE.

To the Committee on Forest Trees:—

I desire to make the following statement regarding the ornamental trees which I offer for premium. The row of rock maples growing along the avenue through the farm, forty-five in number and thirty feet apart, were taken from the woods of natural growth forty years ago, and when set were about two inches in diameter, and cut off at an equal height of ten feet from the ground. This gave them the appearance of bare poles, and caused them to put out branches from the top, thus adding to the beauty of the whole row by the uniformity of their branches. These

trees though healthy have not made a very rapid growth, being now from twelve to eighteen inches in diameter; affording, however, a grateful shade in the centre of a driveway a quarter of a mile long and thirty-five feet wide. So beautiful is this that very many strangers are induced to drive in and through the farm to enjoy the shade thus afforded.

This first experience in setting shade trees proved so satisfactory that in later years, from time to time, I have planted some three hundred ornamental trees of various kinds along all of the highways and railroad that pass through or by my farm, adding much beauty to the landscape and comfort to man and beast that travel that way.

The grove of twenty-five trees in front of the Clifton House, being very near the ocean, was quite difficult to make grow, as the exposure to the severe easterly storms and high winds is more than those trees will generally bear. This grove was started thirty-five years ago by planting the trees quite near together, thereby affording protection to each other, and as they have grown, the weak ones have been removed, following the natural law that the fittest survive. Several varieties were here planted, not knowing which would stand the exposure the best. The American elm, Norway maple, Sycamore maple, English linden and Balm of gilead are now standing in the group, all in a healthy condition, varying in size from six to sixteen inches in diameter, and from fifteen to forty feet in height. There were originally some Silver-leaved Poplars nearest the ocean, which grew quite well for a few years, but have since all died; they were not very satisfactory at any time, continually throwing up suckers and showing more or less dead branches.

In the summer season the dense shade which this grove affords is highly appreciated by the guests of the Clifton House.

As an experiment, I trenched one-half of the land where this grove stands two feet deep, supposing that it would promote the growth of the trees, but contrary to the opinion generally held, I never saw any favorable result from it.

I have another grove composed of sixty-five evergreen trees, that serves as a screen for the barn and stable, and also for a delightful shade with a pine odor which is very agreeable to many persons. These trees were set quite near together to afford mutual protection, and are now from three to eight inches in diameter, and from six to twenty feet high, all in thrifty condition. They will be thinned out as future growth may require. Here are the Norway, Scotch and White Pines, each of a different shade of green, each beautiful in itself, and making a pleasant combination of color; especially in the winter is this attractive in contrast with the bareness of the surrounding deciduous trees and of the landscape generally.

I desire to call your attention to a row of Norway maples along the approach to the Clifton House. This variety of maple naturally forms a compact mass of foliage, shaped like a spinning top inverted, admirable for a shade. It is very hardy, retains its foliage quite late in the season and turns to a beautiful yellow color in many shades as the season advances. This row of trees, with their uniform shape and dense foliage, helps to make the walk to the railroad station a luxury rather than a burden.

Along Atlantic avenue and the approach to the railroad station and on each side of the railroad are planted White ash, Sycamore maple, Norway maple, Rock maple and Horse chestnut trees, thirty feet apart. These are all in a thrifty condition, varying from five to ten inches in diameter and from twelve to twenty-five feet high. These varieties have proved hardy and well adapted to this loca-

tion, and to the object desired in planting, although no variety will excel, or perhaps equal, our native Elm for majestic grandeur and beautiful proportions.

Nearly all of our ornamental as well as fruit trees are subject to attacks of disease or insects which mar the beauty, check the growth, and even cause death unless protected. Diligent watchfulness is the price of success, here as well as elsewhere on the farm.

The Elm is subject to the ravages of the canker worm. My Linden trees were this year badly eaten by the same or a similar worm, and had I not sprayed them with paris green, they would have been stripped of all foliage. The White ash is subject to a blight in the early season, causing black spots on the leaves, though later growth seems to overcome it, so that the effect is not noticed.

The Norway maple is, I think, a very desirable tree, but it is liable to be affected unfavorably by atmospheric influences. One side of mine had a brownish appearance which came on suddenly from this cause. The Norway maple is in danger, more than other varieties, of splitting down where there are crotches of large limbs. When young, care should be taken in pruning to have a main centre trunk, instead of cutting it off and thereby causing several main limbs to branch out. The horse chestnut is a very beautiful tree in form, foliage, and especially in flower. It is a rapid grower after it is well established. But a heavy wind while the foliage is tender in the early season will seriously mar its beauty for the rest of the season. The balm of gilead is a very hardy, rapid-growing tree, and will probably bear exposure to the ocean storms better than any other variety, and is very valuable on that account. It also has valuable medicinal properties that with many persons are the cure-all of the family and of the neighbors. Mr. Tudor found it of great service on

exposed places at Nahant in forming wind-breaks for the protection of more tender trees, and was thus enabled to grow fruit quite successfully. But this tree is subject to a borer that will seriously injure, if not totally destroy it, unless protected.

The black poplar, introduced from Japan, is a rival to this for hardiness to ocean exposure, rapid growth and symmetrical proportion. It can be easily propagated by cuttings, it has been fully tested in this country for some fifteen years, and I know of no serious objections to it. It does not sucker like the balm of gilead, silver poplar or the Lombardy poplar that was so famous seventy-five years ago. Take it all in all, I think it is a valuable acquisition to our list of ornamental trees.

The sycamore maple is a hardy tree with me, a rapid grower, has very beautiful leaves, grows very shapely, has pretty and abundant blossoms, and produces abundance of clusters of winged seed that add to the beauty of the tree in the autumn. This variety is not subject to attacks of any disease or insects that I am aware of. I consider it of great merit.

I have in my collection of ornamental trees, Wier's cut leaf maple, which, as its name indicates, has a beautiful deeply serrated leaf, attractive by its oddity. This tree is a rapid grower, with an abundance of long, slender branches with a drooping habit, quite desirable in a collection. Also the cut leaf weeping birch, with its beautiful pyramidal form, very white bark on the trunk and large limbs, and dark colored on the smaller branches which droop, and so fine, not larger than a knitting needle, that a gentle breeze will cause them to wave in a gentle, undulating manner, making this one of the most beautiful and attractive trees we have. It is propagated by grafting on some strong growing birch of another variety.

I have several other varieties of some merit, but not requiring any special mention.

I have gone into some detail, hoping to enlist the attention of my brother farmers to the planting of shade and ornamental trees about their homes, which to me has been so satisfactory, notwithstanding the drawbacks that I have mentioned. They do grow while we sleep.

Respectfully submitted.

BENJAMIN P. WARE.

REPORT OF COMMITTEE ON STRAWBERRIES AND OTHER SMALL FRUITS.

Your Committee have attended to their duty, and respectfully report three entries, one of strawberries, one of raspberries, and one of blackberries, to each of whom was awarded premiums as follows, viz. :

- \$10. First premium, to George G. Peirce, West Newbury, for strawberry crop.
- \$10. First premium, to George G. Peirce, West Newbury, for raspberry crop.
- \$10. First premium, to Benjamin W. Farnum, North Andover, for blackberry crop.

Since the fruit crops of Mr. Peirce were entered, he has died. He was a young man of promise, and greatly interested in the cultivation of small fruits, which he did so successfully.

Mr. Farnum commenced in a small way while a scholar in the High school, and has both multiplied his plants and increased his market, to a profit since.

Respectfully submitted for the committee,

EDWARD E. WOODMAN, *Chairman.*

STATEMENT OF GEORGE G. PEIRCE, "BREAK HILL FARM,"
WEST NEWBURY.

Crop of Wilson and Crescent strawberries on 1 acre,
148 1-2 sq. rods.

Soil, gravelly loam, good corn land, sloping slightly to
the south. Plants set in spring of 1885, about the same
quantity of each variety.

Cost of preparing and manuring ground, \$40 per acre,	\$77.00
9000 plants to acre, about 17,440 plants, at \$3 per thousand,	52.32
Planting, \$6 per acre,	11.60
Hoeing, \$6 per acre,	11.60
Mulching in the fall of 1885, \$10 per acre,	19.40
Picking and marketing 12,304 quarts, at 3 cents,	369.12
Total cost,	<u>\$541.04</u>

First picking of berries June 12, 67 quarts; last pick-
ing July 13th, 129 quarts.

Total picking, 12,304 quarts, at average selling price of 12 1-2 cents,	\$1538.00
Less cost of crop,	541.04
Profit,	<u>\$996.96</u>

Rent of land and interest on investment not reckoned.

NOTE.—Crop per acre, 6381 quarts,	\$797.62
Cost of strawberry crop, per acre,	<u>280.43</u>

Profit per acre, exclusive of land rent and interest, \$517.19

STATEMENT OF GEORGE G. PEIRCE, "BREAK HILL FARM,"
WEST NEWBURY.

Crop of Cuthbert raspberries on 71 1-2 sq. rods.

On side hill, sloping north ; soil, yellow loam, 8 inches deep. Location favorable for snow remaining through the winter, preventing deep freezing. Set in 1884, rows 8 feet apart, plants 3 1-2 feet in rows. Pruned to within three feet of ground in spring, 1886.

Cost of preparing ground, plants, planting, etc., in 1886,	\$50.00
Cost of pruning, 1886,	10.00
Cost of picking and marketing 2505 pints fruit, or 1252 1-2 quarts, at 3 cents,	37.58
	<hr/>
	\$97.58

First picking of raspberries July 12th, 110 pints ; last picking August 5th, 90 pints.

Total picking, 2505 pints or 1252 1-2 quarts, at average selling price of 15 cents,	\$187.88
Less cost of crop,	97.58
	<hr/>
Profit,	\$90.30

Rent of land and interest on investment not reckoned.

NOTE.—Crop per acre, 2803 quarts,	\$420.45
Cost of raspberry crop, per acre,	218.35
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Profit per acre, exclusive of land rent and interest, \$202.10

STATEMENT OF BENJ. W. FARNUM, NORTH ANDOVER.

Crop of Wachusett Thornless blackberries on 20 1-2 sq. rods of land.

Soil, dark loam, rocky subsoil, southeastern aspect. Plants set some three years, some two years ago. Rows 7 feet apart, plants 3 feet apart in the rows. Old wood trimmed out early in spring. Stable manure spread on

and cultivated in, keeping ground level. Not mulched through the winter ; perfectly hardy.

Cost for season of 1886 :

Cutting out old wood,	2.00
Trimming during season,	.75
Labor,	1.25
3 ft. manure,	2.25
Picking and marketing 806 quarts at 5 cents,	40.30
	<hr/>
	\$46.55

First picking July 28th.

Total picking, 806 quarts, at average selling price about 13 1-2 cents,	\$110.52
Less the cost,	46.55
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Profit,	\$63.97

NOTE.—Crop per acre, 6290 3-4 quarts,	\$849.25
Cost of blackberry crop, per acre,	364.37
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Profit per acre, exclusive of land rent and interest, \$484.88

REPORT ON NEW VARIETY OF WINTER APPLES AND APPLE INSECTS.

In our last report we gave the history of the Baldwin apples. It is supposed to be more than one hundred years since they were first known, and now they are at the head of the list of winter apples. Still we think they, like other old varieties of winter apples, are on the decline, and are not what they were many years ago. That it should be so is not strange, as apples, when grafted, are believed to partake more or less of the natural stock ; and we believe, too, that varieties of apples, like other works of nature, have their maturity and decline.

Many years ago the trustees of the Essex Agricultural Society, believing that varieties of apples deteriorated and became less productive, offered the liberal premium of one hundred dollars for a new variety originated in this county equal to the Roxbury russet or Baldwin.

In 1879 Mr. Alfred Ordway of Bradford presented a new variety of apples that originated in a neighbor's wood lot, from which he took scions and put into his own trees, which produced the apples presented. The apples are much like the Baldwin and about the same size. Samples have been presented several times. Your committee did not feel satisfied that they were quite up to the standard, and declined awarding the premium, but recommended a gratuity of twenty dollars, which was voted by the trustees. Last fall the premium was changed as follows: one hundred dollars for a new variety originated in this county equal to the Baldwin; for a new variety of like character originated elsewhere, provided they have been cultivated in the county sufficiently to prove them equal to the Baldwin for general purposes, twenty dollars.

The additional premium is an improvement, as it matters not to the apple growers of this county where the apples originated, if they are productive and of good quality. Some of our best apples are of foreign origin. The red Astracan and Gravenstein are both of foreign origin and of superior quality in their season. If there are winter apples elsewhere better than we have, let us have them; get scions and test them. It is hoped this additional premium will induce people to make an effort for that purpose.

It is not easy estimating correctly the comparative value of different varieties of apples, as there are so many qualities to be considered. The taste of the apple, their color, their size, their bearing quality, their keeping quality, with

other qualities of less importance, should all be considered. Their bearing quality is of vital importance, and most varieties are very uneven.

The past autumn I visited the farm I formerly occupied. The Baldwin apples were small and of inferior quality. The Roxbury russet, the Hunt russet and Rhode Island greening were of good quality and an abundant yield. The comparison between them and the Baldwin the like I had rarely seen before. The comparison has usually been largely in favor of the Baldwin.

At the late fair at Newburyport specimens of the Ordway apple were presented that appeared well, also a specimen of the same fruit by Mr. A. Kimball from scions from Mr. Ordway's tree; also a sample of apples, without name, from Mr. Joseph Horton of Ipswich; another variety from Mr. C. M. Kent of Newbury; another specimen from J. H. Hill of Amesbury. It is hoped that some of these apples will be kept and presented at the trustees' meeting in June, that their quality may be known at that time and compared with each other. We would also recommend that scions be taken from these trees and grafted into other trees, as one tree is not sufficient to fully test a variety of apples.

A premium of twenty-five dollars has been offered for a successful experiment in destroying the codlin moth, and other worms destructive to the apple. No premium has been called for, consequently no effectual remedy can be expected. I have taken considerable pains to get information from observation and otherwise in regard to the habits of these insects, and think something might be said that would be instructive to others.

It is often said apple insects are increasing—new insects are appearing. How this is we are not quite certain. It was said by a wise man of old "there is nothing new un-

der the sun." What then existed the like had existed before. Whether that was intended to apply to insects we are not informed. The canker worm, the caterpillar and palmer worm are all mentioned in scripture as destructive insects; whether they are the same insects now known by these names we are not informed.

We learn from tradition that the orchards in the north part of the county were ravaged by the canker worm in the latter part of the last century. In the spring of 1793 there was a late frost that killed the canker worm and nearly all the apples, and it was thought to be a benefit rather than a loss, as the destruction of the canker worm would more than compensate the loss of the apples. They appeared again early in the present century. I remember their sad effects as is seen the present day in many orchards. I also remember assisting in tarring my father's trees, which with much care proved successful. In 1815 they were again killed by a late frost. Since that time they have appeared and disappeared, and sometimes have disappeared without a known cause.

In tarring my father's trees we used tar mixed with blubber to thin it, then warmed it over the kitchen fire to have it mix and spread well. It was applied every day late in the afternoon. More recently ink has been used, as it could be put on less frequently and answer the purpose. Still more recently a solution of Paris green and water has been used to spray the trees that in many cases has been successful, but caution should be used that it be not too strong, as the foliage is sometimes injured.

Caterpillars were formerly more numerous than they now are. It was then not uncommon to see nearly the whole orchard stripped of its foliage by these insects, but the like is now rarely seen.

The apple maggot is thought to be a new insect. It is

not so. Many years ago sweet or pleasant sour apples appearing well on the outside, when cut open were worthless, but no insect visible. They are not regular depredators. Some years they destroy nearly the whole crop, other seasons they do but little or no damage. From the outside appearance of the apple no one can tell what is inside. They are said to proceed from a small fly. No remedy is known for their destruction.

Professor Sanborn informs us that there are many insects that infest the apples. We think the apple maggot and codlin moth are the most destructive. The codlin moths are of foreign origin, having been brought to this country early in the present century. They have now spread nearly over the whole country. They are a deceitful, troublesome insect. The moths fly in the night and evening and not in the day time, and are rarely seen; therefore it is not easy learning all their movements.

Entomologists tell us that the moths come out in spring, about the time the apple blossoms are falling from the trees, laying their eggs in the blossom end of the apple. I have never seen the little yellow eggs spoken of by Professor Sanders in his late work on insects, but have often seen where the worms were entering the apples at different times from the early stage of their growth to October, and not always at the blossom end of the apple, but on the side or cheek of the apple. They soon hatch and enter the apple, and in about four or five weeks, according to the season, the worms are matured, crawl out of the apples and seek a hiding place to spin their cocoon and change to another insect as nature designed.

If the worm is matured before the apple drops from the tree, it crawls out and seeks a place under the rough bark, or in a crotch between two branches, or some other place, to form its cocoon on the tree. If the apple drops before

the worm is matured, when matured it crawls out and seeks a place to form its cocoon: it may be to the body of the tree, to the stone wall, rail fence or some other place, as most convenient.

I have repeatedly picked up the wormy apples soon after they have fallen from the trees, cut them, and found much the greater part without worms, they having matured, as was supposed, and left the apple to cocoon. It thus appears that not so much is gained by picking up the wormy apples and destroying them, as has been by some supposed. To get further information, I picked up wormy apples, put them into a firkin with small scraps of cloth and covered the firkin. I soon found cocoons in the scraps of cloth, which were removed to a glass jar. Early in August moths were seen fluttering in the jar. Desirous of more information, I wrote to Professor Sanborn of the Historical Institution, of Worcester, Mass., now deceased, a man who was known to have had long experience in studying the habits of insects, and received the following information: The moths come out in spring and lay their eggs as I have described; that he had within his experience of more than thirty years examined with a microscope a large number of female moths, and found them to contain about three hundred eggs each. They live two or three weeks only, laying their eggs singly on the apples. If the nights are quite cool they remain torpid, do not move out, or if the weather is wet they remain quiet; should the weather continue cold and wet, they sometimes die without laying all their eggs.

He also informs us that the worms propagate and subsist on the following kinds of fruit: apples, pears, quinces, cranberries, and some wild fruit, and these only. In the most of our orchards apples are the only fruit produced on which they subsist. Then if there is a failure of

the apple crop, as there sometimes is in certain orchards, there will be no place for the moths to lay their eggs; consequently there will be no worms the next year, unless moths come from elsewhere. How far the moths will go to lay their eggs, and whether instinct directs them to the bearing tree, like the canker worm moth, we are not informed. We have seen them when they came out of the ground crawl directly to the body of the tree; also when the web of the canker worm is broken and falls to the ground, the worm crawls directly to the body of the tree, thence up the tree for its daily food. Now may we not reasonably suppose that instinct directs the codlin moth to the bearing rather than to the barren tree?

There is much difference of opinion among entomologists in regard to the habits of these insects, whether they are single or double brooded. The fact seems to be this: In the northern latitudes, where the growing season is short, they have but one brood in a year. In the warmer latitudes, like California, they are said to have three broods in a year. In the intermediate latitudes two broods in a year, or partially so. The early ones have a second brood, the later ones but one brood, as may be supposed it is with us.

I have the copy of an interesting letter from Professor Charles V. Riley of Washington, (formerly of Missouri). He confirms my representation that the moths appear about the time the apples are forming, others in cool places come out later, and others still later, so that he has known moths of the first brood and moths of the second brood in the same tree at the same time.

He further informs us that he has bred those moths, who when confined would so cover the apple with eggs that when the worms hatched, they would enter the apple from every side, and soon so perforate and devour the apple as to die of starvation.

We have been informed by Col. Wille, secretary of the State Board of Horticulture of the State of California, that it takes about fifty-five days to produce a generation of the codlin moth, from the time the first generation appear on the wing.

Here, as the weather is cooler, it may take longer, and from my experiments I think it may take sixty or sixty-five days to produce a brood or generation. My opinion is simply this: They begin to appear about the time the apples are forming, others in cool places come out later, others still later, until the next brood appears, so that nearly all the fall and winter apples are infested from the second brood of moths.

We have thus, we think, given a fair description of the habits of these insects, and hope some of our Yankee farmers will avail themselves of the liberal premium, and point out a plan for the extermination of these destructive insects.

JOSEPH HOW, *Chairman*.

Methuen, Nov. 9, 1886.

NEW MEMBERS.

The Committee on New Members has attended to the duty and respectfully report the following award:

\$6.00. Premium, to John Q. Evans, Salisbury, for 8 new members from Salisbury.

Other than those, who became members by rule of the Society, a premium of \$7 or upwards having been awarded them, the new members of the Society during the year were 8 from Salisbury, 3 from Amesbury, 3 from Lynn, 2 from Andover, 2 from Boxford, 2 from Rockport, 2 from Newburyport, 3 from Gloucester, and 1 each from

Manchester, Salem, Hamilton, Beverly, Lynnfield, Bradford, Newbury and Topsfield.

It will be seen by looking at the list of active members of the Society that in several places in the county the increase by new members has not kept pace with the decrease by death, so that the membership in those places in point of numbers is not a credit to them or to the Society. Your Committee would therefore urge the members, especially the Trustees from those places, and from all other cities and towns in the county, to increase the membership another year. No farmer or other person interested in Agriculture or Horticulture can obtain so good a return for the sum invested, \$3.00, making a lifetime member.

Respectfully submitted,

DAVID W. LOW, *Committee.*

REPORT OF COMMITTEE ON TREADWELL FARM.

The farm is increasing in fertility as shown by the crops, the plain land especially yielding better returns from year to year. The stone wall around the field in which the buildings stand is much out of repair. Part of it is common wall which any man can lay up; another line is bank wall, originally laid in mortar; now much of it is loose and many stones have fallen out, several gaps have appeared, and the whole wall needs to be relaid. The under-drain laid many years ago when Nathan Brown was on the farm is in good order, and furnishes to those who remember the former condition of the land drained, the best evidence of the wisdom of the men who planned and executed the work. The wall and fence around the pasture will require extensive repairs before another season.

The wall was all poled when A. H. Gould first leased the farm, but little has been done to it since. Now the poles have decayed, the wall has been only partially put up of late years, and a considerable outlay is required at once. Poles enough can be cut in the pasture to do the work. If the maples are thinned judiciously, it would be no injury to them, and a maple pole will last many years.

The wood-wax is increasing to an alarming extent, and the comments made by neighboring farmers are not flattering to the Society. Nothing was done last year or this to check it. The plowing done a few years ago not being followed up, spread the plant by killing out the grass, thus giving the wood-wax the whole ground. A much larger area is covered by it than formerly; it has run into the woods and along the old walls so far that it cannot be well cut or plowed. It is respectfully suggested that the Society offer a premium for some effectual method of exterminating the weed, the test to be applied to this pasture.*

Accompanying this report is the account given by Mr. Foster, foreman of the Pierce Farm, of the experiments conducted by him in planting potatoes. He also gave me a verbal account of an experiment with the Stockbridge, Ames, and Darling's fertilizers applied to corn. A heavy coat of manure was spread on the land and the fertilizer used in the hill; an equal quantity of each one being applied to different parts of the field. No difference could be observed in the various lots, either while growing or in the crop at harvest. This amounts to nothing as a test, for the manure alone would have made the crop, over four cords to the acre being used.

*NOTE.—The Trustees, at the November meeting, voted that the Society insist that the tenant of the Farm be required to cut the wood-wax when in blossom, or immediately after.

The amount of the crops raised on the farm is also appended to this paper, the amounts produced being given but no prices carried out. This account was of course furnished by Mr. Foster, superintendent of the leased farm.

Respectfully submitted,

CHARLES J. PEABODY,

For the Committee.

REPORT OF PRODUCE — TREADWELL FARM.

25 tons English hay.
 20 tons meadow hay.
 7 tons stover.
 18 tons rye straw.
 10 tons oat straw.
 1200 bushels potatoes.
 175 bushels shelled corn.
 100 bushels beans.
 200 bushels oats.
 200 bushels rye.
 60 barrels apples.

MANURE APPLIED.

10 tons Darling's Fertilizer.
 15 cords stable manure.

EXPERIMENT WITH POTATOES.

Ten rows planted with whole potatoes produced 38 bushels.

Ten rows planted with single eyes produced 40 bushels.

Ten rows planted with two eyes produced 42 bushels.

These were all planted in drills three feet apart; seed about fifteen inches apart in the drill.

REPORT OF DELEGATES TO FARMERS' CLUBS AND FRUIT GROWERS' ASSOCIATIONS.

The Houghton Horticultural Society, of Lynn, has a large number of enthusiastic members, and as a body have acted as a City Improvement Society. They have caused a large number of ornamental and shade trees to be planted on many of the streets, they sometimes establish courses of lectures during the winter, and annually hold an exhibition of fruit, flowers and vegetables, continuing two days and evenings, followed the next evening by a social festival, with liberal refreshments. As Lynn is a specially favorable location for the growth of pears and other fruit, their exhibitions are remarkable for the excellent quality of the fruit shown. Many first premiums offered by the Essex Agricultural Society are taken by members of this society. Its influence has been very marked, by the great advance in fruit culture and improved taste in floriculture and arboriculture which makes Lynn appear as a city of gardens. This is often remarked by strangers who visit that city.

The Marblehead and Swampscott Farmers' Club has been organized six years. It has succeeded in enlisting the interest of nearly all of the inhabitants of the farm districts of the two towns. Old and young, male and female, are induced to become members. The annual membership fee is 50 cents; children under twelve, 25 cents. The ladies of the club have formed a supplementary club called "The Helping Hands," and they have truly proved what their name indicates. They hold weekly afternoon meetings at their several homes, which have resulted in providing for two fairs for the sale of fancy and useful articles, the products of their taste and industry. These fairs have netted some two or three hundred dollars, and thus they have been enabled to help out the meagre in-

come of the club which the small fee of membership provides. The club holds weekly Monday evening meetings from November 1st to May 1st, which are intended to provide for the social and educational wants of the neighborhood and also for amusement. A lively interest has been kept up, with a full attendance. The club has the free use of a very prettily arranged hall, centrally located, where from time to time discussions upon farm topics are held by the members. Popular scientific and other lectures are given by many distinguished gentlemen, who kindly come for the good that they can do the club. The younger members are encouraged to volunteer frequent declamations, dialogues, etc., which are always welcomed by the club. The young ladies have formed a Choral Union, for the purpose of providing singing with piano accompaniment as an opening exercise for the meeting. Musical and other entertainments are frequently given by friends of the clubs from other towns. A social picnic is usually held in August, and the ladies of the club provide elaborate refreshments from time to time as occasion may require. The influence of the club has been to enhance the much-needed social condition of the neighborhood. It has developed and brought out much latent talent in various directions. It has been a beneficence to the educational, social and moral standing of those communities, probably more than anything else could have secured.

The West Newbury Farmers' Club is one of the oldest in the county. Their fairs, usually held in September, every other year, draw large crowds of farmers and others. A dinner and speeches from invited guests are prominent features of the occasion. They hold ten or fifteen meetings for discussion during the year in different parts of the town, with an occasional lecture. A visiting committee is appointed to inspect farms and growing crops, which are

reported to the club, much interest is manifested, and good results to the farmers of the town have been secured.

Newbury, Ipswich, Rowley, Georgetown, all have their farmers' organizations for discussions, lectures and social intercourse. They are all in a healthy condition, and the members feel that they are benefitted by them.

Wenham has recently formed a club under favorable auspices; discussions have already been provided for.

The Bradford Farmers' and Mechanics' Association is an active, healthy organization, holding frequent meetings for discussion, and an annual picnic or steamboat excursion down the Merrimac river, which is a rare social occasion, much enjoyed by the families and invited guests of the members; and an annual festival in the winter for social enjoyment. They also hold an exhibition as often as every second year, with great success.

The Andover Farmers' Club has been organized eight years. They have meetings for discussion, a visiting committee to report the condition of farms and crops, and an annual festival which is highly enjoyed by the large attendance of members and invited guests.

The Topsfield Farmers' Club is not as large or active as some others, but more interest is now manifested, and it is hoped that the discussions that are in prospect for the winter will give new life and energy to the organization.

The West Peabody Farmers' Club is probably one of the most lively clubs in the county. The discussions held at their weekly meetings are sharp and spicy. With a fine musical company among its membership, they are eminently social; male and female, old and young, of the neighborhood, are included in this club. They held their first exhibition last September, which was a great success, complete in all its details.

There have been organized during the past year, Gran-

ges of Patrons of Husbandry in the towns of Amesbury, North Andover and Ipswich, under very favorable auspices, with good prospects of success. These are strictly farmers' organizations, possessing all the advantages of a farmers' club, and much more that a farmers' club cannot have. This is the beginning, probably, of many more that may follow when more is known of the Order of the Patrons of Husbandry.

The effect of these several farmers' organizations in the county has been very marked in the improved agriculture, in the talent for discussion and criticism that has been developed, and the importance and value of more careful observation by farmers. They have proved of great assistance to the mother Essex County Agricultural Society in providing accommodations for the Farmers' Institutes held in the past six years in different parts of the county. And the committee feel highly gratified at being able to report so healthy a condition of these organizations.

BENJAMIN P. WARE,

For the Committee.

FARMERS' INSTITUTES.

The Institutes of this Society, eight in number the past season, have shown increased attendance and interest. No farmer or person of other pursuits who has attended any of these meetings need have gone away without taking with him some new practical idea or established fact, to be of after benefit to him in the duties of life. No person interested in Agriculture in Essex county can afford to miss these Institute meetings, for aside from the benefits derived from the instructive essays and the mutual exchange of experiences and opinions which the discussions draw out, the coming together from all parts of the county

as we do in different places, thus becoming acquainted with each other and forming more social relations, is of mutual benefit by expanding those sentiments which were never intended to lie dormant in the human breast.

It should be remembered that all our Institute Meetings are open to every person who desires to listen to or take part in its discussions, without regard to age or sex. There is nothing exclusive about them; they are free to all. Members of our Society should cordially invite their neighbors to participate in them.

The opening essays or papers of the several meetings have been with hardly an exception of more than usual merit, and it is to be regretted that they cannot find room in our annual report.

The first Institute of the season, and the 37th one of the Society, was held Dec. 8, 1885, at the Town Hall, Andover. Seventy persons were present at 9.30 A. M., when President Ware called the meeting to order, to listen to George D. Forristall of Tewksbury, foreman of the State farm at Tewksbury, whose excellent paper on "The Silo and Ensilage" was ably discussed by Messrs. Ware of Marblehead, King of Peabody, Gulliver of Andover, Butler of Georgetown, Case of North Reading, Morse of Lowell, Evans of Amesbury, Holt of Andover, Ayers of Methuen, Dr. Bailey, and others. At the afternoon session, Vice President James P. King presided, and President Ware read an essay on "Indian Corn Culture," which was an able and exhaustive paper. Messrs. Holt, Butler, Gulliver, T. C. Thurlow of West Newbury, and Mr. Hilton of Bradford took part in the discussion that followed.

The next Institute was intended to be held in Georgetown December 29th, but a disastrous fire in that place on December 26th caused its postponement, and its place of meeting was changed to Methuen.

The 38th Institute was held at Methuen in Memorial Hall with good attendance, Jan. 7th, 1886. The forenoon discussion was on "The Production and Marketing of Milk," opened by James P. King of Peabody, followed by Messrs. Hazleton, Ware, Holt, and others. The subject in the afternoon was "Some Lessons and Suggestions from the Farm Experience of 1885," by Hon. J. J. H. Gregory of Marblehead, who gave a very interesting and instructive talk on his experience and the lessons it had taught, which brought out numerous questions and the experiences of others.

The 39th Institute was held at Peabody Town Hall, Jan. 26, 1886, with a large attendance. The subject of the forenoon, "The Comparative Merits of General and Special Farming," was ably presented by Rev. O. S. Butler of Georgetown, and was discussed by Messrs. Tapley and Janvrin of Revere, Ware of Marblehead, King of Peabody, Chesley of Salisbury, Hon. Warren Brown of Hampton Falls, N. H., Hill of Amesbury, and Marsh of Peabody. The afternoon essay, "Forestry and Pasture," by Hon. J. J. H. Gregory of Marblehead, was deeply interesting, and contained valuable facts which the after discussion of the subject developed.

The 40th Institute was held in the Town Hall, Ipswich, Feb. 12, 1886. Mr. Bartlett, the essayist for the forenoon, being absent on account of stormy weather, the afternoon subject was taken up, a very instructive paper, mostly from experience, on the question, "Is Raising Stock and Fattening Beef Practical for Essex County?" being presented by Charles J. Peabody of Topsfield, followed by instructive discussion. During the noon recess a large party visited the Ipswich Creamery, where butter making had been commenced on the 18th of January previous, and at the time of the meeting was in successful

operation with a capacity of one hundred pounds per day. For the afternoon discussion, James P. King of Peabody was called upon to give his experience with Fertilizers, which he did, greatly to the credit of "commercial fertilizers." His talk on the subject brought out the experiences of others, which with discussions made a very interesting meeting.

The 41st Institute was held in Memorial Hall, Bradford, Feb. 26, 1886, on a day in contrast of the preceding Institute at Ipswich, where the rain poured down, while at Bradford a violent and heavy snowstorm greeted us, and obliged quite a number to spend the night in Georgetown on our way home, on account of non-arrival of snow-bound train, to make connection. The meeting, however, was a very interesting one, and well attended, considering the storm. "The Influence of Agriculture on Climate" was the subject of the forenoon, opened by Michael W. Bartlett of West Newbury, with the reading of a paper of more than usual originality and merit, and no one who listened to it could help gaining valuable information, or new subjects of thought. Col. John E. Russell, who was to speak in the afternoon on "The Horse in His Relation to Agriculture," was prevented by the storm from being present. Dr. William Cogswell of Bradford, a well-known lover of the horse, was called upon, and filled with credit the Colonel's place, and his talk, with the interesting discussion which ensued, gave information of benefit to every horse owner, including in its range the strong and weak points of the horse's nature, physical, intellectual and moral; also the raising, breaking or controlling, and the care and feed of colts and horses.

The 42d Institute was held March 16, 1886, in Grand Army Hall, Beverly, and was opened by Baxter P. Pike of Topsfield, on the question, "Does Agriculture Offer the

Same Inducements to Young Men as Other Pursuits?" whose handling of the subject brought out such able discussion that an audience of some three hundred were deeply interested until its close at the dinner hour. In the afternoon, the subject of "The Potato and its Culture," was opened by Edmund Hersey of Hingham, who gave his "lecture on the potato," which was full of interesting facts and valuable information based on the results of experiments made by him for a series of years in the growing of this vegetable. In response to questions, Mr. Hersey and Mr. Gregory added to the information on the subject.

In response to a communication from the Houghton Horticultural Society of Lynn, asking the aid of the Society in securing the appointment of an Arbor Day, Mr. Gregory offered the following resolution, which was adopted:

Resolved, That it is the belief of the members of the Essex Agricultural Society that it would be for the interest of the State and greatly promote the planting of shade trees along the highways and byways of Massachusetts to have the first of May, or any other better day, appointed by His Excellency Governor Robinson, as Arbor Day.

The 43d Institute was held March 30th, 1886, at Lyceum Hall, Salem. The forenoon subject, "The Horse in Agriculture," was opened by Col. John E. Russell, Secretary of the State Board of Agriculture, in his usual enthusiastic and spiey way of taking up a subject in which he is interested, and in replying to the pertinent inquiries which he invokes from his audience. The discussion which followed showed conclusively that there was a difference of opinion among the speakers in regard to the management, care and feed of horses, some of the methods giving practical and useful information. Mrs. E. V. Gage of Bradford was expected in the afternoon, to give her views on

"Farm and Peasant Life, as seen in short tour in Austria and Germany," but her non-appearance caused the subject to be changed to "Flowers," on which Prof. John Robinson of Salem and Mrs. Maria H. Bray of West Gloucester opened the meeting and were followed by others interested in Horticulture, which made the afternoon meeting a pleasant and profitable one.

The 44th Institute was held April 21, 1886, on the farm of Hon. George B. Loring of Salem, "for the exhibition and trial of implements used in the cultivation of crops." Exhibitors of ploughs could use their own team and driver if they chose and plough as they pleased, *but not less than* seven inches deep; teams being provided on the grounds for those who desired them. It was a perfect day, and brought together several hundred from all parts of the county. The judges of the merits of the machines were each man for himself to form his own opinion of which excelled. The display of implements was quite large, J. L. Colcord of West Peabody and Whitcomb & Carter of Beverly being the largest contributors, others being Parker & Wood of Boston, George G. Creamer of Hamilton, C. W. Mann of Methuen, E. E. Lummus of Beverly (or Boston), C. L. Huse of Newburyport, C. H. Thompson & Co. of Boston, Joseph Breck & Son of Boston and J. R. Whittemore of Chicopee Falls, and comprised implements of the best kinds for every purpose used in the cultivation of crops.

Many of those present improved the opportunity to examine the horses and cattle in the well-ordered barns of Dr. Loring.

Thus ended a season of successful Farmers' Institutes, notwithstanding the inclement weather experienced at several of them. We were fortunate in nearly all places in having good dinners at the usual price served to us by ladies

of charitable organizations, thus being enabled to help them, as well as to sit down together at the social board near the places of meeting, and with the ladies' assistance help ourselves to abundance of well prepared food.

DAVID W. Low, *Secretary*.

POULTRY ON THE FARM.

ESSAY, BY O. S. BUTLER, OF GEORGETOWN.

That poultry raising is naturally an important department of agricultural industry, no one can doubt; notwithstanding very many persons are engaged in poultry raising who have no interest in common with farmers or farming, still it remains a fact that no farm is quite complete without its well-arranged poultry yards. But this industry is subject to the same fluctuations as any and all other business, sometimes reaching the highest standard of volume and profit, and then dropping down to the lowest point of remunerative profit, because the business is overdone and poultry and eggs become a drug in the market. But these fluctuations are felt more by the fancy breeder or specialist than by the ordinary farmer who raises about the same number of chickens every year, and supplies his customers with new-laid eggs and clean, toothsome poultry at about the same price from year to year.

The facts and opinions that follow in this discussion are the result of many years of experience, and of very close and careful observation made during the last year, by visiting the large poultry yards of this and other states, and by conversing with their proprietors in a friendly way.

The first question that will naturally arise in the minds of persons contemplating the poultry business as a pro-

spective industry will be, "What kind of fowls shall we raise?" Well, my friends, that depends upon what you intend to do, and how much you know about the business, and how much money you wish to invest. If you wish to go into the breeding of fancy stock, and get your profits from the sale of birds straight bred and properly mated, with the requisite number of points in feather and form, or if you wish to dispose of your eggs for hatching purposes, then I would say to you, take any of the standard varieties, it makes no difference which, build your houses and yards on the most approved plan, without regard to cost, put into your buildings all the modern appliances that have been thoroughly tested for the artificial raising of poultry, such as incubators and brooders, with the means for heating your buildings and the cooking of food, and if you do not understand the business very thoroughly yourself, then employ some one that does, to assist you in starting your operations, then advertise your business very extensively in several of the poultry journals of the country, (advertising is a trade by itself), then attend all the poultry shows within your reach, exhibit your birds to the best advantage, take the first premiums if you can, and you will make money if you have pluck and patience.

What will it cost to commence in this way? Well, if you do not wish to raise more than one thousand chickens a year, and have your land, it will not cost more than one thousand dollars, that is, if you are not extravagant in your outlay, but if you get the best of everything, and hire the most of your work done, then you can double the amount before you will begin to realize anything from the sale of eggs or birds.

But if you are a farmer or mechanic, and wish to raise and keep from twenty to one hundred fowls, deriving your profit from the sale or use of eggs and poultry at the or-

dinary price, after supplying your own table with the best you have, then I should say, select any one of the approved breeds of Asiatic fowls, and in most instances, a cross between these and the Plymouth Rock or Leghorn will improve them both. I have found the best results by crossing the Light Brahma with the Plymouth Rock, realizing more pounds of eggs and poultry, and of a better quality, than from any other breeds. These fowls are more easily housed and yarded, are good growers, and usually are very hardy and healthy.

We should advise you to raise your chickens in the natural way. While the modern incubator and brooder is a success in the hands of an expert who has plenty of time and a natural taste for that business, the practical farmer or the working mechanic has no business with them unless he wishes to experiment with them at great cost of time and temper, to say nothing of money.

The best time to hatch your chickens is in March or April. It is a great mistake to suppose that chickens leaving the egg in June or July will do better than earlier in the season. We have found that chickens hatched in March or April are more hardy and free from vermin than those that come later in the season, and besides this, your chickens will mature earlier in the season, realizing a good price for all the male birds you may wish to dispose of, leaving your pullets all ready to drop their first egg in September, when by judicious feeding, you can keep them laying until New Year's day, covering just the time when eggs bring the highest price. Then they will commence laying again about the middle of February to give you eggs for hatching.

The best feed for poultry is grain of all kinds, supplemented by meat scraps, ground bone and sea shells. Fish waste is excellent for a change. You should not permit

your fowls to devour all the filthy offal that is thrown from your kitchen. They will eat it if they can get it. But good clean food means good clean eggs and poultry for your table or the market.

The most important time to give special attention to the feeding of your poultry is when they are chickens. I have seen many a brood of fine fowls, well kept and well fed, but giving no eggs in return, for the simple reason that their diet was entirely neglected when they were chickens. If you would have your fowls commence dropping their eggs when they are six months old, and continue through the year with short intervals of rest while moulting, then you must commence to feed them on egg-producing food when they are very young, so that when they are six months old, their whole body will be permeated with egg-producing properties, and then they cannot help laying a bountiful supply of rich, clean eggs. Our rule is, not to give our chickens any food at all till they are two days old. Then we give them a small feed of boiled eggs cut fine, or bread crumbs, if convenient. Soaked crackers are good. We follow this by giving them a feed of dough made of oat and corn meal mixed. We use no other meal on our premises but oats and corn ground together in equal parts. We have used it for hogs, horses and hens for more than thirty years, and consider it the best. When our chickens are from four to five weeks old, we begin to give them whole grain, or broken wheat and oats. Our regular bill of fare is as follows: In the morning, a warm mash of meal and cooked vegetables; at noon, a good generous feed of oats; and at night, give them all the whole corn they will eat. We like to have them go to their roosts with a full stomach. One of the most important articles of diet for poultry is vegetables. They need, and will devour a very large amount of vege-

tables at any and all seasons of the year, and at all stages of their growth. When your chickens are two weeks old, they will relish a little green grass, or potatoes chopped fine. Every farmer should cut and stow away a sufficient amount of vegetables in the fall, for winter use. Cabbages, potatoes and turnips are excellent. And that there be no waste, we keep an old tray and knife, and chop our green food fine. The parings from fruit and vegetables, even cabbage stumps, are relished by them on a cold winter day. When your supply of vegetables is all exhausted, then you can fall back on your haymow. One hundred fowls will eat one-half ton of clover hay in five months' time, and it will do them good. The best way to prepare it for use is to take your hay (second crop is best) and run it through the hay-cutter, and then put it into a box or firkin, then sprinkle it over with hot water, cover the vessel tightly, and in two hours' time take off the cover and see how quickly they will devour it. They will leave all other food for this. Every meechanic should cut the fine, short grass that grows around the house or yard, cure it, and store it away for winter use, if he would please the inhabitants of the poultry house, and it would improve the appearance of his dooryard as well as furnish toothsome food for his fowls.

The next question in order of special interest to the poultry grower is as to what kind of a house does he need. Well, that depends upon what you want to do. If you want to keep only a few fowls for your own use and pleasure, then you will spend as much for beauty and ornament as you do for real use, only remembering that twelve fowls require about a twelve foot square room. The cheapest and most convenient poultry house that we have ever seen was built of 3x4 joist for a frame and covered with matched boards. The roof and walls were covered

with tarred paper, and when dressed with a coat of coal tar, was rendered entirely impervious to the atmosphere or storm, and will last for many years. They were built about ten feet wide, shed roof, the front posts about seven feet high, the back posts about five feet high, the front facing the south, and lighted with one common size window about every twelve feet. Most of our modern poultry houses have too much glass, giving too much heat at midday and too much cold at midnight. The extremes are too great even with the above described windows. They should be protected by tightly fitting shutters on cold winter's nights.

The most important matter in connection with your poultry house is ventilation. No animal on your farm needs so frequent a change of air as your poultry. Some persons advocate taking the impure air from the bottom and others from the top of the house. We do not think it makes much difference which method you adopt, if you have your arrangement under perfect control and easily regulated. Some poultrymen prefer a ground floor, others prefer a board floor, and others still prefer a cemented floor. For ourselves, we prefer a tight board floor for our house, with a chance for the chickens to get at the ground through a run into the yard, if they desire to. The advantages of the tight board floor are, it can be kept clean and dry. Dampness is death to young chicks. You can cover it with sand or other absorbents, as you wish. Your chickens are entirely protected from rats, skunks or weasels. The cemented floor has these advantages, but it costs three times as much as the board floor. Such a house as I have described will cost about one dollar and fifty cents per running foot. If you can perform the work yourself, you can reduce the cost one-third. We have seen these houses built nearly two hundred feet long, and

divided into separate apartments of about twenty feet in length by wire netting. If you have an old building that you wish to convert into a poultry house, you had better fumigate it well by burning saltpetre and sulphur, and then ceil up the inside tightly with matched boards, giving a smooth surface for your paint or whitewash.

The one great enemy to your chickens, young or old, is vermin. Of these there are two kinds. It is as natural for poultry to generate or breed vermin as it is for them to eat, and many a fine brood of fowls is rendered entirely useless by these pests of the hen-house. What are the remedies or disinfectants? Well, we prepare our nests for setters or layers as follows: We put a little salt hay into the box after saturating it well with kerosene oil, then we fill the boxes as full as is necessary with pine sawdust or shavings. These are excellent disinfectants and absorbents as well. Then we occasionally sprinkle the boxes with dry sulphur or carbolic acid. We use a great deal of carbolic acid about our nests and roosts. We give our fowls the means to take a dust bath in coal ashes or road dust, which is equally as good, and then, as often as twice a year, we fumigate our houses by burning sulphur and saltpetre in them with the doors and windows closed tightly. No vermin can live one minute in that sulphurous odor.

The next question that will arise in the minds of those contemplating this business prospectively is, will it pay? after doing all this, will it pay? We think it will; taking one year with another, we think it will pay you better than any other industry connected with farming, with the same amount of capital invested. If any man tells you he can make a profit of four or five dollars per year on every hen, and forty dollars apiece on every duck, you may make up your mind that he has a secret that the ordinary

farmer does not possess. But we feel very confident, after keeping an account with our poultry yards for some time, that when grain is worth sixty cents a bushel, you can make poultry for about seven or eight cents a pound, and eggs for about ten cents per dozen, giving you from one dollar and fifty cents to two dollars profit on every fowl, if you manage shrewdly and economically. In this calculation we reckon the manure as compensation for your labor.

Is it profitable to raise ducks? Of this you must be your own judge. All that we have said in regard to chickens will hold true in regard to ducks. They need the same treatment and attention as chickens. They need a little more feed. They will eat more. But they do not need any more water than chickens. They will do better on close confinement than chickens. If you have a good market, try the ducks. The Pekin duck is our favorite.

How about turkeys? Well, I should not touch them until they are well cooked and on the table. There is no profit in raising turkeys in Essex county as a business, and they are too costly an ornament for the ordinary farmer.

THE KITCHEN GARDEN.

ESSAY, BY M. B. FAXON, OF SAUGUS.

It seems as if enough had already been said and written urging every farmer to have a kitchen garden separate from his crops which are grown for sale; but observation will show that not one farmer in ten does have a garden that is entitled to be called such in every sense of the word. It is my intention in this essay to try and explain

what can be raised in a garden of suitable size to supply a family of ten persons, and what such a garden will cost.

A garden containing one acre, and even less space, will amply supply ten persons with all the luxuries of the season, and as most farmers can spare that amount of land as well as not, we will take one acre as a basis.

In order to cultivate vegetable products in a satisfactory way, proper attention must be given to the preparation of the soil. Having selected the location, the first step is to see that the ground is properly drained, so that all surplus and stagnant water which may accumulate can pass freely away. After this has been effected, the ground should be trenched as deep as the nature of the soil will admit, and thoroughly enriched with plenty of good manure.

Our acre is now ready to plant, and we will say that it is April 1st.

Suppose the piece to be oblong in shape, say one hundred feet wide by four hundred and thirty-six feet long; which divided into rows will give one hundred and nine rows, each row one foot wide, (that is, the surface upon which the seeds or plants will be placed), and one hundred feet long, with three feet between each row, ample space for horse cultivation.

I will now mention the varieties of vegetables suitable for the kitchen garden, with short hints for their culture; leaving the number of rows planted of each sort, date of planting and ripening, yield, etc., for a concise table at the end of the essay.

Peas.

The pea comes earliest to maturity in light, rich soil. For general crops, a deep loam or a soil strongly inclining to clay is the best; for early crops, mild manure, such as leaf-mould, should be employed. Plant as early as the

weather will permit, in well-prepared soil, and cover two or three inches deep; if the surface of the ground should become "crusty," a good raking just as they break ground will be very beneficial. For a continuous supply during the season, make plantings from early in April until the last of June; then sowings should be discontinued until the middle of August, when an extra early sort (Bliss's American Wonder is good for this purpose) will sometimes produce a good crop. For first early, Bliss's American Wonder and Early Daniel O'Rourke will be found both prolific and of good quality; for general crop, McLean's Advancer, Yorkshire Hero and Champion of England still lead. One quart of peas will plant one hundred feet of drill.

Beans.

Under this head I shall describe two varieties, Dwarf or Bush and Pole or Running.

Dwarf or Bush Beans, although more hardy than Pole Beans, should not be planted before settled mild weather. They do best in warm, light soil, but will flourish in almost any soil or situation, unless it be shaded or very wet. Plant in drills three to three and one-half feet apart, and, for thickness in the row, one quart will plant about one hundred feet of drill; cover two inches deep. Never disturb the vines when moist, or the pods will become rusty. For succession, plant from early in May until the last of August. Golden Wax, Dwarf Horticultural and Early Long Yellow Six Weeks are the cream of the dwarf varieties for snap beans; Dwarf Horticultural is also an excellent shell bean.

Pole or Running Beans, as a class, are less hardy than the Dwarfs, and are not usually planted so early in the season. From the 20th of May until the 1st of June is about the right time. The hills should be three or three

and one-half feet apart each way ; three good plants in a hill are enough, as these beans need plenty of light and air to do well ; cover two inches deep. The poles should be firmly set before the beans are planted, and the earth slightly raised around them. The maturity of some of the later sorts will be hastened by nipping off the runners when they have reached four or five feet in height. One quart will plant about one hundred and fifty hills. Limas and Seivas, being very tender, should not be planted before the ground is warm and mellow, say about June 1st. Large White Lima, Seiva or Small Lima and Pole Horticultural are the best shell beans, while Indian Chief Pole is an excellent snap bean.

Sweet Corn.

Corn requires a good soil and a warm situation. Commence for first early by planting the early varieties about May 1st ; and if a continuous supply is wanted all summer, make plantings about two weeks apart from May 1st until the last of July, first planting early varieties, then later ones. Plant in rows three feet apart, and make the hills about the same distance apart in the rows. Five kernels in the hill are plenty. Cover about one inch deep for early, and a little deeper for late ; thin to three plants in a hill. The following varieties are first-class in every respect : early varieties, Extra Early Marblehead, Early Minnesota and Early Crosby ; for general crop, Potter's Excelsior, Burr's Mammoth and Stowell's Evergreen. One quart will plant about one hundred and fifty hills.

Beets.

The soil best suited to the beet is a deep, light and rich sandy loam. For early beets, the seed should be sown about the middle of April, or as soon as the ground is in good working condition, in drills twelve to fourteen inches

apart, and thinned to ten inches apart in the drills. For winter crops, the 1st of July is about the right time to plant, perhaps a little earlier; have the drills the same distance apart as for early beets, but do not thin to more than four or six inches apart in the drills, as, the weather being warmer, they will grow as well at this season as early ones grow in April thinned to ten inches apart. Cover the seed one inch deep. Early Bastian and Dewing's Early Turnip are the standards for early and late crops. Beet tops are very popular as greens, being very tender, and when cooked are preferred by many to spinach or dandelion. One ounce will sow fifty feet of drill.

Cabbage.

All of the varieties are propagated from seed sown annually. For early use, sow about February 15th, in the hot-bed, green-house, or in a box in a sunny window, covering the seed about one-half of an inch deep; the plants will be ready to set in the open ground about April 20th, before which time they should be transplanted, in order to make them stocky. Cabbages grow best in a rich, loamy soil, which should be prepared by very heavy manuring (as high as twenty cords per acre being used with profitable results by market gardeners); lap two furrows together about three and one-half feet apart, and beat them down nearly level with the fork. Set the plants twenty-two to twenty-four inches apart, according to the quality of the land. It takes about six thousand plants to set an acre. A handful of wood ashes thrown into the forming heads will not only keep off the cabbage fly, but will also assist the growth of the plants to a considerable extent. For late crops, sow from the 1st to the 20th of June in the field, or in beds so as to transplant. If planting the seed in hills, thin to the same distance as for early; if

transplanting the plants from the seed-bed into the field, set the same distance (many set thicker, but just as much cabbage can be raised from the same piece of land by raising large heads as small ones, with less labor of cultivation). Late cabbages do not require as strong land as early ones. Henderson's Early Summer, Fottler's Improved Brunswick and Stone Mason Drumhead are all good varieties.

Carrots.

A good, light and well-enriched sandy loam which is very finely pulverized will grow carrots to perfection. For early crops, cover one-half of an inch deep, and thin to six inches apart in the rows; for late, cover three-fourths of an inch, and thin to four inches. A good strain of Danvers Half-Long Carrot is best for general use. Carrots should be planted about May 1st.

Cucumbers.

Cucumbers in the open ground should be planted about June 1st, in hills six feet apart, and thinned to three plants in a hill. Manure used should be old and fine; or still better, plant on land from which a crop has been taken which was heavily manured for that crop. Plenty of water is the most important point. A sprinkling of dry plaster will keep off the striped bug. Improved White Spine and Long Green Prickly for the table, and Boston Pickling for pickles, are leading kinds.

Lettuce.

Lettuce is well known as furnishing, among its varieties, the best vegetable of the salad kind grown in the open garden; it is also grown largely under glass, hundreds of acres being devoted to growing this crop in this country alone. It requires a rich, moist soil, and, to be crisp and

tender, needs to be grown in cool weather. Plant in rows, and cover the seeds one-fourth of an inch deep, and thin out the plants to twelve inches apart. If plants are used, set them twelve inches apart. Lettuce plants are grown about the same as cabbage plants, a full description of which was given in the first part of this essay. For New England, the Black Seeded Tennisball for solid heads and the Boston Fine Curled for a curled lettuce, are both very fine.

Onion Sets.

Sets are small onions which produce early plants for salad or large bulbs for table use, much earlier than they could be grown from seed. They should be set out about April 20th and covered two inches deep. When the tops have died (about the middle of July), the sets should be gathered and spread thinly, in a dry, cool place. I especially recommend them for small gardens, and those wishing a few early onions. There are White, Yellow and Red Onion Sets, but the White are by far the best, being of good quality and mild flavor.

Parsnips.

Sow as early in the spring as the weather will permit, in rows, covering the seed one-half of an inch deep; when well up, thin out to five or six inches apart in the rows. Parsnips are improved by frost; and it is a usual custom to take up in the fall a certain quantity for winter use, leaving the rest in the ground until spring, to be dug as required. Aside from the value of the parsnip as a table vegetable, it is one of the best roots for cultivation for farm purposes, furnishing a very nourishing food, particularly adapted to and relished by dairy stock. The Long Smooth White is the favorite for general use; roots long and smooth, very productive, and an excellent keeper.

Potatoes.

The potato can be grown with varying success on soils of all kinds and in all conditions of fertility. Pasture lands or new land with the turf freshly turned, produce the most abundant as well the most certain crops. On heavy soils, and land that has been long under cultivation, it is apt to be diseased and of inferior flavor. Plant in rows three feet apart, so as to cultivate with horse, and drop the seed ten or twelve inches apart in the rows; cut to two eyes, with a good amount of the potato around same, so that the young plants may have plenty of nourishment until the roots get well established. Phosphate will grow a good crop of smooth, fine-flavored tubers, when barn-yard manure would cause them to become diseased. Cultivation should commence as soon as the young plants are fairly above the surface of the ground, and continue until the appearance of the blossoms, when no further attention will be required till harvesting time. At each successive hoeing, gather the earth about the plants, adding a little each time, for support, and also to develop the side shoots. When the bugs arrive, use Paris green; one or two applications will destroy them. I consider the following varieties the best for general cultivation, and in the order named: Early Beauty of Hebron, Early Rose, Clark's No. 1 and Pearl of Savoy.

Radish.

The radish will thrive best in rather light soil, and to be crisp and tender, needs to be grown quickly. For early spring use, sow in hot-beds about January, and every ten days or so make fresh sowings. For summer use, sow in drills in the open ground as early as possible (the ground needs to be pretty dry and warm), and thin to two or three inches apart; if a continuous supply is wanted

through the season, make sowings as above every ten days or two weeks. The French Breakfast and Early Long Scarlet are both excellent sorts.

Squash.

The squash is a tender annual, and should not be planted until all danger from frost is passed, and the ground is warm and settled; as aside from the tender nature of the plant, the seed is liable to rot in damp, cool weather. The hills should be nine feet apart each way, and thoroughly manured. Slightly elevate them, and on this place seven or eight seeds, so as to have plenty for the bugs. The bush varieties, such as Summer Crookneck, White Bush Scollop, etc., may be planted a little nearer together. Press the seeds down firmly before covering, and cover early planted ones one inch deep, and late, one and one-half inches. Ground plaster is about as good an article as has yet been found for keeping off the bug. Plant Early Summer Crookneck and White Bush Scollop for summer use; Boston Marrow for fall; and Hubbard, Essex Hybrid and American Turban for winter.

Tomato.

Tomato plants should be set out about June 1st, in rich soil, the plants being set five feet apart in the rows. Their cultivation is very simple; make them very rich and keep them free from weeds seems to be about all that is required. Just before frost, take up the vines, and place them in the cellar with plenty of earth around the roots, and what tomatoes have not been picked (that are fully grown) will ripen. The favorite varieties are Acme, Livingston's Perfection, Cardinal and Emery; I should have said the above four varieties are favorites, as there are so many good tomatoes that it is very difficult to make a selection.

Turnip.

The turnip is propagated from seed, and should be planted where the plants are to remain, as they do not succeed well when transplanted. Sow for early crops as soon as the ground can be made ready in the spring, in good, rich soil, in rows three feet apart, and thin out according to the variety. The principal trouble in planting turnips is that of getting them so thick that it makes a great deal of labor in trimming. The Swede turnips are planted later, about June 1st; while the Purple Top varieties may be planted either early or late, and as late as August 15th, a good crop of them may be secured. The Sweet German turnip is an excellent sort for winter, and should be planted about June 20th to July 1st for the best results. This turnip is also called the Cape turnip, and is raised extensively on Cape Cod, Mass.

Farm Account.

The following table gives an exact account of my garden of one acre; showing dates of planting and harvesting, cost of production, etc. It will be remembered that we divided this acre into one hundred and nine rows, each row one hundred feet long:

NAME OF VARIETY PLANTED.	No. rows planted, each variety.	Date of Planting	Began H'vest- ing.	Finished H'vest- ing.	Total Yield.	Amount of seed used.
Pea, Early Daniel O'Rourke,	1	April 13	June 20	June 25	2 1-2 bu. pods.	1 quart.
Pea, Bliss' American Wonder,	1	" 21	" 27	July 4	2 bu. pods.	1 quart.
Onion Sets, White,	2	" 21	July 19	Sept. 20	2 bu. onions.	2 quarts.
Pea, Abundance,	1	May 4	" 19	July 19	1 1-2 bu. pods.	1 pint.
Pea, Everbearing,	1	" 4	" 13	" 20	2 bu. pods.	1 pint.
Carrot, Danvers,	1	" 4	Aug. 15	Sept. 30	2 1-2 bushels.	1 ounce.
Parsnip, Long White,	10	" 5	Sept. 15	Oct. 10	28 bushels.	1-2 pound.
Sweet Corn, Early Cory,	1	" 14	Aug. 1	Aug. 15	145 ears.	1-2 pint.
Potato, Early Beauty of Hebron	60	" 24	" 20	Sept. 25	92 bushels.	5 bushels.
Cabbage, Stone Mason,	5	" 25	Sept. 10	Oct. 1	200 good heads.	400 plants.
Pea, Stratagem,	1	" 27	July 30	Aug. 7	1 1-2 bu. pods.	1 quart.
Bean, Dwarf Golden Wax,	1	" 27	" 21	" 23	bu. pods.	1 quart.
Squash, Summer Crookneck	1	" 27	Aug. 18	Sept. 30	68 squashes.	1 ounce.
Sweet Corn, Moore's Concord,	2	" 29	" 25	" 14	252 ears.	1 pint.
" Burr's Mammoth,	2	" 31	Sept. 7	Oct. 1	210 "	1 pint.
" Stowell's Evergreen,	2	" 31	" 5	" 6	275 "	1 pint.
" Black Mexican,	2	" 31	Aug. 20	Sept. 11	250 "	1 pint.
" Early Minnesota,	2	" 31	" 28	" 19	280 "	1 pint.
Tomato, Emery,	2	" 31	" 25	Oct. 4	7 bu. ripe, 3 bu. green	2 doz. plants
Cucumber, White Spine,	1	June 2	" 9	Sept. 23	300 cucumbers.	1 ounce.
Beet, Dewing's Turnip Blood,	4	July 2	Oct. 1	Oct. 10	8 1-2 bushels.	1-4 pound.
Turnip, Purple Top,	5	" 10	Sept. 25	" 10	17 bushels.	1 4 pound.
Pea, Bliss' American Wonder,	1	" 15	" 1	Sept. 5	1 1-2 bu. pods.	1 quart.

Summary.

Total cost of seeds and plants,	\$10.93
“ “ manures,	30.00
“ “ planting,	20.00
“ “ summer cultivation,	15.00
“ “ harvesting,	10.00
Interest and taxes,	6.00
	<hr/>
	\$91.93

You will notice that there is no winter squash in the list, but families that wish for it can substitute winter squash for potatoes or parsnips; in other words, change the list to meet your own wants.

The above quantities of vegetables will supply a family of ten persons one year. Now if \$91.93 will supply ten persons with vegetables for one year, then one-tenth of \$91.93 must supply one person one year; and it seems to me that \$9.19 for vegetables for one person one year is cheap enough.

STATEMENT IN REGARD TO SHEEP
HUSBANDRY IN ESSEX COUNTY.

To the President of the Essex Agricultural Society:

You will find enclosed my Sheep Report for 1886. You are at liberty to use it in any way you see fit.

These sheep were bought at the Watertown market and were culled from flocks from Maine, Canada and Vermont. Some of them were old and diseased, in consequence I lost 30 head by disease, and 12 were killed by dogs. The increase from the 400 was about 500. I have no doubt that a flock of fine young ewes would pay a profit of \$4 per head.

Very respectfully, your obedient servant,

W. W. FOSTER.

SHEEP ACCOUNT.

Dr.	400 sheep, bought in January, 1886, at a cost of	\$1700.00
	50 tons meadow hay, at \$10 per ton,	500.00
	100 bushels corn, at 60 cts. per bushel,	60.00
	100 bushels oats, at 40 cts. per bushel,	40.00
	Care of sheep, one man one year, at \$30 per month,	360.00
	Pasturage,	100.00
	Shearing,	40.00
	Total,	<u>\$2800.00</u>
Cr.	350 lambs, average price \$4,	\$1400.00
	200 sheep, " \$4,	800.00
	2200 lbs. wool, at 21 cts.,	462.00
	40 pelts, at \$1,	40.00
	50 cords manure, at \$5,	250.00
	300 sheep and lambs on hand,	<u>1200.00</u>
	Total,	\$4152.00

Peirce Farm, Topsfield, Jan. 1, 1887.

REPORT OF THE COMMITTEE ON ESSAYS, REPORTS AND STATEMENTS.

The Committee designated to award premiums for Essays, Reports and Statements have taken pleasure in the performance of their duties, because the papers submitted to them this year have seemed to them to be specially meritorious, and to fill the conditions imposed by the Society. Papers upon agricultural topics contain necessarily more or less matter which is not new, and as they

are written usually by persons who are not professional authors, they are not always "presented in a form worthy of publication," as required by the rules. But the Committee had little chance for criticism in this respect the present year. They are gratified to be able to make this statement, because they believe that good essays and good reports are the most attractive features of the "Transactions." They hope to receive more essays another year, as they are confident that many members of the Society could furnish, from their large experience and from their thought, many facts and suggestions which would enrich the Society's annual publication.

The Committee have awarded the first premium of \$15 to O. S. Butler, of Georgetown, for an essay entitled "Poultry on the Farm." This is an excellent paper, full of practical matter, and entertaining suggestions which seem to be pertinent and useful. The subject is a good one, and is receiving more and more attention each year.

The second premium of \$10 has been given to M. B. Faxon, of Saugus, whose essay on "The Kitchen Garden" will be read with interest. The ideal garden which he lays out is, as we understand, substantially a description of the author's own garden in Saugus.

In the matter of reports, the Committee's attention was given to an excellent report on "Ornamental Trees," by Francis H. Appleton, of Peabody, and to him they awarded the first premium of \$10. To some very utilitarian minds this subject may seem fanciful, and they may consider that those who assign it a place of little or no importance are not mistaken. But those who think that pleasant surroundings, agreeable prospects and grateful shades have a value as real and as measurable as anything else, will agree with the Committee in placing it in the front rank of topics for discussion.

Another very excellent report was submitted to the Committee, on "Root Crops," written by B. F. Huntington. If there could be two best reports, we might rank this with the other. The author has evidently expended much time and money in visiting the farms of Essex county, and he brings in good accounts of their condition and what has been done thereon during the past year. All practical cultivators will peruse this report with avidity, and will derive much information and many suggestions therefrom. Mr. Huntington has been awarded the second premium of \$8.

The third award of \$6 has been made to Joseph How, of Methuen, for a report on "New Apples and the Codlin Moth." Both of these subjects are important to farmers and the public, and perhaps no one has given more attention to them for many years than Mr. How. The results of his observations and studies are given in this report, which the Committee are pleased to present to the members of the Society.

The Committee made no awards for best statements.

For the Committee,

GILBERT L. STREETER, *Chairman*.

G. L. Streeter, Daniel E. Safford, N. M. Hawkes,
Charles P. Preston, David W. Low—*Committee*.

IN MEMORIAM.

Your committee appointed by the Society to prepare appropriate notice of the members of the Society who have died during the past year, to be published in the Transactions, would report that the list of members in each town and city has been sent to the Trustee of the Society, representing each town or city, for revision, and requesting from them brief notices of the deaths that had occurred in their place, from which, or other sources, the following is submitted :

ASA A. ABBOTT, of Andover, died Jan. 11, 1886, aged 87 years. He was a prominent citizen, having represented the town in the State legislature several terms, and filled for many years the offices of Selectman, Town and Parish Assessor, and other minor offices, and for over twenty years past took much interest in this society.

AARON DODGE, of Beverly, died Feb. 3, 1886, aged 73 years, 6 months. He was proprietor of a grist mill for forty years. He held several town offices, the boards of Selectmen and Overseers of the Poor being the most prominent. He was a member in 1850.

SAMUEL D. G. STANLEY died in 1886, aged about 75 years. He became a member in 1850.

"THOMAS W. HAZELTINE, of Bradford, died Sept. 2, 1886, aged 67 years. He was a successful farmer, and a member of this Society for 25 years, serving on many of its committees with credit to himself and our society. He had accepted places on two committees, and virtually died with his harness on."

GEORGE W. ORDWAY, of Bradford or Haverhill, died Sept. 26, 1886, aged 51 years. He was a shoe manufacturer, and joined our Society in 1855.

JAMES LOURIE, of Danvers, died Oct. 25, 1886, aged 65 years. He became a member in 1876.

LEVI MERRILL, of Danvers, died in September, 1886. He became a member in 1857.

DANIEL RICHARDS, of Danvers, died in November, 1886. He became a member in 1858.

WILLIAM H. MEARS, of Essex, died May 27, 1886, aged 73 years. He became a member in 1859. He was a farmer and a manufacturer of codfishing lines, with an excellent reputation of fair dealing.

JOHN PERKINS, of Essex, died March 27, 1886, aged 73 years. He became a member in 1871. He was a successful merchant in the fishing business of Gloucester, where he resided several years, from which he retired to become a successful farmer at his later home in Essex.

IRA HARDY was born in a part of Bradford now Groveland, where he has always resided. He died suddenly, May 26, 1886, aged 78 years, 5 months. He owned a small farm, and was interested in his work upon it. He became a member of this society in 1865.

DANIEL ATWOOD resided near the Merrimac river in Groveland, and died Oct. 6, 1886, aged 83 years, 8 months. He joined this Society twenty-five or thirty years ago, and took an interest in its work.

JOHN J. BABSON, of Gloucester, died April 13, 1886, in the seventy-seventh year of his age. He was its historian, and its school educator, devoting a lifetime to the welfare of its Schools, serving a great many years as Superintendent, or on the School Committee as chairman, and in many ways proved himself a public benefactor. He was called upon several times to serve as Representative to the State Legislature, and served one or more terms as Senator. He was for many years cashier of the Gloucester Bank. He was much interested in horticultural

ture, serving the Cape Ann Horticultural Society as president several years. He became a member of this society in 1869, and served as one of its Trustees in 1870.

ISAAC PATCH, of Gloucester, died July 4, 1886, aged 85 years. He was a very successful farmer, and at his death owned a large farm in Hamilton, and one in Gloucester. He joined this Society in 1855, and served as one of its Trustees from 1864 to 1870.

DANIEL T. BABSON, of Gloucester, died Oct. 4, 1886, aged 72 years. He was a man always interested in milch cows and the cultivation of small fruits, as a relaxation from his business as painter. He visited our Fairs yearly, and attended the last one at Newburyport this year. He became a member in 1871.

AARON W. BRAY, of Gloucester, died June 21, 1886, aged 55 years. He was the manager of the New England Halibut Company at the time of his death. He joined this Society in 1872.

GEORGE JAMES, of Gloucester, died Feb. 14, 1886, aged 68 years. He was greatly interested in horses, and kept a livery stable. He became a member of this Society in 1870, has served on its committees, and has taken premiums for horses and colts at various times.

ROBERT FEARS, of Gloucester, died Aug. 27, 1886, aged 79 years. He was a sail-maker by occupation and business until he retired. He was a Director of the First National Bank, and always an active and successful business man. His interest in agriculture was mostly confined to his garden. He became a member of our Society in 1872.

CHARLES W. DENNISON, of Gloucester, died Sept. 23, 1886, aged 80 years. He was a retired sea captain, and devoted his time, aside from looking after what business interests he had, in doing good to others in a quiet way. He became a member in 1872.

JOSEPH P. GARDNER, of Hamilton, died Oct. 16, 1886, about 26 years of age. He joined our Society early in the year, and being a young farmer of ability, gave promise of usefulness to the Society, of which his early death has deprived us.

"JOHN P. GILMAN, of Haverhill, died April 13, 1886, aged 59 years. He was an active business man, formerly a shoe manufacturer and afterward a hat manufacturer, and also largely interested in real estate."

"ISRAEL K. JEWETT, of Ipswich, died suddenly Oct. 26, 1886, aged 87 years, 8 months. Before the advent of the railroad, he drove an express team from Ipswich to Boston, which railroad competition caused him to abandon, and for fifty years past kept a grocery store in Ipswich. The deceased was a successful business man and prospered in whatever he undertook, being a man of strict integrity and always recognized as a safe man with whom to deal." He became a member in 1869.

JACOB RHODES, of Lynn, died in 1886. He became a member in 1872.

JAMES B. KNIGHT, of Newbury, died in 1886, aged 75 years. For forty years or more, he was engaged in the grain business at the tide mill at Knight's Crossing, on the Eastern railroad, and later at the City Steam Mills, Newburyport, where he had an extensive business. Aside from this, he took an active interest in farming, having raised some of the largest crops of English hay and potatoes ever raised in that town. At his death, his herd of milch cows was among the best in that section of the county. He became a member in 1879.

JOHN F. KIMBALL, of North Andover, died the 1st of September, 1886.

EUNICE L. SMITH, of Newburyport, a member of this Society, died July 7, 1886, at the age of 51 years. She

was a farmer's wife, and always ready for her part in life.

CHARLES H. IRELAND, of Newburyport, died Sept. 15, 1886, aged 70 years. He was a large real estate owner, and well known to the whole community. He joined this Society in 1868.

JOHN SUMNER, of Newburyport, died Aug. 29, 1886, aged 59 years. He was a stove dealer, and took an active part in the Society's exhibition of 1885. He joined the Society in 1856.

WILLIAM BRITCHER, of Newburyport, died June 15, 1886, aged 73 years. He was a market gardener for many years, and a very successful one. He became a member in 1856.

"Major LEWIS ALLEN, of Peabody, died Nov. 15, 1886, at the ripe old age of 92 years, 3 months, 20 days. While he had been an active business man all his life, he made his home on his farm, and so long as his health allowed was an actively interested member of the Essex Agricultural Society, being one of its oldest members, and on its Board of Trustees from 1846 to 1857, and Vice President 1857 to 1870. He was called to the offices of selectman and assessor, representative in the General Court, trustee of the Peabody Institute, captain of the Danvers Artillery and later major for five years, when he resigned. He was also county commissioner; and his name will also be found in numerous positions of other important trusts. He was an energetic farmer, combined with his other business; and to the active part which he took in that natural occupation, he was undoubtedly largely indebted for his healthy and well-balanced mind and body which he possessed until so near the last of his long life. His manly form and bright, intelligent countenance were always conspicuous at our Fairs; and well does the writer remember his thoughtful and interested remarks concerning our useful

Society, at one of the last autumn meetings at which he was present."

"On September 22, 1886, passed away MALACHI F. BATCHELDER, at the age of 74 years and 5 months, after a long and painful illness, a respected citizen of Peabody, of modest and retiring disposition. He was one of the best market-gardeners in his vicinity, as the variety of his crops and his frequent success in competition for prizes at our County Shows well proves. His crops were always carefully and well cultivated, and in return they commanded the highest market prices. His fields were extensive and yielded largely per acre. He was an exponent of an industrious farmer, with perseverance and good judgment combined, and his example and influence will be missed by all who knew him, not less at the annual Fairs of the Essex Agricultural Society than elsewhere." He joined this Society in 1871.

JOSEPH HALE, of Rowley, died March 13, 1886, aged 65 years. He was one of the foremost men of the town, serving on its Board of Selectmen many years, and a prominent worker in the local Farmers' Club. He was interested and active in the affairs of our County Society, joining it in 1870, serving as a Trustee in 1871 and 1877.

JOSHUA FOSS, the oldest resident of Rowley, died Dec. 25, 1886, aged 87 years.

MAURICE BIRMINGHAM, of Salem, died March 25, 1886, aged 65 years. He was a regular attendant at our Fairs, and will be missed there by many friends. A member in 1879.

WILLIAM S. MESSERVEY, of Salem, died Feb. 19, 1886, aged 73 years, 6 months. In early life he was in business in the West. At one time he was a Delegate to Congress from the Territory of New Mexico, and at another time Secretary and Acting Governor. In 1854 he returned to

Salem, and in 1856 and 1857 was its Mayor. He was a member of this society in 1856.

BENJAMIN S. NEWHALL, of Salem, died April 3, 1886, aged 79 years, 7 months. He was clerk of the contractors who built the Eastern Railroad, and was afterwards a farmer in Danvers several years. He became a member in 1853.

JOSEPH PULSIFER died in Salem Oct. 19, 1886, aged over 88 years. He was born in Ipswich, and went to Salem at the age of 14 years to learn painting, and led a life of industry, economy and honest dealing, and earned success. He was one of the founders of Barton Square Church, and Naumkeag Fire Club, of Salem, and the pioneer in manufacturing painted carpets. He joined this Society in 1839.

ELBRIDGE MERRILL, of West Newbury, died in 1886, aged 72 years. "Deacon Merrill" has been one of our oldest and most valued members. For more than twenty years he has attended our annual gatherings, serving as trustee for several years, always with credit to himself and the society. All who knew him mourn his loss.

GEORGE G. PEIRCE, of West Newbury, died in 1886, at about 25 years of age. He joined our Society in 1882, and was awarded two premiums this year for fruit crops. He was a young man of much promise, and was loved and esteemed by all who knew him.

MOSES HILL, of Revere, a non-resident member of the Society, has died in 1886.

Again the busy reaper, Death, has passed through our county, gathering for the better land a bountiful harvest during the year, from the members of this society. One from every thirty-five has been taken home; in Gloucester, one from every thirteen. Those who have left us have contributed each in their own way to the success and

progress of our society and to a greater or less extent according to their ability or opportunity, leaving regret for their loss. The Society extends to all who mourn the loss of those near and dear to them, its sympathy in their affliction.

DAVID W. LOW,
For Committee.

Dr. GILBERT L. STREETER, TREAS., IN ACCT WITH THE ESSEX AG'L SOCIETY. Cr.

1885.	
To balance of previous account,	\$956 80
To Bank Dividends for October,	389 30
To State Bounty received,	600 00
To Cash received from Committee in charge of Annual Exhibition,	42 00
To State Tax on Bank Stocks refunded,	188 76
To Cash received for new members,	123 00
To Account of the Treadwell Farm,	300 00
To Bank Directors for April,	407 55
To amount of unclaimed premiums,	95 50
	<hr/>
	\$3,132 91
	<hr/>
	\$3,132 91

1885.	
By amount of Premiums and Gratuities awarded by the Trustees,	\$1604 25
Bills paid for Printing and Advertising,	301 49
Amount paid to Salem Athenaeum,	25 00
Rent, Postage and Printing, paid for Institute meetings,	24 25
The settlement with C. P. Preston, Secretary,	219 77
The Secretary's account,	274 51
The Treasurer's account,	51 68
Balance,	601 96
	<hr/>
	\$3,132 91

Funds belonging to the Society, October, 1886.

10 shares in National Hide and Leather Bank, Boston,	\$1101 87	<i>Amount brought forward,</i>	\$13,905 01
3 shares in National Revere Bank, Boston,	377 62	Funds reported last year,	14,289 85
18 shares in First National Bank, Salem,	1914 66	Loss,	<hr/>
18 shares in Salem National Bank, Salem,	2060 00		\$384 84
42 shares in Asiatic National Bank, Salem,	1281 25		G. L. STREETER, Treasurer.
12 shares in Mercantile Bank, Salem,	1226 50		
23 shares in Merchants' Bank, Salem,	1189 50		
5 shares in First National Bank, Danvers,	375 00		
8 shares in National Exchange Bank, Salem,	800 00		SALEM, Jan., 1887.
16 shares in Warren National Bank, Peabody,	1595 40		The above account has been examined this day, and found correctly cast
15 shares in South Danvers National Bank, Peabody,	1441 25		and properly vouched and the funds on hand correctly reported.
Cash on hand,	601 96		JOS. H. PHIPPEN.
	<hr/>		
	\$13,905 01		
	<hr/>		
	<i>Amount carried forward,</i>		
	\$13,905 01		

LIST OF PREMIUMS AWARDED IN 1886.

FAT CATTLE.

J. P. Little, Amesbury, for pair oxen, first premium,	\$10 00
J. P. Little, Amesbury, for pair oxen, second premium,	8 00
Furmer H. Greeley, Salisbury, for pair oxen, third premium,	4 00

BULLS.

Francis Gulliver, Andover, for Jersey bull, over two years old, first premium,	10 00
H. H. Hale, Bradford, for Jersey bull over two years old, second premium,	5 00
Ben : Perley Poore, West Newbury, for Short Horn bull over two years old, first premium,	10 00
Wm. C. Cahill, Danvers, for Ayrshire bull under two years old, second premium,	3 00
H. H. Hale, Bradford, for Jersey bull under two years old, first premium,	5 00
D. A. Massey, Danvers, for Ayrshire bull calf, "Queer," No. 8821, A. B. A. R., instead of 882 as printed in report, first premium,	2 00

MILCH COWS.

T. N. Cook, Newburyport, for Milch cow, first premium,	10 00
T. N. Cook, Newburyport, for butter cow, first premium,	10 00
T. N. Cook, Newburyport, for butter cow, second premium,	4 00
Jere. Cashman, Newburyport, for best Milch cow, special premium,	15 00
Jere. Cashman, Newburyport, for Milch cow, second premium,	4 00
Francis Gulliver, Andover, for Jersey cow, first premium,	10 00

Francis Gulliver, Andover, for Jersey cow, second premium,	4 00
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HEIFERS—FIRST CLASS.

Francis Gulliver, Andover, for Jersey in milk, second premium,	4 00
Francis Gulliver, Andover, for Jersey calf, first premium,	4 00
D. A. Massey, Danvers, for Ayrshire calf, first premium,	4 00
D. A. Massey, Danvers, for Ayrshire heifer, second premium,	2 00

HEIFERS—SECOND CLASS.

P. A. Perkins, Newbury, for three year old Grade Ayrshire in milk, first premium,	10 00
O. F. Lewis, Salisbury, for three year old Grade Jersey in milk, second premium,	4 00
E. S. Toppan, Newburyport, for three year old Short Horn, first premium,	4 00
Elbridge Tenney, Newbury, for twenty-six months old Grade Jersey, second premium,	2 00
T. K. Bartlett, Newburyport, for twenty months old Dutch, first premium,	4 00
J. F. Smith, Salisbury, for fourteen months old Grade Jersey, second premium,	2 00
Jere. Cashman, Newburyport, for three months old Grade Jersey Calf,	4 00

WORKING OXEN AND STEERS.

C. U. Burbank, Amesbury, oxen, first premium,	12 00
Carlton Little, Newbury, oxen, second premium,	10 00
Wm. Bryant, West Newbury, oxen, third premium,	8 00
R. T. Jaques, Newbury, steers, first premium,	10 00

TOWN TEAM.

Town of West Newbury, oxen, first premium,	20 00
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STEERS.

C. U. Burbank, Amesbury, two year old steers, first premium,	6 00
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James Noyes, Newbury, two year old steers, second premium,	5 00
Wm. H. Perkins, Newbury, yearling steers, first premium,	5 00
Edward Illsley, Newbury, yearling steers, second premium,	4 00
Mrs. M. L. Moody, West Newbury, steer calves, first premium,	4 00

STALLIONS—FIRST CLASS.

H. H. Hale, Bradford, three year old stallion, first premium,	8 00
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STALLIONS—SECOND CLASS.

C. C. Hewitt, Newburyport, four years old stallion, first premium,	10 00
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BROOD MARES.

C. N. Maguire, Newburyport, mare and foal, first premium,	10 00
E. E. Bartlett, Newburyport, mare and foal, second premium,	6 00
Frank Perkins, Newbury, mare and foal, third premium,	4 00

FAMILY HORSES.

S. P. Hale, Newbury, family horse, first premium,	10 00
John C. Tarlton, West Newbury, family horse, second premium,	6 00
Peter Holt, Jr., North Andover, family horse, third premium,	4 00

GENTLEMEN'S DRIVING HORSES.

Peter Holt Jr., North Andover, white mare, first premium,	10 00
Jere. Cashman, Newburyport, gelding, second premium,	6 00
C. U. Burbank, Amesbury, gelding, third premium,	4 00

FARM HORSES.

J. A. Illsley, Georgetown, farm horse, first premium,	10 00
J. Otis Winkley, Newburyport, farm horse, second premium,	6 00
Michael Reddy, Ipswich, farm horse, third premium,	4 00

DRAFT HORSES.

Peter Holt Jr., North Andover, draft horse, first premium,	10 00
Wm. W. Perkins, Newbury, draft mare, second premium,	6 00
John Ronan, Newburyport, draft horse, third premium,	4 00

PAIRS OF FARM HORSES.

Walter F. Dodge, Beverly, farm horses, first premium,	12 00
C. N. Maguire, Newburyport, farm horses, second premium,	8 00

PAIRS OF DRAFT HORSES.

Charles Bennett, Gloucester, draft horses, first premium,	12 00
Jere. Cashman, Newburyport, draft horses, second premium,	8 00
Jere. Cashman, Newburyport, draft horses, third premium,	4 00

COLTS FOR DRAFT PURPOSES—FIRST CLASS.

H. H. Hale, Bradford, three year old mare, first premium,	10 00
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COLTS FOR DRAFT—SECOND CLASS.

E. E. Bartlett, Newburyport, colt one year old, first premium,	6 00
A. J. Stockbridge, Rowley, yearling mare colt, second premium,	4 00
M. B. Chesley, Amesbury, two year old colt, first premium,	6 00
R. Jaques, West Newbury, two year old colt, second premium,	4 00

COLTS FOR GENERAL PURPOSES—FIRST CLASS.

O. N. Fernald, Danvers, mare colt, four years old, first premium,	10 00
F. W. Evans, Newburyport, filly, four years old, second premium,	6 00

C. C. Cook, Bradford, mare, four years old, third premium,	4 00
George H. Whipple, Lynn, mare, three years old, first premium,	8 00
Daniel Tenney, Newbury, gelding, three years old, second premium,	5 00

COLTS FOR GENERAL PURPOSES—SECOND CLASS.

Woodbury Smith, Rowley, two year old colt, first premium,	6 00
H. H. Hale, Bradford, two year old colt, second premium,	4 00
B. W. Bartlett, Rowley, one year old colt, first premium,	6 00
O. N. Fernald, Danvers, one year old colt, second premium,	4 00

SWINE, FIRST CLASS OR LARGE BREEDS.

Wm. W. Perkins, Newburyport, breeding sow, first premium,	8 00
L. P. Hale, Newbury, breeding sow, second premium,	5 00
Michael Reddy, Ipswich, Jersey red sow, first premium,	8 00
Edward S. Knight, Newbury, grade Berkshire boar, first premium,	8 00
Wm. W. Perkins, Newburyport, weaned pigs, second premium,	5 00

SWINE, SECOND CLASS OR SMALL BREEDS.

Wm. W. Perkins, Newbury, weaned pigs, first premium,	8 00
Wm. W. Perkins, Newbury, breeding sow, first premium,	8 00

SHEEP.

Matthew H. Toomey, Newbury, Coltswold sheep, first premium,	10 00
Matthew H. Toomey, Newbury, Coltswold buck, first premium,	8 00

PLOUGHING WITH DOUBLE TEAMS.

Noyes & Little, Newbury, with two yoke oxen, first premium,	12 00
Wm P. Coffin, Newbury, with two yoke oxen, second premium,	10 00
Wm. W. Perkins, Newbury, with two yoke oxen, third premium,	9 00

PLOUGHING WITH HORSES.

Chas. N. Maguire, Newburyport, with one pair, first premium,	10 00
S. F. Newman, Newbury, with one pair, second premium,	7 00
Walter F. Dodge, Beverly, with one pair, third premium,	5 00

PLOUGHING WITH THREE OR FOUR HORSES.

J. Kent Adams, Newbury, with four horses, first premium,	10 00
Frank Perkins, Newbury, with three horses, first premium,	10 00

PLOUGHING WITH SWIVEL PLOUGH.

Jonas M. Rollins, Danvers, with two horses, first premium,	10 00
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PLOUGHING WITH SULKY PLOUGH.

A. J. Stockbridge, Rowley, first premium,	10 00
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IMPROVING WET MEADOW AND SWAMP LAND.

B. H. Farnum, North Andover, first premium,	15 00
S. A. Jaques, West Newbury, second premium,	10 00

GRAIN CROPS.

J. J. H. Gregory, Marblehead, rye crop, first premium,	10 00
Oliver P. Killam, Boxford, corn crop, first premium,	10 00

ROOT CROPS.

Asa T. Newhall, Lynn, onion crop, first premium,	10 00
John H. George, Methuen, onion crop, second premium,	5 00

John H. George, Methuen, potato crop, first premium,	10 00
Stephen A. Jaques, West Newbury, potato crop, second premium,	5 00
J. E. Page, Supt. Pickman farm, Salem, cabbage crop, first premium,	10 00
Daniel Carlton, Andover, cabbage crop, second premium,	5 00
J. W. Blodgett, Saugus, mangold crop, first premium,	10 00
Walter Smith & Co., Methuen, turnip crop, first premium,	10 00
James Manning, Topsfield, turnip crop, second premium,	5 00
Cyrus K. Ordway, West Newbury, carrot crop, first premium,	10 00
Asa T. Newhall, Lynn, squash crop, first premium,	10 00

FOREST TREES.

Benjamin P. Ware, Marblehead, ornamental trees, first premium,	10 00
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STRAWBERRIES AND OTHER SMALL FRUITS.

George G. Peirce, West Newbury, strawberry crop, first premium,	10 00
George G. Peirce, West Newbury, raspberry crop, first premium,	10 00
Benj. W. Farnum, North Andover, blackberry crop, first premium,	10 00

NEW MEMBERS.

John Q. Evans, Salisbury, most new members, premium,	6 00
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ESSAYS AND REPORTS.

O. S. Butler, Georgetown, essay, "Poultry on the Farm," first premium,	15 00
M. B. Faxon, Saugus, essay, "The Kitchen Garden," second premium,	10 00
Francis H. Appleton, Peabody, report on ornamental trees, first premium,	10 00

B. F. Huntington, Amesbury, report on root crops, second premium,	8 00
*Joseph How, Methuen, report on new apples and the codlin moth, third premium,	6 00

*NOTE.—Mr. Howe is 86 years of age.

MASSACHUSETTS AGRICULTURAL COLLEGE SCHOLARSHIP.

George E. Newman, Newbury, yearly payment of 1884 award,	25 00
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OTHER AWARDS.

Awarded by Committee on Poultry,	37 00
“ “ “ “ Agricultural Implements,	47 00
“ “ “ “ Carriages,	17 00
“ “ “ “ Dairy,	24 00
“ “ “ “ Bread, Honey, etc.,	22 00
“ “ “ “ Pears,	103 50
“ “ “ “ Apples,	109 75
“ “ “ “ Peaches, Grapes, etc.,	74 50
“ “ “ “ Flowers,	56 00
“ “ “ “ Vegetables,*	158 00
“ “ “ “ Grain and Seed,†	32 00
“ “ “ “ Counterpanes and Afghans,	31 00
“ “ “ “ Carpets and Rugs,‡	26 50
“ “ “ “ Articles man’f’d from Leather	5 00
“ “ “ “ Manufact’s and Gen’l Mdse.,	20 00
“ “ “ “ Fancy Work and Art Work,	51 50
“ “ “ “ Children’s Work,	15 00
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	\$1732 75

CORRECTION.—*Gratuity, 50 cents, was awarded to M. M. Ridgeway, Newbury, for Queen of the Valley Potato, instead of \$1, as printed on 63d page. †\$5 second premium was awarded to Aaron Low, Essex, for collection of seed, instead of \$3, as printed on 65th page. ‡75 cents gratuity was awarded Mrs. S. J. Woodward, West Newbury, for woven rug, instead of 50 cents as printed on 68th page.

RECAPITULATION.

FARMS.

Awarded for Ploughing,	\$93 00
“ “ reclaiming swamp land,	25 00
“ “ Ornamental Trees,	10 00
	<hr/> \$128 00

FARM STOCK.

Awarded for Fat Cattle,	\$22 00
“ “ Bulls,	35 00
“ “ Milch Cows,	57 00
“ “ Heifers,	44 00
“ “ Working Oxen and Steers,	40 00
“ “ Town Team of Oxen,	20 00
“ “ Steers,	24 00
“ “ Horses,	162 00
“ “ Colts,	83 00
“ “ Swine,	50 00
“ “ Sheep,	18 00
“ “ Poultry,	37 00
	<hr/> \$592 00

FARM PRODUCTS.

Awarded for Grain Crops,	\$20 00
“ “ Root Crops,	90 00
“ “ Fruit Crops,	30 00
“ “ Fruits,	287 75
“ “ Dairy,	24 00
“ “ Bread, Honey, etc.,	22 00
“ “ Flowers,	56 00
“ “ Vegetables,	158 00
“ “ Grain and Seed,	32 00
	<hr/> \$719 75

MISCELLANEOUS.

Awarded for Agricultural Implements,	\$47 00
“ “ “ Essays and Reports,	49 00
“ “ “ College Scholarship,	25 00
“ “ obtaining largest number of new members,	6 00
“ “ Domestic Manufactures,	149 00
“ “ Carriages,	17 00
	<hr/> \$293 00

Total amount awarded in 1886,	<hr/> <hr/> \$1732 75
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OFFICERS OF THE SOCIETY FOR 1886-7.

PRESIDENT,

BENJAMIN P. WARE, of Marblehead.

VICE PRESIDENTS,

GEORGE B. LORING, of Salem.

J. J. H. GREGORY, of Marblehead.

THOMAS C. THURLOW, of West Newbury.

JAMES P. KING, of Peabody.

HONORARY TRUSTEE,

JOSEPH HOW, of Methuen.

SECRETARY,

DAVID W. LOW, of Gloucester.

TREASURER,

GILBERT L. STREETER, of Salem.

TRUSTEES,

Charles C. Blunt, Andover. Aaron Low, Essex.

B. F. Huntington, Amesbury. Oliver S. Butler, Georgetown.

John Meacom, Beverly. Alonzo F. Harvey, Gloucester.

John Parkhurst, Boxford. Nathan Longfellow, Groveland.

William Hilton, Bradford. Alvin Smith, Hamilton.

Charles H. Gould, Danvers. Richard Webster, Haverhill.

Alden Story, Ipswich. James C. Poor, No. Andover.
 Asa M. Bodwell, Lawrence. Francis H. Appleton, Peab'dy.
 John L. Shorey, Lynn. Andrew Lane, Rockport.
 John M. Danforth, Lynnfield. Edward H. Potter, Rowley.
 Wm. S. Phillips, Jr., M'head. John Robinson, Salem.
 Daniel W. Friend, Manch'str. Samuel Hawkes, Saugus.
 Chas. W. Mann, Methuen. John Q. Evans, Salisbury.
 James D. Pike, Merrimac. David Warren, Swampscott.
 O. Loring Carlton, Middlet'n. George F. Averill, Topsfield.
 C. N. Maguire, Newburyport. Zachariah Cole, Wenham.
 James Noyes, Newbury. E. G. Nason, W. Newbury.

NEW MEMBERS — 1886.

*Joseph P. Gardner, Ham'lt'n. Osman Babson, Gloucester.
 Samuel Thayer, Andover. Frederic F. Low, Gloucester.
 Henry A. Hayward, Andover. Alfred Presson, Gloucester.
 Amos F. Chase, Lynn. Eugene L. Wildes, Topsfield.
 B. W. Rowell, Lynn. John W. Parkhurst, Boxford.
 Edwin Bates, Lynn. James W. Chadwick, Boxford.
 Furmer H. Greeley, Salisb'y. George B. Austin, Boxford.
 N. Tracy Getchell, Salisbury. Daniel D. Adams, Newbury.
 J. Q. A. Pettingell, Salisbury. Edwin P. Noyes, Newbury.
 John H. Eaton, Salisbury. Edward Illsley, Newbury.
 Wesley Pettingell, Salisbury. Frank W. Evans, Newburyp't.
 Abram L. Morrill, Salisbury. Geo. W. Knight, Newburyp't.
 P. Albert True, Salisbury. James E. Page, Salem.
 Robert Thornton, Salisbury. Ezra K. Preston, Beverly.
 Jona. H. Osborne, Amesb'ry. Thomas E. Cox, Lynnfield.
 William F. Vining, Amesb'y. John Hazeltine, Bradford.
 E. A. Goodwin, Amesbury. William H. Smith, Rockport.
 Fred'c Burnham, Manchester. Horace Lane, Rockport.

*Deceased.

J. P. Little, Amesbury. Elbridge Tenney, Newbury.
 C. U. Burbank, Amesbury. Wm. Bryant, West Newbury.
 P. A. Perkins, Newbury. Stephen A. Jaques, W. N'wb'y
 Carlton Little, Newbury. Charles Bennett, Gloucester.
 Edw'd G. Knights, Newbury. Michael Reddy, Ipswich.
 Matthey H. Toomey, Newb'y. George H. Whipple, Lynn.
 James Kent Adams, Newb'y.

REMOVALS OF MEMBERS.

Andover — Addison M. Robinson to North Andover.
 Boxford — B. Frank Barnes, to Haverhill.
 Danvers — Beverly S. Moulton, to Boston.
 Samuel W. Nourse, to Peabody.
 Charles O. Putnam, to Wenham.
 Moses W. Putnam, to Philadelphia, Pa.
 William Lord, to North Beverly.
 Lyman Wilkins, to Middleton.
 Hamilton — Dudley H. Porter, to Saratoga, N. Y.
 Lynn — John G. Barker, to Boston.
 Middleton — Wm. B. Carleton, to Danvers.
 John R. Wellman, to Lawrence.
 Salem — C. A. Cooper, to Lynnfield.
 Eben Jackson, to Danvers.
 Topsfield — Arthur M. Merriman, to Manchester.
 West Newbury — E. C. Little, to Haverhill.

CORRECTIONS OF 1884 LIST OF MEMBERS.

Methuen — S. C. Sargent should have been S. G. Sargent.
 Saugus — Alfred C. Hill, omitted.
 Peabody — David Osborne, died May 7, 1875, aged 84.
 Georgetown — I. Adams Illsley should be J. Adams
 Illsley.

Members of Essex Agricultural Society,

DECEMBER, 1886.

Previous printed list was in 1884, errors in which have been corrected in 1885 and 1886 Reports. If any errors are discovered in the following list, please report them to the Secretary. Trustees are requested to report deaths of members as soon as they occur, with printed notice, when convenient.

AMESBURY—21.

Bailey, O. S.	Gale, Edmund	Lane, T. W.
Burbank, C. U.	Gale, Foster	Morse, Daniel L.
Cammet, Samuel	Goodwin, E. A.	Osborne, Jona. H.
Chesley, M. B.	Hill, Albert C.	Sawyer, Aaron
Chesley, John F.	Hill, J. Henry	Tibbets, William B.
Currier, W. H. B.	Huntington, B. F.	True, Eben
Feltch, Elbridge S.	Little, J. P.	Vining, William F.

ANDOVER—47.

Abbott, James J.	Chandler, Joshua H.	Holt, Ballard
Abbott, Nathan F.	Cheever, James O.	Jenkins, John B.
Abbott, Moses B.	Cummings, C. O.	Jenkins, E. Kendall
Abbott, Hartwell B.	Downing, J. J.	Johnson, Francis H.
Abbott, John B.	Flint, John H.	Johnson, S. K.
Andrews, M. C.	Foster, George W.	Mason, George F.
Barnard, Edwin H.	Foster, Moses	Morton, Marcus
Bailey, Moses A.	Foster, George C.	Rea, Jasper
Bean, Samuel G.	Gulliver, Francis	Ripley, George
Blunt, Charles C.	Gutterson, George	Smith, James B.
Blunt, J. H.	Harriman, Thos. P.	Smith, John L.
Bodwell, H. A.	Hayward, Henry A.	Smith, Peter D.
Buchan, George	Hazen, Nathan W.	Smith, Benjamin F.
Callahan, Robert	Hidden, David I. C.	Thayer, Samuel
Carter, Charles L.	Holt, E. F.	Upton, Edward C.
Carruth, Isaac	Holt, Joseph S.	

BEVERLY—54.

Appleton, Nathan D.	Dodge, Walter F.	Mason, Alphonso
Appleton, Isaac	Foster, David L.	Mason, George
Avery, Mark B.	Foster, Henry W.	Mason, Lyman
Baker, John I.	Foster, William A.	Mayo, Josiah
Bell, John	Friend, Seth	Meacom, John
Bliss, Edgar J.	Giles, Benjamin V.	Mitchell, John
Burnham, O. B.	Gould, Thomas	Morse, John T.
Carter, John W.	Haven, Franklin	Munsey, John G.
Clark, George	Herrick, Joseph H.	Paine, Charles C.
Connelley, Stephen	Hill, Hugh	Pitman, Mark
Cressy, Joseph	Lee, Asa F.	Porter, Adoniram
Danforth, E. F.	Lord, Cyrus W.	Preston, Ezra
Dodge, Andrew	Lord, William	Raymond, John W.
Dodge, Benjamin N.	Lawrence, C. A.	Stephens, Augustus
Dodge, Benjamin S.	Loring, Augustus P.	Trask, Joseph W.
Dodge, Joshua S.	Lovett, Francis S.	Walker, Lawson
Dodge, Richard	Lummas, E. E.	Waters, Richard P.
Dodge, Forest C.	Mason, Alfred A.	Waters, William C.

BOXFORD—27.

Anderson, Chas. R.	Cleveland, James P.	Day, Mrs. John
Andrew, Isaac W.	Cole, David M.	Hale, John
Austin, George B.	Cole, John K.	Herrick, Israel
Barnes, B. S.	Cole, Warren M.	Killam, Oliver P.
Chadwick, Geo. W.	Cole, Wm. Kimball	Ladd, John I.
Chadwick, James W.	Day, Isaac C.	Nason, James H.
Parkhurst, John	Pearl, John M.	Sawyer, Thomas
Parkhurst, John W.	Pearl, John	Styles, Charles F.
Pearl, Edw. E.	Perley, Charles	Wood, John T.

BRADFORD—38.

Bradstreet, Justin E.	Haseltine, Thomas	Kimball, Wm. B.
Cogswell, Doane	Hazeltine, Charles	Kimball, W. Eustace
Cogswell, George	Hazeltine, John	Kimball, M. Tenney
Cogswell, William	Hilton, William	Knight, Albert H.
Day, Albert J.	Hopkinson, Sam'l W.	Ladd, B. G.
Day, Royal	Johnson, Charles G.	Ladd, George W.
Ellis, John A.	Johnson, Laburton	Little, Mrs. M. P.
Emerson, Charles B.	Kimball, Albert	O'Brien, John
Gage, Edwin V.	Kimball, A. Laburton	Ordway, Alfred
Hale, H. H.	Kimball, Leverett	Ordway, Warren

Peabody, Frank	Phillips, G. Franklin	Thornton, William
Peabody, Daniel	Poor, Charles H.	Webster, Charles E.
Perley, John	Tewksbury, John B.	

DANVERS—115.

Armitage, John S.	Kimball, Joel, Jr.	Putnam, John A.
Allen, Henry C.	Kirby, Patrick	Putnam, Joel
Bartlett, James A.	Langley, J. R.	Putnam, Otis F.
Berry, Allen A.	Learoyd, A. P.	Pratt, George
Berry, Eben G.	Lefavour, Mrs.	Pratt, Samuel S.
Batchelder, J. Q. A.	Legro, Edmund	Porter, John W.
Bradstreet, Elijah	Legro, John C. P.	Pope, Daniel P.
Bodge, Henry	Massey, Dudley A.	Proctor, Nathan P.
Bodge, Horatio	Martin, George B.	Richardson, James
Blake, John A.	Martin, Walter F.	Richards, C. S.
Brown, William H.	McCrillis, Ransom F.	Richards, George D.
Boardman, I. P.	Merrill, Walter S.	Rollins, Jonas
Butler, J. C.	Morgan, Wm. B.	Ropes, Joseph E.
Clark, N. J.	Mudge, Edwin	Rice, Charles B.
Carlton, Wm. B.	Mudge, Augustus	Sears, John A.
Day, Clarence	Nichols, Andrew	Silvester, Joshua
Dempsey, L. P.	Nichols, Andrew, Jr.	Spaulding, Sam'l W.
Dodge, Elnathan	Newhall, Benj. E.	Swinerton, John
Dodge, Francis	O'Neal, T. H.	Smart, John L.
Eaton, Winslow W.	Patch, Abraham	Swazey, E.
Fellows, Alfred	Peart, William B.	Spring, Jacob E.
Fisher, Franklin W.	Perley, Dean A.	Tapley, George
Faxon, George	Perley, Edward P.	Tapley, Gilbert A.
Fowler, Augustus	Perkins, Henry A.	Trask, Alfred M.
Fowler, Samuel P.	Perkins, Warren G.	Upton, Franklin W.
Fuller, Solomon	Pettingill, David A.	Verry, Augustus
Gaffney, Cornelius	Peabody, George H.	Verry, Henry
Gould, Charles H.	Pillsbury, H. H.	Walcott, Wm. H.
Grosvenor, David A.	Pope, Ira P.	Waldron, E. T.
Grout, John	Porter, Benjamin F.	Wallis, Samuel
Gustin, John H.	Pratt, Amos	Warren, Aaron W.
Hill, Edward L.	Preston, Charles H.	Weston, Wm. L.
Hood, R. B.	Preston, Charles P.	Weston, Mrs. L. P.
Hood, Joseph E.	Prince, Amos	White, Henry A.
Hutchinson, Edward	Putnam, Ansel W.	Woodis, Alden B.
Jacobs, Wm. A.	Putnam, Edwin F.	Woodman, Edw. E.
Jackson, Eben	Putnam, Israel H.	Whipple, John F.
Johnson, George E.	Putnam, Joseph C.	Wilkins, Fred'k A.
Juul, Conrad		

ESSEX—21.

Andrews, Elias	Cogswell, Chas. B.	Knowlton, Herbert A.
Andrews, Joseph	Dodge, Grover	Knowlton, Perry B.
Andrews, Miles S.	Haskell, David L.	Lee, Edward K.
Burnham, D. Brainard	Haskell, George	Low, Aaron
Burnham, Washington	Knowlton, Aaron	Low, Josiah
Burnham, Wm. Howe	Knowlton, David	Lufkin, A. E.
Choate, Rufus	Knowlton, Moses	McDonald, Daniel

GEORGETOWN—28.

Bateman, A. P.	Marble, Nathaniel	Preston, John
Butler, Oliver S.	Moulton, Daniel E.	Ridley, Amos
Chapman, Jonathan	Nelson, Sherman	Spofford, Sumner P.
Dole, Moody S.	Nelson, William	Tenney, George J.
Harriman, Hiram N.	Noyes, Henry P.	Tenney, Gorham D.
Hoyt, John A.	Osgood, Stephen	Tenney, Milton G.
Hoyt, Martin L.	Pettingill, Henry	Tenney, Moses
Huse, Ralph C.	Pillsbury, J.	Tenney, Orlando B.
Illsley, J. Adams	Poor, Samuel T.	Wheeler, William S.
Lovering, John H.		

GLOUCESTER—85.

Atkinson, John	Cronin, John	Haskell, William H.
Babson, Fitz J.	Curtis, Samuel, Jr.	Herrick, Gardner W.
Babson, Horatio	Dale, Eben, Jr.	Knowles, Thomas J.
Babson, Osman	Davis, James	Lane, Andrew
Barrett, Charles P.	Davis, William P.	Lane, George
Bennett, Charles	Dennen, George	Lawrence, R. C.
Bradford, George R.	Dodd, Stephen	Loring, Francis M.
Brown, Edward H.	Dolliver, John S.	Lovett, John H.
Burnham, A. M.	Dolliver, William C.	Low, David W.
Burnham, H. A.	Dolliver, William P.	Low, Frederic F.
Burnham, S. A.	Fears, Robert R.	Marr, Chester, Jr.
Calef, John C.	Ferguson, Thos. B.	Mayo, Israel C.
Carter, John S.	Foster, Jeremiah	Merchant, E. W.
Carter, Sherman J.	Friend, Elbridge G.	Norwood, George
Clark, John	Garland, Joseph	Parsons, W. Frank
Cole, Israel H.	Gilbert, Addison	Pattillo, Alexander
Conant, Thomas	Griffin, Bennett	Pew, William A.
Cook, Benjamin F.	Grover, Charles E.	Phillips, N. H.
Corliss, Benjamin H.	Harvey, Alonzo F.	Plumer, David
Corliss, John	Haskell, H. C. L.	Presson, David S.

Presson, Alfred	Sanford, H. G.	Webster, Nathaniel
Price, Augustus E.	Sawyer, Samuel E.	Wetherell, M. L.
Procter, Joseph O.	Shepherd, Joseph C.	Wilson, John J.
Proctor, Wilbur F.	Somes, John E.	Witham, Addison
Ricker, Richard W.	Stacy, John H.	Wonson, Augustus H.
Roberts, Joshua	Stanwood, Barnard	Wonson, F. G.
Rogers, Allan	Story, Cyrus	Wonson, George M.
Rogers, John S.	Thompson, Charles P.	Wonson, J. W.
Rust, William P.		

GROVELAND—28.

Atwood, Moses	Ladd, J. P. B.	Savary, Charles P.
Balch, Thomas H.	Ladd, Nathaniel E.	Spofford, Henry H.
Curtis, Edwin T.	Longfellow, N.	Stacy, Edward M.
Fegan, Henry C.	Longfellow, Samuel	Stickney, Abel
George, Edwin B.	Martino, Philip H.	Tenney, George H.
George, Samuel B.	Merrill, Burton E.	Walker, George S.
Harrington, Edward	Parker, Eldred S.	Wardwell, Z. C.
Harriman, Moses H.	Peabody, Walter S.	Whitmore, Wm. F.
Harriman, Abel S.	Pemberton, L. K.	Woodbury, Louis A.
Hopkinson, W. H.		

HAMILTON—28.

Abbott, Joseph B.	Dodge, George B.	Norris, George
Allen, Francis R.	Dunnels, Ira A.	Norwood, C. J.
Brown, William A.	Ellis, George W.	Patch, Mrs. Oliver
Creamer, George G.	Gibney, George H.	Rankin, Eli C.
Dane, Ephraim A.	Kimball, Isaac W.	Robinson, E. P.
Dane, George E. F.	Knowlton, Franklin	Safford, Daniel E.
Dane, John, Jr.	Knowlton, Isaac F.	Smith, Alvin
Dane, William A.	Knowlton, Joseph	Whipple, Em. A.
Dane, Sylvester	Lamson, Jarvis	Winslow, G. W.
Dodge, Emerson P.		

HAVERHILL—86.

Barnes, Frank B.	Caldwell, William	Currier, Samuel M.
Berry, J. M.	Chase, Abel W.	Davis, James
Bodwell, Stephen	Chase, C. W.	Dewhurst, James
Brickett, Barnard	Cheever, H. W.	Eaton, B. F.
Brickett, Daniel	Cook, Justin T.	Eaton, Harrison
Butters, Charles	Corliss, Charles	Elliott, Samuel

Elliott, Samuel H.	Lackey, Andrew	Sanders, Thomas
Emerson, Albert	Little, E. C.	Smith, George S.
Emerson, E. A.	Little, J. G. S.	Sprague, W. W.
Emery, Benjamin E.	Marsh, John J.	Stewart, John
Farnsworth, J. H.	Merrill, William	Swett, Jackson B.
Fellows, Samuel	Mitchell, E.	Taylor, Levi
Fellows, C. H.	Mitchell, Seth K.	Taylor, Martin
Fitts, D. F.	Moody, H. L.	Taylor, Oliver
Flanders, Daniel D.	Morse, John H.	Titcomb, Beniah
Frost, Henry	Morse, C. E.	Wadleigh, Levi C.
Gale, John E.	Merrill, Giles	Wales, Herbert E.
Gale, James E.	Nichols, James R.	Webster, Ebenezer
Gage, Edmund,	Nichols, John B.	Webster, E. F.
Goodwin, Rufus	Nichols, J. B.	Webster, Richard
Goodrich, T. J.	Ordway, Joshua H.	West, H. K.
Hale, Edward	Peabody, Stephen	West, James F.
Hanson, M. W.	Peters, Daniel	West, Thomas
Haseltine, Amos Jr.	Poore, F. W.	Wheeler, Allison
Heath, Albert	Porter, Dudley	White, James D.
Hooke, Daniel	Randall, John P.	Whittier, Alvah
Howe, Moses	Richardson, John B.	Whittier, Warner R.
Ingalls, E. T.	Ridgeway, Jos. N.	Winchell, James H.
Jeffers, William	Rhodes, C. N.	

 IPSWICH—43

Appleton, Francis R.	Hobbs, John	Perley, David T.
Appleton, Daniel F.	Hodgdon, George	Reddy, Michael
Baker, S. N. Jr.	Hodgkins, Augustine	Rogers, Isaiah H.
Bond, James W.	Horton, Joseph	Ross, Joseph
Brown, S. Albert	Hunt, Samuel	Rutherford, Aaron A.
Brown, John	Hurd, Y. G.	Russell, Daniel S.
Brown, William G.	Jordan, Mrs. Robert	Shatswell, Nathaniel
Caldwell, Abraham	Kimball, Daniel	Smith, Webster
Clark, Erastus	Kinnear, James	Stone, Augustine
Fall, Tristram B.	Kinsman, Joseph F.	Story, Alden
Fellows, Alonzo B.	Kinsman, William H.	Treadwell, William
Gould, John J.	Kinsman, Willard F.	Underhill, J. C.
Grant, Joshua B.	Marshall, Joseph	Wade, Asa
Green, George H.	Perkins, Isaac E. B.	Whittier, Maynard
Haskell, George		

LAWRENCE—38.

Ames, M. B.	Goodwin, John	Page, E. F.
Bodwell, Asa M.	Goodwin, Patrick	Richardson, E. P.
Cabot, George D.	Goodwin, Francis J.	Robinson, P. B.
Currier, Eben B.	Halley, T. D.	Rollins, John R.
Currier, J. Merrill	Harmon, Nathan W.	Russell, George W.
Dow, Vigil	Herrick, H. G.	Russell, W. A.
Drew, J. D.	Hills, George	Saunders, Daniel
Durant, W. A.	Hood, Gilbert E.	Shattuck, Charles
Fiske, E. A.	Holt, Lewis G.	Small, Henry
Flynn, Edward	Keleher, W. A.	Victor, F. M.
French, A. J.	Lewis, S. T.	Wellman, John R.
Gile, W. F.	McAllister, J. G.	Wright, W. H. P.
Gilman, Frederick	Merrill, George S.	

LYNN—56.

Baker, Ezra	Harris, N. S.	Noyes, Geo. C.
Bates, Edwin	Hawkes, Nathan M.	Oliver, John E.
Bates, Wallace	Hill, E. L.	Parsons, Charles E.
Beede, C. O.	Hovey, Rufus P.	Pevear, G. K.
Berry, Henry N.	Kimball, Rufus	Pevear, H. A.
Berry, Benj. J.	King, W. P.	Potter, Edward P.
Breed, Henry A.	Marsh, George E.	Preble, J. H.
Breed, Richard	Marsh, S. E.	Rowell, B. W.
Chase, L. H.	Merrill, E. H.	Roney, Simon J.
Chase, Amos F.	Merritt, Timothy	Sargent, George D.
Cross, Alfred	Mudge, John	Shorey, John L.
Cressey, John S.	Neal, Peter M.	Shorey, George L.
Davis, Edward S.	Newhall, Asa T.	Sawyer, J. A. J.
Emery, George E.	Newhall, G. A.	Tyler, Thaddeus W.
Farrar, Jos. E.	Newhall, Hiram L.	Usher, Roland G.
Foster, George	Newhall, George T.	Whippen, H. C.
Fry, Charles E.	Nichols, Otis	Whipple, Geo. H.
Goodell, J. W.	Nichols, Thomas P.	Winslow, Aaron
Harnden, Henry C.	Norris, George, Jr.	

LYNNFIELD—13.

Bancroft, J. K.	Hawkes, George L.	Perkins, John
Brown, Joseph	Herrick, George E.	Perkins, John H.
Cox, Thomas E., Jr.	Mansfield, Andrew	Roundy, W. R.
Cooper, C. A.	Newhall, Frank	Smith, Henry E.
Danforth, John M.		

MANCHESTER—12.

Allen, Luther	Cheever, William M.	Merriman, Arthur M.
Allen, Wm. H.	Coolidge, T. Jefferson	Price, John
Burnham, Frederick	Friend, Daniel W.	Rabardy, Julius F.
Cheever, John H.	Lee, Allen	Sturgis, Russell, Jr.

MARBLEHEAD—16.

Alley, Amos P.	Dennis, W. John	Nutting, John
Alley, Reuben	Gregory, J. J. H.	Paine, Thomas W.
Appleton, Thomas	Hathaway, Amos C.	Phillips, Wm. S. Jr.
Childs, Caleb	Hathaway, Joseph B.	Ware, Benjamin P.
Cloutman, B. Henry	Hathaway, Seth W.	Ware, Horace
Cronin, Michael		

MERRIMAC—15.

Adams, George	Hill, A. C.	Sargent, Bailey
Chase, William	Loud, L. C.	Sargent, Geo. W.
Clement, M. G.	Nichols, Chas. H.	Sargent, P. Willis
England, John J.	Pike, James D.	Sawyer, Thomas C.
Haskell, Wm. H.	Sargent, M. Perry	Tewksbury, D. M.

METHUEN—28.

Bradley, George B.	Gutterson, B. G.	Patterson, D. H.
Bradley, Frank J.	Goss, Chas. E.	Pedlar, S. J.
Buswell, Joseph E.	How, Joseph	Phippen, G. S.
Butters, W. H.	How, Joseph S.	Parker, Jas. O.
Currier, Daniel	Mann, C. W.	Sargent, S. G.
Crosby, John S.	Morrison, D. T.	Sleeper, Wm. C.
Emerson, Jacob, Jr.	Morse, Jonathan	Smith, Walter
Frederick, John W.	Nevins, Henry C.	Thurlow, J. E.
Gage, George W.	Noyes, David W.	Tozier, C. L.
George, John H.		

MIDDLETON—13.

Berry, William	Hutchinson, J. A.	Stiles, Mrs. Farnham
Carlton, O. Loring	Phelps, William A.	Stiles, Hiram A.
Christopher, Wm. P.	Stiles, David	Stewart, Mrs. S. A.
Currier, George A.	Stiles, Farnum	Wilkins, Lyman S.
Flint, James		

NAHANT—1.

Goodale, Byron

NEWBURY—58.

Adams, Charles	Jones, William	Noyes, Edwin P.
Adams, Charles W.	Kent, John N.	Noyes, Justin
Adams, Daniel D.	Knight, Edward S.	Noyes, Horace P.
Adams, George W.	Kent, Edward	Noyes, James
Adams, James K.	Little, Carlton	Noyes, Luther
Bray, Richard S.	Little, Edward F.	Noyes, Moses K.
Bray, George W.	Little, George	Perkins, Wm. W.
Boynton, Charles	Little, Joseph	Perkins, Frank
Coffin, Wm. P.	Little, Nathaniel Jr.	Perkins, Paul A.
Colman, Moses	Little, William	Plummer, Daniel Jr.
Dole, Nathaniel	Little, Wm. Burke	Plummer, George H.
Goodrich, Wm. F.	Longfellow, Horace F.	Randall, George A.
Hale, Stephen P.	Longfellow, Joseph	Rogers, Abial
Howard, Horatio M.	Longfellow, Jos. Mrs.	Rolfe, Joseph N.
Illsley, Edward	Lucy, Gideon R.	Tenney, Henry L.
Illsley, Paul M.	Lunt, Charles M.	Tenney, Elbridge
Illsley, Joseph	Moody, Nath'l W.	Tenney, Daniel G.
Jaques, Richard	Mann, Otis	Toomey, Mathew H.
Jaques, Richard T.	Newman, Sidney F.	Woods, Charles W.
Jaques, William		

NEWBURYPORT—70.

Adams, Philip D.	Cook, T. N.	Little, Hector
Adams, J. Quincy	Cutter, Eben P.	Little, John G.
Adams, Rufus	Delano, Otis	Lunt, Charles
Akerman, Joseph	Evans, Frank W.	Maguire, C. N.
Allen, John W.	Griffin, Eliphalet	Merrill, Enoch
Balch, John H.	Hale, Joshua	Merrill, George F.
Ballou, C. N.	Hamlet, Daniel	Morrison, Daniel T.
Bartlett, T. K.	Hart, James S.	Moseley, Edward A.
Batchelder, Dan'l C.	Hewett, C. C.	Moseley, Edward S.
Bayley, Wm. H.	Huff, William	Mosely, Fred'k S.
Boardman, Isaac H.	Huse, William H.	Moulton, Henry W.
Cashman, Jeremiah	Jackman, George W.	Moulton, Joseph
Capers, Thomas	Johnson, Wm. R.	Nelson, David O. Jr.
Colby, George J. L.	Kent, Otis L.	Newhall, Asa T.
Colby, George W.	Knight, George W.	Northend, E. T.
Colman, James C.	Knight, Joseph	Noyes, Isaac P.
Colman, William T.	Lewis, Samuel W.	Ordway, A. D.

Ordway, Parsons	Smith, Robert A.	Titcomb, Paul
Perley, R. M.	Stanley, B. F.	Toppan, Edward S.
Perkins, Charles	Stanley, J. C.	Winkley, J. Otis
Plummer, Moses A.	ThurLOW, William	Winkley, Paul T.
Plummer, Wm. C.	Titcomb, Albert	Winkley, Paul T. Jr.
Smith, David	Tilton, Enoch	Young, Hiram
Smith, Joseph B.		

NORTH ANDOVER—55.

Adams, Edward	Farnham, Jacob	Loring, Geo. B., Jr.
Berry, Albert	Farnham, J. L.	Manion, John
Blake, J. P.	Farnham, J. Ralph	Montgomery, Jas. A.
Bodwell, S. B.	Farnham, W. Benj.	Osgood, Isaac F.
Butterfield, Chas. A.	Foster, J. Frank	Peters, Nathaniel
Bassett, Leon H.	Foster, John P.	Phillips, Willard P.
Barker, John	Foster, Orrin	Poor, James C.
Carlton, Daniel	French, J. D. W.	Rea, Loring P.
Carlton, Daniel A.	Fuller, Abijah P.	Reynolds, James H.
Crosby, Josiah	Goodhue, Hiram P.	Riley, Henry
Chever, William J.	Greene, E. W.	Robinson, Addison M.
Davis, George G.	Goodwin, John O.	Stevens, Moses T.
Davis, George E.	Holt, Peter, Jr.	Stevens, Oliver
Davis, George L.	Jenkins, Benj. F.	Sutton, Eben
Dale, William J.	Jenkins, Milon S.	Symonds, Frederick
Dale, William J., Jr.	Johnson, James T.	Wilson, Abiel
Farnham, B. H.	Johnson, Charles F.	Wardwell, T. O.
Farnham, Byron K.	Kittredge, Hannah E.	Wiley, John A.
Farnham, Mrs. B. H.		

PEABODY—62.

Appleton, Francis H.	Cummings, Daniel	Hutchinson, Samuel
Bancroft, Sidney C.	Curtis, Andrew	Hutchinson, C. H.
Barrett, E. P.	Dole, William T.	Jacobs, Edward W.
Buxton, Henry V.	Durkee, T. C.	King, J. Augustus
Brown, Rufus H.	Emerton, C. S.	King, James P.
Brown, Lewis	Foster, Ira	King, Jonathan
Bushby, N. A.	Foster, George M.	Linehan, John
Brown, W. H.	Gardner, Henry	Little, William H.
Blaney, Stephen	Goodale, Jacob O.	Marsh, Fred.
Buxton, Robert G.	Goodale, J. P.	Mansfield, E.
Carroll, Thomas	Hills, Benjamin M.	Mansfield, Arthur W.
Clark, A. B.	Herrick, John E.	Marsh, Frank
Colcord, J. L.	Hubbard, A. J.	Marsh, James

Needham, George A.	Preston, Levi	Twiss, Everett M.
Needham, Joseph S.	Richardson, W. B.	Viles, Bowman
Newhall Orlando F.	Rogers, Jacob C.	Walcott, John G.
Nourse, Samuel W.	Saltonstall, Henry	Wallace, David B.
Osborne, Abraham C.	Southwick, Sumner	Walton, George D.
Osborn, Lyman	Swett, Samuel	Ward, Winsor M.
O'Keefe, Timothy	Taylor, George W.	Wheeler, Benj. S.
Pepper, George W.	Thomas, Josiah B.	

ROCKPORT—19.

Blatchford, Eben	Low, William	Norwood, Gorham
Estes, Alden C.	Mills, R. P.	Patch, William H.
Hodgkins, John B.	Manning, James	Smith, Allen
Lane, Andrew	Manning, John J.	Smith, Beaman C.
Lane, Andrew, Jr.	Manning, William N.	Smith, William H.
Lane, Horace	Marshall, John W.	York, Nathaniel S.
Low, Mrs. Martha J.		

ROWLEY—22.

Bartlett, B. W.	Hale, Thomas	Potter, Edward H.
Blodgette, George B.	Hale, T. P.	Stockbridge, Seth
Daniels, George E.	Haggarty, D. L.	Stockbridge, A. J.
Dole, Charles	Lambert, Mary G.	Tenney, Harrison J.
Dodge, Joseph D.	Mighill, Charles P.	Todd, Frank P.
Dummer, Nath'l M.	Pike, John	Todd, John F.
Hale, Clara A.	Prime, Daniel B.	Todd, J. Scott
Hale, Daniel H.		

SALEM—71.

Andrews, Randall	Endicott, William P.	Hale, Henry
Andrews, Samuel P.	Felt, John	Hale, Henry A.
Almy, James F.	Foote, Caleb	Horton, N. A.
Abbott, Nathaniel	Foster, Joseph C.	Ives, John S.
Barton, Gardner	Foster, William H.	Jones, Samuel G.
Curwen, James B.	Foster, William J.	Kinsman, John
Chamberlain, James	Goodhue, William P.	Kemble, Arthur
Curwen, Samuel H.	Gray, Benjamin A.	Lamson, Frederick
Clark, Charles S.	Gibney, John	Loring, George B.
Collins, William F. M.	Gardner, D. B.	Lander, William A.
Daland, John	Hathaway, John	Lyford, Francis W.
Endicott, William C.	Hanson, Clement R.	Mack, William

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Manning, Robert	Pettingell, George	Smith, Andrew
Merritt, David	Pickering, Wm. Jr.	Shreve, O. B.
Morse, E. Henry	Page, John G.	Spencer, Charles P.
Newcomb, Caleb	Page, James E.	Swasey, John A.
Northend, Wm. D.	Pickering, Benjamin	Stowe, Volney C.
Peabody, John P.	Robinson, John	Streeter, Gilbert L.
Perkins, E. R.	Ropes, Charles A.	Tracey, Patrick
Putnam, Henry W.	Rogers, A. D.	Ware, Horace C.
Phippen, George D.	Reynolds, Henry E.	Wheatland, Henry
Potter, Daniel	Rowell, E. F.	White, Frank W.
Potter, William	Ropes, John C.	Waters, David P.
Pingree, David	Saunders, Robert J.	

SALISBURY—15.

Bartlett, Moses J.	Getchell, N. Tracy	Smith, John F.
Dole, Edward G.	Greeley, Furmer H.	Thornton, Robert
Dow, George A.	Morrill, Abram L.	True, P. Albert
Eaton, John H.	Pettengill, Wesley	True, Eben
Evans, John Q.	Pettengill, John Q. A.	Greenleaf, Wm. H.

SAUGUS—13.

Blodgett, J. W.	Hawkes, Louis P.	Noble, William
Faxon, M. B.	Hill, Alfred C.	Penney, George H.
George, Henry M.	Newhall, Herbert B.	Robinson, E. P.
Houghton, T. O. W.	Newhall, Joseph	Whitehead, Joseph
Hawkes, Samuel		

SWAMPSCOTT—9.

Crosman, S. F.	Pettingell, S. J.	Washburne, John
Holden, Philander	Rowe, Allen	Warren, David
Pettingell, L. D.	Stetson, Charles A.	Warren, Mrs. N. J.

TOPSFIELD—20.

Batchelder, T. W.	Leach, Charles H.	Towne, Frank H.
Billings, Augustus T.	Leach, Thomas K.	Ward, Richard
Bradstreet, Dudley	Manning, James	Wildes, Moses
Averill, George F.	Peabody, Charles J.	Wildes, Eugene L.
Illick, Charles	Pike, Baxter P.	Wilson, James
Hood, S. D.	Poole, Benjamin	Woodbury, Isaac M.
Lamson, J. Arthur	Stanwood, Joseph E.	

WENHAM—18.

Alley, Henry	Edwards, Francis R.	Parsons, George W.
Cole, Zacariah	Hobbs, A. F.	Patch, Henry
Demsey, H. H.	Hobbs, Henry	Perkins, Nathan'l P.
Dodge, Robert F.	Kavanagh, J.	Putnam, Charles O.
Dodge, George F.	Pingree, David	Tilton, George H.
Dodge, William P.	Peabody, George	Whitman, F. A.

WEST NEWBURY—45.

Bailey, William P.	Gowen, Oscar	Ordward, Cyrus D.
Bradley, C. S.	Jacques, Romulus	Ordway, Cyrus K.
Boynton, Eben M.	Jacques, Stephen A.	Ordway, Thomas G.
Brown, Hayden	King, T. J.	Ordway, Charles W.
Bartlett, M. Walsh	Lane, Isaac N.	Poore, Moses H.
Bailey, Lawrence H.	Merrill, William	Poore, Amos
Bryant, William	Merrill, William E.	Poore, Ben : Perley
Carr, E. Dole	Merrill, M. B.	Poore, George H.
Carr, Samuel	Merrill, Henry	Ridgway, Moses M.
Follansbee, B. A.	Moore, Alfred L.	Ridgway, M. M. Jr.
Flook, George L.	Nason, Ezekiel G.	Rogers, Calvin
Goodridge, David L.	Nason, Henry F.	Rogers, George C.
Goodridge, H. M.	Nelson, Daniel P.	Stanwood, Moses P.
Gordon, J. R.	Newell, Richard	Thurlow, Thomas C.
Gowen, Francis H.	Noyes, Stephen E.	Titcomb, Silas M.

NON-RESIDENTS—116.

Alley, James E.	Clarke, Joseph F., Boston
Burnham, Ira T., Lexington	Currier, William A., Boston
Babson, Gustavus, Jr., Seward, Neb.	Chapin, W. C., Providence, R. I.
Barker, John G., Boston	Cleaveland, H. W. S., Chicago
Beckford, C. H., Boston	Colby, Charles A., New York
Balch, William H., Malden	Chase, Joseph S., Malden
Balch, Eustis, California.	Carey, James, Quincy
Bodwell, Henry A., Keene, N. H.	Caldwell, L., Jacksonville, Fla.
Black, James D., Harvard	Campbell, Charles H., New Rochelle, N. Y.
Blunt, J. Milton, Springfield	Carey, James, New York.
Bodwell, Jos. R., Hallowell, Me.	Day, Abraham, Boston
Brackett, H. Clarke, Virginia.	Davis, Phineas E., Chicago
Brooklebank, S., Rumney, N. H.	Dole, Francis F., Chicopee
Burnham, Choate, Boston	Dodge, Albert W., Brighton
Butler, Benjamin F., Lowell	Dodge, John S., Chicopee

Drew, Charles R., Medford	Putnam, Benjamin C., Chelsea
Eaton, Thos., Harristown, Ill.	Putnam, Moses W., Philadelphia
Emannell, Henry, New York	Pierce, William, Boston
Farrell, Edwin C., Reading	Page, Adino, Metamora, Ill.
Felton, Wm. H., Sherborn	Page, Nathan, Jr., Wakefield
Flint, Charles L., Boston	Poor, Henry, New York
Fowler, W. W., Plymouth	Porter, Dudley H., Saratoga,
Fernald, Henry B., Washington	N. Y.
Foster, James B., Melrose	Payson, Samuel F., New York
Flagg, Wilson, Cambridge	Patch, A. H., Clarkville, Tenn.
Flint, Horace P., Boston	Putnam, Wm. R., Red Wing,
French, Charles, Davenport, O.	Minn.
French, Geo. H., Davenport, O.	Phelps, N. L., Iowa
Gannett, W. W., Boston	Phillips, Samuel, Brighton
Gilman, S. E., Kingston, N.H.	Phillips, A. P., Medfield
Gookin, Samuel F., Boston	Quimby, F. W., Washington, Mo.
Green, John A., New York	Raymond, Samuel, New York
Greene, Arthur M., Philadelphia	Reynolds, W. B., Derry, N. H.
Hadley, William, Boston	Robinson, John L., Manchester,
Hale, Joseph S., Stockton, Cal.	N. H.
Hayes, J. F. C., Iowa	Rogers, Benjamin, Malden
Hill, Mark F., Derry, N. H.	Rogers, William, Illinois
Hubbard, J. G., Hampste'd, N.H.	Stone, Edwin M. Provid'ce, R.I.
Holt, H. E., Lexington	Snow, Jesse W., Boston
Hutchinson, C. H., Rhinebeck,	Sargent, Elmer P., Malden
N. Y.	Sargent, G. P., Philadelphia, Pa.
Hubbard, Leavitt, Turner's Falls	Stickney, Niles T., Chicago, Ill.
Hicock, S. S., Rochester, N. H.	Stanley, Samuel S., Boston
Kent, Albert S., Colorado	Safford, N. T., Dunbarton, N. H.
Kimball, Jonathan, Boston	Smith, George J., Boston
Kimball, W. F., Providence, R.I.	Stickney, Chas., Fon du Lac, Wis.
King, D. Webster, Boston	Sleeper, S. C., Plaistow, N. H.
Knight, J. M., Maine	Shattuck, L. P., Boston
Lamb, Wm. D., Southbridge	Spofford, Farnham, Washington
Lyford, Geo. H., New York	Titcomb, Charles A., Boston
Lake, Chas. H., Churchill, Md.	Taylor, George H., Everett
Low, Sidney, Groton	Tappan, S. B., Arlington
McFarland, L., Maine	Wentzel, David, Amherst
Mitchell, Charles, Milton	Whittemore, Chas. A., Boston
Merrill, Hayden A., Dedham	Ware, Darwin E., Boston
Moulton, Beverly S., Boston	Whittemore, J. R., Chicopee
Nichols, Albert, Chicago, Ill.	Wheeler, H. T., Worcester
Nichols, D. P., Boston	Webb, Michael, Jr., Cambridge
Noyes, A. P., Lowell	Walker, Dexter M., Boston
Ordway, G. W., Manch'r, N. H.	Wilder, S. W., Lowell

Total number, December, 1886—1405 members.

1887

PREMIUM LIST OF
Essex Agricultural Society

FOR THE

Sixty-Seventh Annual Cattle Show and Fair,

*To be held September 27th and 28th, 1887, probably in
Peabody.*

DUTIES OF TRUSTEES.

The Trustee of each town is instructed to see the several members of Committees in his town previous to the Show, and urge upon them the importance of attending to their duties. Also impress upon exhibitors from localities near to the Exhibition the importance of entering their exhibits the afternoon and evening of Monday, in fairness to those from a distance, who are obliged to come Tuesday.

To be prompt at the meeting of the Society for filling vacancies in committees on the first day of the Exhibition.

Committees on live stock and articles exhibited on the Fair Grounds should appear at the Secretary's office on the grounds at 1 o'clock, punctually, on the first day of the Exhibition, and there organize, take the books of entry and proceed at once to business.

DUTIES OF COMMITTEES.

Full reports of Committees, on the blanks furnished by the Secretary, to be signed by all the members acting on the same, are required of each committee.

Three members of any committee consisting of more than that number are authorized to act.

No committee is authorized to award gratuities, except the committees on agricultural implements, carriages, bread, honey and canned fruits, domestic manufactures, fruits, vegetables in

Hall, and flowers; or any premium, unless the rules of the Society have been strictly complied with. Neither shall they award premiums or gratuities in excess of the amount appropriated.

No gratuity is to be awarded of less than fifty cents.

The several committees are requested to affix premium cards (which may be had of the Secretary or assistant on the grounds and at the hall) to the several animals or articles, designating the grade of premium awarded each, and the name of the person to whom awarded, and special care should be taken that the cards issued correspond with the awards in their report to the Society.

No claimant for a premium can be a member of the committee upon the subject on which he makes his claim.

The reports of award of premiums on ploughing and on animals and articles exhibited at the Show, will be delivered to the Secretary and announced on Wednesday.

The Society offers liberal premiums for the best reports of committees; and the chairmen of the several committees are requested to present to the Secretary a full report explanatory of the opinions of the committee on the matter referred to them, within two weeks after the awards are made at the Show, for publication in the Transactions.*

Reports on farms, crops, etc., to be presented previous to the meeting of the Trustees in November.

Any member of a committee who cannot serve on the same, is requested to give notice to the Secretary, before the Show, so that the vacancy may be filled.

Each member of the several committees will receive a ticket of admission to the hall of exhibition, on application to the Secretary.

*Chairmen of committees will please notice this request.

GENERAL RULES.

All claims (entries) for premiums to be awarded at the Exhibition must be entered with the Secretary of the Society, or his agent, on or before 11 o'clock, A. M., of the first day thereof.

All claims (entries) for premiums (on Fair Grounds) must be handed or forwarded to the Secretary or his agent, in writing, previous to the day of the Fair, if possible.

Any person not a member of the Society, receiving an award of seven dollars and upwards, shall receive a certificate of membership, for which three dollars of his award will be retained to increase the funds of the Society.

Diplomas awarded will be delivered and premiums paid on application, either by the person to whom the premium or gratuity is awarded, or an agent duly authorized, by the Treasurer, at First National Bank, Salem.

In all cases the reports of award of premiums and gratuities made by the several committees and adopted by the Society shall be final. Committees should see that the premium cards issued correspond with the premiums and gratuities awarded in their report.

All premiums and gratuities awarded, the payment of which is not demanded of the Treasurer on or before the first day of September next succeeding the Exhibition, will be considered as given to increase the funds of the Society.

No person shall be entitled to receive a premium, unless he complies with the conditions on which the premiums are offered, and by proper entry as required, gives notice of his intention to compete for the same; and committees are instructed to award no premium unless the animal or article offered is worthy.

No animal or object that is entered in one class, with one committee, shall be entered in another class, except town teams, fat cattle, working oxen and draft horses, which may be entered for ploughing, and milch cows, which may be entered with a herd.

In regard to all the subjects for which premiums are offered, it is to be distinctly understood that the Trustees reserve to themselves the right of judging the quality of the animal or article offered; and that no premiums will be awarded unless the objects of them are of a decidedly superior quality.

Pure Bred Animals, defined by the State Board of Agriculture.

The *proof* that an animal is so bred should be a record of the animal or its ancestors, as recorded in some herd book, recognized by leading breeders, and the public generally as complete and authentic.

Standards adopted:—American Jersey C. C. Register and American Jersey Herd Book, Ayrshire Record and Holstein Herd Book.

PREMIUMS TO BE AWARDED AT THE SHOW.

The Committees will take notice that no premium will be awarded unless the animals or objects are of a decidedly superior quality.

DIPLOMAS may be awarded for ANIMALS or ARTICLES of *special merit*.

CATTLE AND OTHER FARM STOCK.

TO BE ENTERED IN THE NAME OF THEIR PROPER OWNER.

All animals, to be eligible to a premium, shall have been raised by the owner within the County, or owned by the exhibitor within the County for four months previous to the date of the Exhibition, except Working Oxen.

All animals, whether teams for ploughing or animals entered for premium or exhibition, will be fed during the Exhibition, and longer when they are of necessity prevented from leaving, at the expense of the Society.

FAT CATTLE.

Fat Cattle, fatted within the County, regard being had to manner of feeding and the expense thereof, all of which shall be stated by the exhibitor in writing and returned to the Secretary with committee's report.

Best Pair of Fat Cattle, premiums, each,	\$10, \$8, \$4
Best Fat Cow, premiums, each,	\$8, \$6, \$4

THOROUGHbred BULLS.

*Ayrshire, Jersey, Short Horn, Devon, or of any other recognized thoroughbred breed, for each breed,

Two years old and upwards, premiums,	\$10, \$5
Under two years, premiums, for each breed,	\$5, \$3
Bull Calves under one year old, premium,	\$2

BULLS OF ANY AGE OR BREED.

*For the best thoroughbred Bull of any age or breed, with five of his stock not less than one year old, quality and condition to be taken into account, and especially the adaptability of the animal to the agriculture of the County, premium, \$12

*NOTE.—Competitors are required to give a written statement of pedigree, and committees are requested to be particular in this respect, and return them to the Secretary with report.

MILCH COWS.

For the best Milch Cow of any age or breed, with satisfactory record in quarts or pounds of her daily yield of milk for one or more years, premium, \$15

For best Milch Cow, either of Foreign, Native or Grade, not less than four nor more than ten years old, with satisfactory

evidence as to quantity and quality of milk, either by weight or measure, during the evening and morning of the first and last ten days of any month, premiums, \$10, \$4

Thoroughbred Ayrshire, Jersey, Devon, Short Horn, or any other recognized breed, four years old and upwards, premiums, for each breed, \$10, \$4

Native or Grade, five years old and upwards, premiums, \$10, \$4

For the Cow that makes the most butter in any single week from June 1st to September 15th, premiums, \$10, \$4

NOTE.—A written statement will be required of the age and breed of all Milch Cows entered, and time they dropped their last calf, and when they will next calve, the kind, quality and quantity of their food during the season, and the manner of their feeding, which statement is to be returned to the Secretary with Committee's report.

HERD OF MILCH COWS.

For the best herd of Milch Cows, not less than five in number, to be exhibited at the Show, and a correct statement of manner of keeping and yield from January 1st, preceding the Show, premiums, \$18, \$12

For the greatest produce of Milk on any farm, in proportion to the number of cows producing it, not less than four, from April 1, 1886, to April 1, 1887, statement to be made of the exchanges made, manner and expense of food, use made of milk, and such other facts as will illustrate the entire management, special regard being had to the mode in which the account is kept, premium, Diploma, and \$15

NOTE.—The above-mentioned statement is to be returned to the Secretary with Committee's report.

HEIFERS.

FIRST CLASS.—Thoroughbred Ayrshire, Jersey or Short Horn under four years old, in milk, premiums, for each breed, \$10, \$4

Devon, or any other recognized breed, premium, for each breed, \$10

Two year olds of each breed that have never calved, premiums, \$4, \$3

One year olds of each breed, premiums, \$4, \$3

Heifer Calves, thoroughbred, under one year, premiums, for each breed, \$4, \$3

SECOND CLASS.—Native or Grade Milch, under four years old, premiums, \$10, \$4

Two year olds, that have never calved, premiums, \$4, \$3


One year olds and less than two, premiums, \$4, \$3

Heifer Calves, Native or Grade, under one year old, premiums, \$4, \$3

WORKING OXEN AND STEERS.

Stags excluded. For best pair of Working Oxen under eight and not less than five years old, taking into view their size, power, quality and training, premiums, \$12, \$10, \$8

For best pair Working Steers four years old, to be entered in the name of the owner, premiums, \$10, \$6

NOTE.—The Committee are required to consider the quality and shape of the cattle as well as their working capacity. The training of working oxen and steers will be tested by trial on a cart or wagon containing a load weighing two tons for oxen, and 3000 pounds for steers.  At the time of entry a certificate of the weight of the cattle must be filed with the Secretary.

TOWN TEAMS.

For best Town Team of Oxen, ten yoke or more, premiums, \$20, \$12

For best Town Team of Oxen, eight or nine yoke, premiums, \$15, \$8

For best Town Team of Horses, ten or more pairs, premiums, \$20, \$12

For best Town Team of Horses, eight or nine pairs, premiums, \$15, \$8

STEERS.

For best pair three year old steers, broken to the yoke, premiums, \$8, \$6

For best pair two year old Steers, premiums, \$6, \$5

For best pair yearling Steers, premiums, \$5, \$4

For best pair of Steer calves, premiums, \$4, \$2

STALLIONS.

All Stallions entered in either class must have been owned by the exhibitor four months previous to the exhibition.

FIRST CLASS. For best Stallion for Farm and Draft Horses, four years old and upwards, diploma or premiums, \$10, \$6, \$4

For best Stallion, three years old, premiums, \$8, \$5

For best Stallion of any age, and five colts of his stock not less than one year old, quality and condition to be taken into account, premium, \$15

SECOND CLASS—For best Stallion for Driving Horses, four years old and upwards, premiums, Diploma, \$10, \$6, \$4

Best Stallion of any age and five colts of his stock, not less than one year old, quality and condition to be taken into account, premiums, \$15

BROOD MARES.

For best Brood Mare, with her foal not more than eight months old by her side, premiums, \$10, \$6, \$4

NOTE.—No brood mare or stallion will be entitled to a premium unless free from all apparent defects capable of being transmitted.

FAMILY HORSES.

For best family Horse, premiums, \$10, \$6, \$4

NOTE.—No horse will receive a premium unless free from all unsoundness.

GENTLEMEN'S DRIVING HORSES.

For Best Driving Horse, premiums, \$10, \$6, \$4

FARM HORSES.

For best Farm Horse, premium, \$10, \$6, \$4

NOTE.—No horse will be allowed except those actually used on farms, and in no case will competitors be allowed to take more than a specified load, 2000 lbs. No obstruction shall be placed either before or behind the wheels in trials of Draft horses of either class. If this rule is not complied with the premium shall be withheld.

PAIRS OF FARM HORSES.

For best pair of Farm Horses with load of two tons, premiums, \$12, \$8, \$4

COLTS FOR DRAFT PURPOSES.

FIRST CLASS. For best Mare or Gelding four year old colt, premiums, \$10, \$6, \$4

For best Mare or Gelding, three year old colt, premiums, \$8, \$5

SECOND CLASS. For best two year old Stallion, Gelding or Mare Colt, premiums, \$10, \$6, \$4

For best yearling Stallion, Gelding or Mare Colts, premiums, \$6, \$4

COLTS FOR GENERAL PURPOSES.

FIRST CLASS. For best Mare or Gelding four year old Colt, premiums, \$10, \$6, \$4

For best Mare or Gelding three year old Colt, premiums, \$8, \$5

SECOND CLASS. For best two year old Stallion, Gelding or Mare Colt, premiums, \$6, \$4

For best yearling Stallion, Gelding or Mare Colt, premiums, \$6, \$4

SWINE.

FIRST CLASS. Large breeds, viz: Cheshire, Berkshire, Chester County Whites, Poland China, Large Yorkshire, and any other breed or grade weighing more than 300 lbs. at maturity.

For best Boar, premiums,	\$8, \$5
For best Breeding Sow, premiums,	\$8, \$5
For best Litter of Weaned Pigs, premiums,	\$8, \$5

NOTE.—Litters of Weaned Pigs must be not *less* than four in number, between two and four months old.

SECOND CLASS. Small breeds, such as Suffolk, Essex, Small Yorkshire, China, and any other breed or grade weighing less than 300 lbs. at maturity, same premiums as in First Class.

SHEEP.

For best flock, not less than ten in number, premiums,	\$10, \$6
For best Buck, premium,	\$8
For best lot of Lambs, not less than four in number, between four and twelve months old, premium,	\$4

POULTRY.

For the best pair of Light Brahmas, Dark Brahmas, Buff Cochins, Partridge Cochins, Black Cochins, White Cochins, Plymouth Rocks, Dominiques, White Leghorns, Brown Leghorns, Dominique Leghorns, Black Spanish, Hamburgs, Polish, Games, Dorking, Bantams, Black, White and Mottled Javas, Wyandottes, White Wyandottes, Andalusian, Erminet, Langshangs and Frizzle, each, premiums, \$2, \$1

Chickens of above varieties, premiums, \$2, \$1

For the best breeding pen of each variety—Diploma of the Society.

Premiums shall be awarded on a score of not less than 176 points for first premium and 166 points for second premium.

Best lot of Geese, Ducks, Turkeys, premiums, \$2, \$1

For the best coop of 10 or more Fowls exhibited, whether thoroughbreds crossed or mixed, with an account for one year, showing cost of keeping, production and profit, premium, \$5

For the best pair of *dressed* Fowls, Chickens and Ducks, premium, \$2

For the best dozen of Eggs, no more and no less than twelve in number exhibited, premium, \$1

Any exhibitor interfering with the Judges in the discharge of

their duties or interfering with, or handling any specimen on exhibition, other than his own, shall forfeit all claim he may have in the premium list.

All breeds exhibited separately and to be judged by the rules of the "American Standard of Excellence."

PLOUGHING.

GENERAL NOTE ON PLOUGHING. Stags are excluded. Teams must be entered in the names of their owners, and only double ox-teams to have drivers. A team consisting of one pair of oxen and a horse will be considered a double team. The owners of separate teams may unite the same and be allowed to compete for premiums. The ploughmen and drivers must have been residents of the County at least three months before the exhibition. Those who intend to be competitors must give notice to the Secretary on or before Saturday previous to the Show. The lands will be staked, but each ploughman will be required to strike out his own land. Ploughmen with land-side ploughs are to back furrow three furrows on each side of the stakes set, the last furrow to be of the depth required in the class. Ploughmen with swivel ploughs to turn the outside of their furrows to the stakes on one side, and to finish one foot from the stake on the other. Committees to note and report the kind of plough used.

PLOUGHING—DOUBLE TEAMS.—For the best performance of Ploughing, one-sixth of an acre, at least eight inches deep, premiums, \$12, \$10, \$9, \$8

PLOUGHING—SINGLE TEAMS.—For the best performance in Ploughing, one-sixth of an acre, at least six inches deep, premiums, \$10, \$9, \$5

PLOUGHING—WITH HORSES.—For the best performance with any form of Plough, except Swivel, one-sixth of an acre, at least six inches deep, premiums, \$10, \$7, \$5

PLOUGHING WITH THREE OR FOUR HORSES.—Eight inches deep with three horses without driver, premium, \$10

With four horses with driver, premium, \$10

PLOUGHING—SWIVEL PLOUGH.—For the best performance, one-sixth of an acre, either with double or single ox-team, double teams, at least eight inches deep, single teams six inches, premiums, \$12, \$10, \$8

Horse teams, consisting of two horses, ploughing at least six inches deep, premiums, \$10, \$6

PLOUGHING—SULKY PLOUGH.—For the best performance, taking into account ease of draft, amount and quality of work, premiums, \$10, \$8

AGRICULTURAL IMPLEMENTS.

For the best collection of Implements and Machines, (no article offered in *collection* will be entitled to a separate premium)

Best Market Wagon, premium, Diploma and \$10 \$5

Best Farm Wagon for one or two horses, premium,	\$3
Best Horse Cart, premium,	\$5
Best Hay, Straw, or Corn Cutter, premium,	\$1.50
Best Ox Yoke, complete, premium,	\$1.50
Best Fruit Evaporator, with sample of work, premium,	\$5
Best set of Horse Shoes, including those for over-reaching, interfering, and stumbling horses, premium,	\$5
For implements not specified, to be awarded by the Committee, premium,	\$40

No premium or gratuity will be awarded for any Mower, Horse Rake, Tedder, or other Machine or Implement, the merit of which can be known only by actual trial in the field; but manufacturers are invited to offer the same for exhibition and inspection.

CARRIAGES.

For Carriages, built in the County, and exhibited by the manufacturer, a diploma, and thirty dollars in gratuities, may be awarded by the Committee.

IN EXHIBITION HALL.

Committees on articles exhibited in the hall should be specially careful that the premium cards issued correspond with the names and sums in the reports to the Society.

DAIRY.

For best specimens of Butter made on any farm within the County, the present year, samples not less than five pounds to be exhibited, with a full account of the process of making and management of the Butter, premiums, \$10, \$8, \$6

For best specimens of New Milk Cheese, made on any farm in the County, the present year, samples of not less than fifty pounds to be exhibited, with statement in writing of the method of making and preserving the same, premiums \$8, \$6, \$4

NOTE.—Each lot presented for premium and the statement accompanying it, must be numbered, but not marked so as to indicate the claimant; any public or known mark must be completely concealed; nor must the competitors be present at the examination.

To the person who shall furnish to the Society satisfactory evidence of the greatest amount of Butter made from any quantity of milk, being the whole produce of any single cow, for the first week of June, July, August and September next, stating

the whole amount of Butter produced in each week, and also the time when the cow dropped her last calf, and her feed and management all to be taken into account in making the award, premiums, Diploma and \$10, \$5

NOTE.—The object in offering this last premium is to elicit inquiry as to the value and quality of milk for the production of butter. As far as practicable it is desirable that the race and pedigree of the cow should be given.

BREAD, HONEY AND CANNED FRUIT.

For White Bread made of wheat flour and raised by yeast, premiums, \$3, \$2, \$1

For yeast bread made from Graham flour, premiums, \$2, \$1

For yeast bread made from other grains, or other grains mixed with wheat, premiums, \$1.50, \$1

All bread, entered for premiums, to be in loaves weighing not less than one pound each, and to be not less than 24 hours old, also to have a full written statement over the signature and address of the maker, stating the kind of flour used, quantity of each ingredient, how mixed and length of time kneaded and raised, *which statements on all premium bread are to be sent to the Secretary with report of the Committee for publication.*

For first and second best display of Bees, Hives and Aparian Implements, to be accompanied with a description of the bees, hives, etc., number of hives in use and amount of surplus honey taken from them during the season, premiums, \$5, \$3

First and second best Honey, ten pounds in comb and one pound of same extracted, made in the County, with statement signed of kind of bees and hive and time of year when honey was made, premiums, \$3, \$2

For first and second best collection of Pickles, Preserved Fruits, and Jellies, made from products of the County, *when premiums are awarded, the method of making to be sent to the Secretary by the Committee for publication.* Premiums, \$3, \$2

For the first and second best five pounds of Dried Apples, grown and dried within the County, with statement of process used and amount of labor and time required in preparing and drying, *such statement on premium fruit to be given to the Secretary for publication,* premiums \$3, \$2

In addition to the above, are placed in the hands of the Committee for gratuities on other articles entered in this department, products of this County deemed worthy, \$5

FRUIT.

All fruit must be entered in the name of the *producer*, and each exhibitor must certify to the same on the Entry Book, or

lists of the varieties of each class of fruit, to be filed when entry is made. (Committees are not authorized to make awards to those who do not comply with this rule.)

Tables will be labeled in a *conspicuous manner* by the hall committee, *before the entry of Exhibitors*, with the names of fruit, for which premiums are offered. all others of same class of fruit to be labelled miscellaneous. Exhibitors must place their several varieties of each class of fruit where indicated by such labels, or be considered by the committee as not competing for premium.

Plates of 24 specimens of fruit, when premiums are offered therefor, must be entered and placed by the exhibitor on the table assigned for the exhibit of that class of fruit.

To entitle exhibitors to receive premiums and gratuities awarded, they are required (when requested by the committee) to give information in regard to the culture of their fruit.

PEARS.

For best twelve specimens of the following varieties, which are recommended for cultivation in Essex County: Bartlett, Belle Lucrative, Beurre Bose, Beurre d' Anjou, Duchess d' Angouleme, Dana's Hovey, Lawrence, Louise Bonne de Jersey, Maria Louisa, Onondaga, Paradise d' Automne, Seckel, Sheldon, Unbaniste, Vicar of Winkfield, Beurre Langlier, Howell, Beurre Hardy and Beurre Clairgeau, each, \$3

Doyenne d' Ete, Beurre Gifford and Clapp's Favorite (ripening early) are recommended for cultivation, but no premium is offered.

For each dish of twelve best specimens of any other varieties deemed worthy by the committee, \$1.50

For best dish of Pears, not less than twenty-four specimens, premium, \$6

In addition to the above, are placed at the disposal of the committee, to be awarded in gratuities of not less than \$1 each, \$20

APPLES.

For best twelve specimens of the following varieties, which are recommended for cultivation in Essex County: Baldwin, Danvers Winter Sweet, King of Tomkins Co., Granite Beauty, Red Russet, McCarty, Tolman's Sweet, Bailey's Sweet, Drap d' Or, Hubbardston Nonesuch, Hurlburt, Porter, Pickman's Pippin, Roxbury Russet, Rhode Island Greening, Sweet Baldwin, Gravenstein, Hunt's Russet, Smith's Cider, premium for each, \$3

Red Astrachan, William's Favorite, Tetofsky and Sweet Bough are recommended for cultivation, but no premium is offered. (ripening early.)

For best twelve specimens of any other varieties deemed worthy by the committee, premium for each, \$1.50

For best twenty-four specimens of any variety, Apples, \$6

For best twenty-four specimens of any variety of Crab Apple deemed worthy by the committee, \$1.50

In addition to the above, are placed at the disposal of the committee, to be awarded in gratuities of not less than \$1 each, \$20

PEACHES, GRAPES AND ASSORTED FRUITS.

For best nine specimens of Freestone White Flesh, Yellow Flesh, Essex County Seedling, each, \$2

For best collection of Peaches, premium, \$3

For best four bunches of Concord, Worden's Seedling, Brighton, Hartford Prolific, Delaware, Martha, Moore's Early, Niagara, each, \$3

For best exhibition of Cold House Grapes, produced with not over one month's artificial heat, premiums, \$6, \$4

For best collection of ten varieties, not less than ten pounds, premium, \$7

For best specimens of four bunches of other varieties deemed worthy by the committee, premium, \$1.50

For best basket of Assorted Fruit, premiums, \$4, \$3

In addition to the above, are placed at the disposal of the committee, to be awarded in gratuities of not less than 50 cents each, \$25

FLOWERS.

For best display of Foliage Plants in pots, at least ten specimens, premiums, \$3, \$2

For best pair of Parlor Bouquets of choice flowers, premium, \$3

For best pair of Hand Bouquets of choice flowers, premium, \$2

For best display of Cut Flowers, premiums, \$3, \$2

For best four Ferns in pots, premium, \$1

For best four Gloxinias, in pots, premium, \$1

For best four Coleus in pots, premium, \$1


For best specimen of any species of Begonia in pot, premium, \$1

For best grown Pot Plant of any species, not from a greenhouse, premium, \$1

For best Bouquet of Garden Flowers, premium,	\$1
For best arranged Basket of Garden Flowers, premium,	\$1
For best twelve garden Dahlias, six varieties, premium,	\$1
For best twelve Bouquet Dahlias, six varieties, premium,	\$1
For best twelve Single Dahlias raised from seed by exhibitor, premium,	\$1
For best twenty-four Asters, six varieties, premium,	\$1
For best twelve Carnation Pinks, four varieties. premium,	\$1
For best twelve spikes of Gladiolus, four varieties, premium,	\$1
For best twenty-four Petunias, six varieties, premium,	\$1
For best twenty-four Verbenas, six varieties, premium,	\$1
For best twenty-four Double Zinnias, four varieties, premium,	\$1
For best twenty-four French and African Marigolds, six varieties, premium,	\$1
For best twelve Calendulas or Pot Marigolds, two varieties, premium,	\$1
For best twelve Japan Lilies, two varieties, premium,	\$1
For best twelve trusses of Geraniums, four varieties, premium,	\$1
For best twelve trusses of Garden Phlox, four varieties, premium,	\$1
For best collection of Drummond's Phlox, six varieties, premium,	\$1
For Mourning Bride, four varieties, premium,	\$1
For Nasturtiums, four varieties, premium,	\$1
For Pansies, six varieties, premium,	\$1
For Everlastings, six varieties,	\$1
For Garden Annuals, six specimens of at least ten varieties, premium,	\$1
For Roses, three varieties, premium,	\$1
For best Floral Design of choice flowers, premium,	\$2
For best collection of Native Plants, to be marked with the correct botanical and common names, and neatly displayed in separate bottles, premiums,	\$5, \$3
For best arrangement of Native Flowers and Autumn Leaves, premium,	\$2
In gratuities to contributors in this department, as the articles may seem to merit, will be awarded,	\$20
1. Every plant or flower entered for premium (except native flowers) must be grown by the exhibitor.	
2. No premium shall be awarded unless the specimens exhibited are of average excellence and worthy of such premium.	
3. No specimen entered for one premium shall be admitted in competition for another different premium.	

VEGETABLES.

Beets—For best twelve specimens, Eclipse and Dewing, premium, each,	\$3
Carrots—For best twelve, short top long Orange and Danvers Intermediate, premium, each,	\$3
For best twelve, Short Horn Orange Carrots, premium,	\$2
Mangold Wurtzels—For best six specimens, premium,	\$3
Flat Turnips—Twelve specimens. For best Purple Top and White Flat, premium, each,	\$3
Ruta Bagas—Twelve specimens. For best Yellow and White, premium, each,	\$3
Parsnips—For best twelve specimens, premium,	\$3
Onions—One peck. For best Danvers, Yellow Flat and Red, premium, each,	\$1
Potatoes—One peck. For best Early Rose, Beauty of Hebron, Clark's No. 1, Pearl of Savoy, Early Maine, premium, each,	\$3
Cabbages—For best three specimens Savoy, Fottler's Drum-head, Stone Mason Drumhead, Red Cabbage, each, premium,	\$3
For next best, each, premium,	\$2
Cauliflowers—For best three specimens, premium,	\$3
For next best, premium,	\$2
Celery—For best four roots, premium,	\$2
Sweet Corn—For twelve ears ripest and best Early, premium,	\$3
For best twelve ears in milk, Late, premium,	\$3
Squashes—For best three specimens Marrow, American Turban, Hubbard, Marblehead, Essex Hybrid, premium, each,	\$3
Melons—For best three specimens Nutmeg, Musk, Cassaba, each, premium,	\$2
For best two specimens Watermelons, premium,	\$2
Tomatoes—For best twelve specimens Round, Flat, Spherical, Essex Hybrid, or any other variety, each, premium,	\$3
For exhibition of greatest variety, premium,	\$3
Cranberries—For peck cultivated, premiums,	\$3, \$2, \$1
For best collections of vegetables, premiums,	\$8, \$6
Placed at the disposal of this committee for whatever appears meritorious,	\$30

 No competitor for premium to exhibit more or less number of specimens of any vegetables than the premiums are offered for.

Collections of Vegetables. where premiums are offered for a number of varieties, must be entered and placed by themselves on the tables assigned for collections. No collection shall receive but one premium. Specimens of any

variety in such collections are not to compete with specimens of the same variety placed elsewhere. Exhibitors of such collections, however, are not prevented from exhibiting *additional* specimens of any variety, with and in competition with like variety.

Size of Vegetables.—Turnip Beets to be from 3 to 5 inches in diameter; Onions, 2 1-2 to 4 inches in largest diameter; Potatoes to be of good size for family use; Squashes to be pure and well ripened—Turban, Marrow, Hubbard, Marblehead, each to weigh 8 to 12 lbs.

GRAIN AND SEED.

For best peck of Shelled Corn, Wheat, Oats, Barley,	
Rye and Buckwheat, each, premium,	\$1
For best 25 ears of Field Corn, premiums,	\$5, \$3, \$2
For best 25 ears of Pop Corn, premiums,	\$3, \$2
For best collections of Field and Garden Seed, premiums,	\$8, \$5

All grain or seed must have been grown in the County to receive premium.

DOMESTIC MANUFACTURES.

Contributors must deposit their articles at the Hall before 11 o'clock on the first day of the Exhibition. Articles not thus deposited will not be entitled to a premium. Gratuities will be awarded for articles of special merit, for which no premium is offered; but no premium or gratuity will be awarded for any article manufactured out of the County, or previous to the last Exhibition of the Society.

COUNTERPANES AND AFGHANS.

For best Wrought Counterpanes having regard to the quality and expense of the material, premiums, \$4, \$2

Gratuities will be awarded for articles belonging to this department, the whole amount of gratuities not to exceed \$25

CARPETINGS AND RUGS.

For best Carpets, having regard to the quality and expense of the material, premiums, \$4, \$2

Best Wrought Hearth Rug, having regard both to the quality of the work and expense of the material, premiums, \$3, \$2

Gratuities will be awarded for articles belonging to this department, the whole amount not to exceed \$25

ARTICLES MANUFACTURED FROM LEATHER.

For best pair hand made and machine made Men's Boots, Women's do., Children's do., each, \$2

Best Team, Carriage and Express Harness, each, \$5

\$10 are placed at the disposal of this committee, to be awarded in gratuities.

For the best exhibition of Boots, and Shoes manufactured in the County, each, Diploma of Society.

MANUFACTURES AND GENERAL MERCHANDISE.

For best display of Bonnets, premiums, \$4, \$2

Best specimen of Horn Combs, not less than one dozen, premium, \$3

At the disposal of the committee in this department, to be awarded in gratuities not exceeding \$3 in any one gratuity, \$20

FANCY WORK AND WORKS OF ART, and other articles of Domestic Manufacture not included in the above.

At the disposal of the committee in this department, to be awarded in gratuities not exceeding \$3 in any one gratuity, \$50

WORK BY CHILDREN UNDER TWELVE YEARS OF AGE. For best specimens of work performed by children under 12 years of age, exhibiting industry and ingenuity, premiums, \$3, \$2

At disposal of committee to be awarded in gratuities, \$10

LIST OF PREMIUMS TO BE AWARDED BY THE TRUSTEES IN NOVEMBER.

FARMS.

Competitors for these premiums must give notice of their intention to the Secretary on or before June 15th, and the farms entered for premium will be viewed by the committee twice during the year. Crops growing on farms that are entered for premiums, cannot be entered with another committee for separate premiums—except specimens exhibited at the Fair. Any person desirous of having his farm inspected, without entering it for premium, may make application to the Secretary, and it will be viewed and reported upon by the committee.

Any person entering his farm for premiums, may apply to the Chairman of the Committee on Farms, for the appointment of a sub-committee of not less than five in number, to visit his farm and report upon the same.

For the best conducted and most improved farm, taking into view the entire management and cultivation, including lands,

buildings, fences, orchards, crops, stock, and all other appendages, with statements in detail, relating thereto, premium, \$30

IMPROVING WET MEADOW AND SWAMP LANDS.

For best conducted experiments relating to wet meadow or swamp lands, on not less than one acre, the course of management, and the produce, etc., for a period of two years at least, to be detailed, with a statement of all the incidental expenses, premiums, \$15, \$10

IMPROVING PASTURE AND WASTE LANDS.

For best conducted experiments in renovating and improving pasture land, other than by ploughing, so as to add to their value for pasturage, with a statement of the same, premiums, \$15, \$10

For best conducted experiments in renovating and improving waste lands, so as to add to their agricultural value, with statement of the same, premiums, \$15, \$10

No premium to be awarded to any person for a repetition of an experiment in meadow, swamp or pasture lands, for which he has already received a premium.

UNDER-DRAINING LAND.

For best conducted experiments in under-draining land, regard being had to the variety of soil, sub-soil, and other local circumstances, premiums, \$15, \$10

MANURES.

For most exact and satisfactory experiments, in the preparation and application of manures, whether animal, vegetable or mineral, premiums, \$15, \$10

COMPARATIVE VALUE OF CROPS AS FOOD FOR CATTLE.

For most satisfactory experiment upon a stock of cattle, not less than four in number, in ascertaining the relative value of different kinds of fodder used in feeding neat stock for milk and other purposes, with a statement in detail of the quantity and value of the same, as compared with English hay, premium, \$25

FATTENING CATTLE AND SWINE.

For most satisfactory experiments in fattening Cattle or Swine, with a statement in detail of the process and result, premiums, \$10, \$5

GRAIN AND OTHER CROPS.

Claimants on Grain and Root Crops will be required to state the size of the piece of land, when they enter, and conform to the following rules: Entries of Grain Crops to be made on or before September 10th; Root Crops on or before October 10th; giving ample time for the crops to be examined by the committee before harvesting. Statement, to be made in conformity with the following form, must be forwarded to the Committee previous to November 1st.

All calculations and figures given in reports of, and statements of Crops are to be made on the *basis of an acre*, results, in all cases, to be given at the rate per acre.

In pursuance of authority delegated to the Board of Agriculture, by Chap. 24 of Acts of 1862, Agricultural Societies receiving the bounty of the State are required to make use of the following form, and be governed by its conditions in the mode of ascertaining the amount of crops entered for premium.

ESSEX AGRICULTURAL SOCIETY.—Statement concerning a crop of——, raised by Mr.——, in the town of——,——, 1887.

What was the crop of 1885? What manure was used and how much? What was the crop of 1886? What manure was used and how much? What is the nature of the soil? When, and how many times ploughed, and how deep? What other preparation for the seed? Cost of ploughing and other preparation? Amount of manure, in loads of thirty bushels, and how applied? Value of manure upon the ground? (What amount of Commercial Fertilizer used? How used? Value of same when applied?) When and how planted? The amount and kind of seed? Cost of seed and planting? How cultivated, and how many times? Cost of cultivation, including weeding and thinning? Time and manner of harvesting? Cost of harvesting, including the storing and husking or threshing? Amount of crop, etc. Signed by ——, Competitor.

The committee, to whom is entrusted the award of the premiums on field crops, may award them according to their judgment, but for the purpose of furnishing accurate statistics for the benefit of agriculture, shall select certain of the crops, and require the owners thereof to measure the land and weigh the crops accurately, giving to the committee a certificate of the same, and give all possible information thereon over their own

signatures, and return the same to the Secretary of the Society, to be published in the annual transactions.

In ascertaining the amount of crop, any vessel may be used and the weight of its contents once, multiplied by the number of times it is filled by the crop.

In measuring the land, or weighing crops, any competent person may be employed, whether a sworn surveyor or not, and must give certificate.

The certificates shall state the weight of all crops only in a merchantable state.

In ascertaining the amount of a hay crop entered for premium, the measurement of the hay in the barn may be employed.

RULES OF MEASURE PRACTICED AND ADOPTED BY THE STATE BOARD OF AGRICULTURE.

Wheat, Potatoes, Sugar Beets, Ruta Bagas, Mangold Wurtzel,	
White Beans and Peas,	60 lbs. to bush.
Corn, Rye,	56 " "
Oats,	32 " "
Barley, Buckwheat,	48 " "
Cracked Corn, Corn and Rye, and other meal, except Oats,	50 lbs. to bush.
Parsnips, Carrots,	55 " "
Onions,	52 " "

1. For the best conducted experiments of Rye, not less than twenty bushels to the acre, fifty-six pounds to the bushel, on not less than one acre, premiums, \$10, \$5

2. For best conducted experiments of Wheat, not less than thirty bushels to the acre, sixty pounds to the bushel, on not less than one acre, premiums, \$10, \$5

3. For best conducted experiments of Oats, not less than fifty bushels to the acre, thirty-two pounds to the bushel, on not less than one acre, premiums, \$10, \$5

4. For best conducted experiments of Barley, not less than forty bushels to the acre, forty-eight pounds to the bushel, on not less than one acre, premium, \$10, \$5

5. For best conducted experiments of Indian Corn, not less than one acre, premiums, \$10, \$5

6. For largest quantity and best quality of English Hay, on not less than one acre, regard being had to the mode and cost of cultivation, premiums, \$10, \$5

7. For best yield of Field Beans, on not less than half acre, and not less than twenty-five bushels per acre, premiums, \$10, \$5

ROOT CROPS.

1. For best conducted experiments in raising Carrots, fifty-five pounds to the bushel, premiums, \$10, \$5
2. For best conducted experiments in raising Parsnips, fifty-five pounds to the bushel, premiums, \$10, \$5
3. For best conducted experiments in raising Ruta Bagas, sixty pounds to the bushel, premiums, \$10, \$5
4. For best conducted experiments in raising Mangold Wurtzels, sixty pounds to the bushel, premiums, \$10, \$5
5. For best conducted experiments in raising Sugar Beets, sixty pounds to the bushel, premiums, \$10, \$5
6. For best conducted experiments in raising Onions, fifty-two pounds to the bushel, premiums, \$10, \$5
7. For best conducted experiments in raising Potatoes, sixty pounds to the bushel, premiums, \$10, \$5
8. For best conducted experiments in raising Cabbages, premiums, \$10, \$5
9. For best conducted experiments in raising Squashes, premiums, \$10, \$5
10. For best conducted experiments in raising Summer English Turnips for the market, premiums, \$10, \$5

Raised on not less than half an acre, and the quantity of crop to be ascertained by weight, so far as practicable, the crops to be free from dirt, without tops, and in a merchantable condition at the time of measurement.

Claimants for premiums on Grain or Root Crops must forward statement to chairman of committee before Nov. 1st.

FOREST TREES.

1. For best plantation of either of the following species of forest trees, viz.:—White Oak, Yellow Oak, Locust, Birch, White Ash, Maple, Walnut, or White Pine, not less than three years old, and not less than 1000 trees, premium, \$20
2. For best do., of not less than 600 trees, premium, \$10
3. For best lot of ornamental trees, ten or more set on any street, road or farm, and cared for five years, premium, \$10

CRANBERRIES.

For best conducted experiment in the cultivation of the Cranberry, at least two summers, on not less than twenty rods of land, with written statement of the quantity and quality of land, expense of planting, weeding and culture, and amount of crops produced. Premium to be paid in 1887 or 1888, \$15

For best experiment do., on not less than ten rods of land,
premium, \$10

For best do., on not less than five rods of land,
premium, \$10

STRAWBERRIES AND OTHER SMALL FRUITS.

For best crop of Strawberries, on not less than twenty rods
of land, expense of planting, culture, crop, etc., stated in writ-
ing, premium, \$10

For best crop Currants, Raspberries and Blackberries, with
statement as above, premiums, each, \$10

NEW WINTER APPLES.

For a new variety of Winter Apple, originated in this Coun-
ty, equal to the Baldwin, premium, \$100

For a new variety of like character originating elsewhere, *pro-
vided* it has been cultivated in the County sufficiently to prove
it equal to the Baldwin for general purposes, premium, \$20

For a successful experiment in destroying the codling moth
and other worms destructive to the apple, premium, \$25

SEEDLING POTATOES AND EXPERIMENTS.

For best Seedling Potato, originating in Essex County, to
equal in yield, earliness and quality, the Early Rose, and to
surpass it in one or more of these particulars, premium paid af-
ter three years trial, \$25

In testing the value of a seedling Potato, the committee are
instructed to take the sworn testimony of the cultivator with
regard to the yield, after having inspected the crop.

For the most satisfactory experiment to extend through five
consecutive years, to settle the following facts relative to rais-
ing potatoes :—premium, \$50

1st. Will whole, medium sized Potatoes, yield better results
than pieces cut to two eyes?

2d. What will be the result of continuously planting small-
sized potatoes of the same strain a series of years?

3d. Difference between hilling and flat cultivation.

4th. Effect, if, any, of cutting off seed ends before planting.

5th. Effects of deep and shallow planting.

6th. Raising from sprouts alone from same strain.

7th. Can potatoes having dwarf vines be planted nearer than
others.

8th. Best distance apart for seed in the drill.

9th. To show the effect of covering the top with earth at several times after they had come up.

To be raised on not less than a half-acre of land, uniform in character, and all to receive the same kind and quality of manure and cultivation, and to be inspected by the committee at the time of gathering the crops.

NEW MEMBERS.

For the person who obtains the largest number of new members for the Society from any Town or City before the first day of November next, \$6

NOTE.—Names of new members, with name of person procuring them, can be sent as fast as obtained, to the Secretary of the Society, who will make a record of them.

Persons paying three dollars will receive a "Certificate of Membership," which is for life. No fines or assessments are ever imposed and members are entitled to vote in all its transactions, with free use of the Library and a copy of the publication of the Society each year.

ESSAYS AND FARM ACCOUNTS.

The Essays must be transmitted to the Secretary by the 1st of November, with sealed envelopes containing the names of their authors, respectively, which shall not be opened by the committee, nor shall the names be known to the committee until they shall have decided upon the merits of the Essay.

For best original Essays on any subject connected with Agriculture, in a form worthy of publication, premiums,

\$15, \$10, \$8

For best statement of Actual Farm Accounts, drawn from the experience of the claimant, in a form worthy of publication, premium, \$10

For best Reports of Committees, who report upon subjects for which premiums are offered by the Society, premiums,

\$10, \$8, \$6

For best Statements of Exhibitors, premiums, \$8, \$4

COMMITTEES.

Committees for Judges, and Arrangements for the next Cattle Show and Fair, are chosen at the Trustees Meeting in June next.

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TRANSACTIONS
FOR THE YEAR 1887,
OF THE
Essex AGRICULTURAL SOCIETY,
FOR THE
COUNTY OF ESSEX,
IN MASSACHUSETTS.

WITH THE
Sixty-Fifth Annual Address,
BY
WILLIAM COGSWELL, M. D.,
OF BRADFORD.

PUBLISHED BY ORDER OF THE SOCIETY.

SALEM, MASS.:
SALEM OBSERVER BOOK AND JOB PRINT.
1887.

ADDRESS.

Mr. President:—I propose to speak in a practical way of our Indebtedness to the Farm. My subject might well be suggested by the display which is this day made by the farmers of Essex. These fruits and flowers, tempting to the taste, give us some notion of what the earth yields to furnish our tables and gladden our homes. No one can look on the wonderful variety of Nature's gifts, without gratitude. We may well take satisfaction and be filled with honest pride as we behold the lowing herds, the bleating flocks, the patient ox, the knowing horse, and not the least the fowls that give grace and beauty to every well appointed farm. It is a grand procession that has come up through all the thoroughfares of Essex to join in this farmers' holiday, and everything we see is a testimony to the fact that Nature is always rendering tribute to man. This exhibition of machines and tools, and instruments, shows the skill and wisdom of man in devising ways of gaining more largely and with greater ease the products of the earth. We are impressed with the fact that these gifts are so abundant that we may never exhaust the bounty of Nature. Every year great harvests grow out on the prairies, which all the power of man could never cut and garner without the use of the reaping machine and the thresher. When the earth is honestly tilled, it becomes a problem which exhausts our skill to know how to gather and transport

the products. It is sometimes said that the former times were better than these, and desponding men think the race is deteriorating; but if our fathers of blessed memory ever had better fruits of husbandry, better cows, or horses, or swine, better needlework, or bread, or sweeter butter, or more delicious sweetmeats, they have left no record of the happy day when they showed them. Heaven be praised! that the mantle of the fathers has fallen on their children; early vigor of New England life has not entirely passed away with the generations that have gone.

THE BLESSING OF HEALTH.

The first indebtedness of which I shall speak is for the health which comes so naturally to the farmers' employ. What constitutes health? It is not the simple absence of pain or disease. It is not to be defined by negatives. Health is the vigor of strong muscles, which make the man robust in action, elastic in step, ready for duty, able to overcome obstacles and to grasp and hold for advantage the blessings which are always within the reach of him who has power to take them. Ability always finds opportunity. Health is in the vigorous lungs which take in freely the pure air of heaven, fill the blood with oxygen, cleanse it from the constant waste of the system; and in the steady pulse which sends the cleansed current as a red river of life through the whole body, giving constant renewal of strength, and grace, and beauty to every part. Health is the power to take the good things of God and digest and assimilate them for all the uses of our manifold life; what is a man good for who has not a good digestion?

Health is the potency of the brain, transmitting its

force along the nerve currents, marshalling the powers of mind and body, so that the will of man is supreme in its control, and every muscle and organ and faculty moves at its command. The mysterious relation of brain and nerves to the healthful activities can never be explained, but the fact is not to be doubted that in a condition of health the brain rules in the conscious and the unconscious action of the whole body. It is often said that the mind is diseased, but the truth commonly is that the brain is affected, so that it cannot act for the mind either in transmitting its commands or in its equally important unconscious influence along the lines of the nerves in controlling digestion, in helping on in the assimilations and secretions, and even in the circulation of the blood. A weak or sickly brain brings inefficiency into all our actions, and enfeebles and distorts the best energies. Now I raise the question, where would you send a man to gain strong muscles, a vigorous digestion, and the healthful activity of lungs, and heart, and brain, if it be not to the labor which is under the open heavens, and to feed without restraint upon the best bounties of God, which come from the well kept farm.

I need hardly say that health is essential to our joy. It is the thing we seek after with great longing. The ancient Alchemist sought in vain to change all things into gold. There is a modern Alchemist who not only seeks for the great panacea, but claims to have found it, and the world is full of his boasts, and men and women in countless numbers are seeking for the blessings of his healing art. They search for health along all avenues, by all remedies and arts, and in all climes. This desire is emphasized by the miseries of a ruined body, whose aches and pains are so many voices always crying out to

be whole again. And every honest physician will testify that it is infinitely easier to preserve our health and develop it, than it is to restore it when lost. In the increasing wisdom of our times, it has come to be understood that health of body is necessary for all classes. There was a time when sickly boys were turned into the professions. The unhealthy body, which could not endure the work of the farm, might still be of service in the study. That fallacy has passed away. We now send sickly men out of the professions to the farm. We send sick ministers and doctors as we do broken down horses, "out to grass," and we send into the professions the strongest men we have. We look for a sound mind in a healthy body. We believe in a sturdy, honest, hardy piety, which is able to do the will of God as well as to long for something spiritual. A vigorous brain needs good digestion. A dyspeptic stomach breeds morbid thoughts. Whatever wastes the energies, depraves the mind. Disease is not confined to the body, but it preys on the sensibilities and the intellect, and destroys the glory of life. It is not strange, then, that men long for health. I claim that the conditions of health are best secured by the farmer. He breathes God's pure air, and that air is not mingled with the dust of the mill, or the contagion that lurks in the crowded streets and alleys. He breathes the air fresh from the hills, cleansed by every shower, fragrant with the breath of heaven ; pure air, full of oxygen, which reddens the blood, and sends it with living power to give strength and glowing beauty to the whole body. The farmer does not work behind some wall which hides the sun ; his labor is where the sunlight paints the flower, and fills the apple boughs with crimson, and adds the purple to the luscious grapes.

He feeds on the bounties of God. The earth yields to him its fruit in its freshness. Good food is essential to health. Give me the natural products, not the result of the laboratory; well grown, well ripened grain and fruit, clover honey, and clover butter, instead of flavored glucose and oleomargarine; golden syrup from the sugar maple and the cane, instead of the gift of the chemist; water from heaven, distilled from the clouds, percolating through the earth and babbling in the living stream.

HEALTHFUL EXERCISE.

I am not forgetful of the hard labor and frequent exposure of farm life, when I say that the farmer has the best possible exercise. This body of ours must be used if we would have it healthy. The spring that is in perfect rest becomes stagnant; the air that never moves is filled with germs of disease—so God makes the living spring, which never rests, and sends the winds which ventilate the world, and keep the waters of the ocean as a reservoir of health, which otherwise were a pool of death. The muscle of your arm must be used, or it will lose its power; everything must act. It must be evident that the farmer's life gives exercise to the whole body. The simplest tool of husbandry serves a double purpose, reaching the present aim, and developing also the hand of him that uses it. More honorable by far in the history of man, are the implements of honest labor, than all the balls and bats and things the athlete uses in his life of sporting vanity. The aim of life is very low if it does not take in some purpose to accomplish some useful thing. The grandest motto of life is, "I live to serve." The simple development of strength of body or mind is of little consequence, if that strength does not render

service. In the early days of the civil war our army was in the process of training. The early battles resulted in defeat. But the army grew stronger with every reverse. Fidelity to duty in the hearts of our patriot soldiery was the inspiration of a new resolve in those dark days, when the fate of the nation hung in the balance. The training of the camp, the knowledge of tactics, the hardening of the body inured to hardships, were elements of strength in that contest when an invincible army moved on dauntless, through the wilderness of death, and swept over the fields of Georgia—adding victory to victory, till the battle was won and the soldiers rested at Appomattox. It was strength devoted to a grand purpose. It was the result of discipline. What is an army good for if it will not fight? What is a man worth if he shirks responsibility, fails in the time of greatest need? What is a man worth if he will not work? This is the more important, when we consider that in all things conflict is necessary in order to succeed—an easy victory means small gain. The most successful man is he who has the most to do. His fertile brain devises the plans of life: his hands carry out the things devised. You cannot gather so much gold as to be able to secure success to your son by any foundation on which you place him. Work, work, work, is the secret of all progress. Not the treadmill as in slavery, not the blind following instinct as the squirrel gathers nuts, but the work of hand and foot, guided by an active brain. The most successful nation does not live in tropical lands, where nature is most opulent with her gifts. But that nation whose ships float on every sea, whose people enter with pride the rivalries of common lives, where the soil is less productive, and nature's forces are held in re-

serve for those who work with her. The largest success lies within the secret place where nature holds her treasures ready for him who surmounts the obstacles, and earns the right and title to her gifts untold.

LABOR AND REST.

The next suggestion of our indebtedness to the farm is that it affords intervals of rest. The best condition of health is when rest and labor are so intermingled that the life is renewed for the duties of each new day. It is one of the pleasant things which the Hebrew bard sang of the gifts of God when he added to his verse, "So he giveth his beloved sleep." Rest answers a necessity of nature. It recuperates the weary body. It gives new strength to the over-taxed brain, and sends man fresh and vigorous to each new duty. Rest is a law of nature.

The trees rest. You shall see when the season is over, how the apple boughs have little buds ready formed for next year's growth. Nature forms the bud, covers it with varnish to keep out the moisture, and then the tree sleeps till it is awakened by the soft winds and the voices of birds singing in the branches in the opening spring. You can wake up that tree in the cold winter time, by bringing it within doors, but it will be like a man roused at midnight: restless and fruitless all the day. Nature teaches us the duty of rest; every shrub and herb, and tender plant, has its season of repose. The land rests. God spreads the white mantle over it, and it sleeps through its winter night. The frost disintegrates it, and loosens and lightens and tempers it, and he is a foolish farmer who tries to work the soil before nature has made it ready. The wise man watches the opening season, and at the appointed time puts in the

ploughshare which turns the black furrows to the sun, and combs the ridges with the harrow, and drops the seed into the mellow loam. The spring-time is nature's morning. The white spread vanishes, sun and shower send greetings from heaven, the buds burst, the birds sing, and a soft verdure clothes the fields. The pastures are clothed with flocks; the valleys are covered with corn.

This lesson of rest we read in the world of growing things. Man also rests from his labor. There is no scene of greater beauty than a rural landscape at the close of day. The ploughman lifts the yoke from the faithful ox; the milk-pails, brimming with foam, are brought in, and the quiet herd lie down to rest. The fowls crowd the perches; the shadows lengthen on the western hills, as the farmer gathers with his family round the evening board. The gates are closed—the bars are up; night draws the curtain, and the tired farmer sleeps. No dreams of unpaid notes disturb his slumbers. No fear of failure or unfair competition. He has done his duty; he leaves the rest to Him who sends the rain and sunshine. He rests in peace, for God giveth the increase.

THE FARM A SCHOOL OF THE INTELLECT.

There are many schools in which man is trained for duty and for life. Among them all I do not hesitate to rank as of first importance that which has its place in the unpretending home of the farmer. In the quiet beauty of every rural scene, the central object is the old farmhouse, with shade trees, and garden, and orchard, and spreading lawn. By the fireside, in that home, the farmer gives lessons of wisdom to the growing boys. With his few books and his weekly newspaper, he keeps his

mind fresh and ready for instruction. Many a lesson on political economy is given by that fireside. There the youthful hearts learn of loyalty to the country. There the mind grows in adherence to the one or the other political party; and there, too, from the gentler voice of her who reigns as queen in her ample realm, are learned those sweeter lessons of love and virtue, which make life more dutiful and more beautiful as the years go on. So the farmer's sons and daughters grow into strength and beauty, in this early school. But more than this is true. We owe our intellectual power to the soil; that is to say, our intellectual force depends on the health which is gained by a proper use of the gifts of nature. The time has passed when men think without eating. The monk lived in the desert, and starved himself as a religious duty. But his religion was as meagre as his dish. The scholastic sometimes did the same thing; but thought was fettered by hunger. His genius was spoiled by the want he suffered. He tried to get away from sense, and gain spiritual ideas; but God has ordained that we should do our work in our realm of sense, and the best trained intellect will not ignore this, and the most important endowment a man can have is common sense. With that as a conscious possession he will never starve his body to make his mind broader, or break the laws of health in order to enlarge the spiritual faculties. Take away food from a man, and his whole being suffers. Good food, pure air, honest labor, and a clear conscience will do more than all else to restore that man who has broken the laws of his being and desires to regain the lost joy. The breaking of the laws of health brings a cloud over the mind. The wit and wisdom fail, and the grasp and grip of every faculty is lost.

RELATION TO MORALS.

I will not close without suggesting that the realm of morals comes clearly into the farmer's life. A man can sometimes deal unjustly with his fellow, and escape the penalty, but he can never do that with his land.

Nature teaches honesty. A man must be honest with his farm. If you defraud your land you will suffer loss. "Nature never forgives an injury." You can never prosper if you take out of your farm its power of production and make no restitution. You may ill-treat it and rob it, and then it will refuse you its gifts. You will be unable to feast from its bounty. The duty of rendering an equivalent is one of the common of the teachings of nature. Let out your land to a man who takes off the hay, and grain, and straw, and you will soon find your land barren. The very soil cries out against the sin of robbery. The farm teaches the duty of exerting a pure influence. Mix the Canada thistle with your seed oats, or let the white daisy have free range over your fields, or admit couch-grass into your garden, and you have done an evil which the labor of a generation will hardly redeem. Resistance of evil is a duty which the farmer knows to be a cardinal virtue. So in all our human relations, it is so very easy to let in the thing that is wrong. The evil thing needs no fostering; it will nourish itself. The thistle will grow in the hedge row, or in the heart of your field. Lust will dwell in the brothel, or in the sacred inclosure of home. It will not be subdued by the curses of the one, nor by the tears and lamentations of the other. You are not only dropping seed into the ready soil, but you are sowing the seed of character in the minds of all about you, especially in the hearts of children, who take the type of character from your ex-

ample and teaching. Be careful to sow good seed, which shall spring up in a harvest which shall bless the world.

The future citizenship of the land depends largely on the nature of the farmer's home.

The yeomanry of the land is large. It is homogenous, conservative. It is self-poised, independent, gifted with energy and power. It is intelligent and far-sighted. If it may perpetuate itself in the honesty, and integrity, and courage, and fidelity of the rising generation all the interests of the Commonwealth are assured. All other things are dependent on the farmer. The farm is the basis of all wealth and civilization. Take away its fertile meadows and sweet pastures, its well-kept fences and appointments; destroy its pure sod, and scatter its choice blooded stock; tear down the home-like farm-house, and trample the garden, and cut away the orchard,—and you have done what you can to destroy all that is blessed in the old Commonwealth. Destroy the farms that send these choice products which grace this day, and society would relapse into the age of Nomadic tribes; cities and commercial marts would be silent as the sand-covered palaces of Ninevah; business industries would be deserted, and all arts would fail. Manufactures are only the handmaids of agriculture. The smoke of the forges, the hum of the factories, the incessant heart beat of the engines, the railway thoroughfares—those great arteries of the republic,—are only the movements of our national life, which have their inspiration from the cultivation of the soil, which is the basis of all. Countless trains of coal, that light the fires on the hearth-stones of the nation's homes; petroleum, which changes darkness into day; wheat, and corn, and barley, and oats, and rye, which feed the people of our land, and the starved mil-

lions over the sea,—are all alike the gifts of God in nature. The vastness of the farmers' industry may be computed, but the aggregate is larger than our power of comprehension. And all this gift of nature is for the comfort, and strength, and development of man. The value of all social and civil institutions must always be measured by the intelligence, and virtue, and moral vigor of the freeholders of the land. Manhood has reached a rare development in our country. Property is widely distributed. The incentive which comes from the ownership of land leads to an honorable ambition. There is something for every man to hope for. The walls which in other lands divide men into classes, are not known here. Therefore, we behold, out of the ranks of the common people, the constant rise of distinguished men. They stand in the courts; they fill the places of statesmen, and jurists, and patriot soldiers. The father of his country was a farmer. Webster, and Clay, and Jefferson, and Adams, were farmers. The fathers of the Republic were your ancestors in occupation. The clergy were farmers in the early days, and if they communed more with nature to-day, there were less of useless debate about theoretical doctrines. The sturdy army that beat back the trained legions of King George, were the hardy pioneers whose strong arms had cleared the forests. We have a true pride in the development of genius. It is worth our while to study the great industries, to see what man has done. He compels the rivers to work like dray horses in the service of human industry. He stops the lightning, and bids it bear his message and bring reply. The numberless discoveries and inventions of man can only be looked upon with wonder and admiration. Thank heaven, that we have a land of boundless resources—the

happy home of a grateful people. The forests have abundant timber ; the mines of silver, and gold, and copper, and lead, and iron, are the hidden treasures ; our wheat fields, golden in harvest time ; our meadows and uplands are fertile and luxuriant, from the spring on the mountain, to the river in the valley, producing everything that ministers to the comfort of man, from the lakes of the North to the Gulf, and from the Pine Tree State to the Golden Gate. Look over the broad land. How prodigal in fruits : apples and pears, apricots, peaches, and grapes, melons, and cherries, and plums, oranges and figs, and all the humbler fruits that with crimson and purple hues, and choice, rare flavor, grace the table of the humblest man who knows the royal privilege of owning a garden of his own.

Man was created and placed in a garden, or, on a farm. The fall of our first parents were less a mystery if the Heavenly Parent had placed them in a palace, with luxury, and wardrobes, laces and corsets, perfumes and cosmetics. It shows the wisdom and love of God, that they were placed in a home which was amid a garden of sweet herbs—a blossoming paradise ; and their work was among the growing crops, which give comfort and satisfy all want. And away in the distance is a sure prophecy, and it is still a garden. The blessed days will come again, when the earth becomes a garden ; its deserts shall blossom as the rose. The wilderness shall be glad, the river of life shall water it, the tree of life shall bear its fruit, and life shall be glad forever.

SIXTY-SEVENTH

Annual Cattle Show and Fair.

The Cattle Show and Fair of this Society was held Sept. 27th and 28th, at Peabody. The exhibits on the Show Grounds fell short in number from the previous year at Newburyport, by sixty-two entries, of which shortage 28 was of Agricultural Implements, 20 of Colts, and 12 of Poultry.

The quality of the stock exhibited was in most classes, of the best, and with the Ploughing Match was successful, attractive and well attended, and it is expected it will be much more so another season.

In the Town House the exhibits were shown in two large halls and a large anti-room, and the displays made in almost every class were the best quality of the products of the farm and garden, or of skill, taste and workmanship in Domestic manufactures. The lower hall was devoted almost wholly to Vegetables, which, with 22 less entries than the previous year, made a very attractive show of excellent quality.

The Exhibition Halls were well attended, the receipts, at 20 cents admission, was \$1306.36 and the committees and others, admitted by free ticket, show an attendance of over 7000 in the hall.

On Wednesday, the second day of the Fair, a procession was formed, in the forenoon soon after eleven o'clock, of the officers, members and friends of the Society headed by the 8th Regt. Band, which proceeded from in front of the Town Hall to Peabody Institute, where the Annual Address was delivered by William Cogswell, M. D., of Bradford. Its good points have been appreciated no doubt by the reader in the preceding pages, if he

failed to hear it. After the address the procession reformed and with their ladies marched to the Rink, where the annual dinner, excellent and well served, was partaken of, followed by very instructive and entertaining speeches by the President, Benjamin P. Ware, E. W. Wood, delegate from the State Board of Agriculture, Hon. George B. Loring, of Salem, Hon. O. B. Hadwin, of Worcester, and Dr. William Cogswell, of Bradford.

The Entries in the several departments of the Fair and premiums awarded in each, are tabulated as follows :

STOCK, IMPLEMENTS, ETC., ON FREE SHOW GROUNDS.

	Entries.	From Different Places.	Amount of Premiums Awarded.
Fat Cattle,	4	4	\$26
Bulls,	10	4	44
Milch Cows,	10	4	43
Herd of Milch Cows,	1	1	18
Heifers, First Class,	7	3	35
Heifer Calves, First Class,	5	3	18
Heifers, Second Class,	17	5	28
Heifer Calves, Second Class,	3	2	7
Working Oxen and Steers,	8	3	40
Steers,	1	1	4
Town Teams,	1	1	20
Brood Mares,	10	6	20
Stallions, First Class,	3	3	18
Stallions, Second Class,	2	2	24
Family Horses,	1	1	
Gentlemen's Driving Horses,	6	5	20
Farm Horses,	9	7	22
Pairs of Farm Horses,	11	8	24
Colts for Draft Purposes,	4	3	26
Colts for General Purposes,	16	10	53
Swine, First Class,	3	1	18
Swine, Second Class,	3	2	21
Sheep,	4	1	8
Poultry,	71	10	2 Diplomas. 44

	Entries.	From Different Places,	Amount of Premiums Awarded.
Ploughing,	18	10	100
Agricultural Implements,	15	6	27
Carriages,	12	3	30
		1 Diploma.	
Total on Free Show Grounds,	255	24	\$738

IBITS IN HALL.

	Entries.	From Different Places.	Amount of Premiums Awarded.
Dairy,	8	8	\$22 00
Bread, Honey and Preserves,	61	11	27 00
Pears,	275	20	83 50
Apples,	320	25	76 50
Peaches, Grapes and Assorted Fruits,	121	15	65 50
Flowers,	70	11	43 25
Vegetables,	299	26	158 00
Grain and Seed,	35	17	31 00
Counterpanes and Afghans,	74	6	31 00
Carpeting and Rugs,	95	7	27 50
Articles manuf. from Leather,	32	4	27 00
Manufactures and General Mdse.*,	26	7	2 50
Fancy Work and Works of Art,	229	9	49 25
Work of Children under 12 years,	21	5	13 50
Total in Exhibition Hall,	1666	33	\$657 50

Grand Total, 1921 entries from 33 towns and cities of the county, all except Merrimac and Nahant, for which \$1395.50 were awarded to 359 different persons. The entries were—Amesbury, 30; Andover, 15; Beverly, 34; Boxford, 38; Bradford, 23; Danvers, 176; Essex, 40; Georgetown, 5; Gloucester, 1; Groveland, 14; Hamilton, 8; Haverhill, 44; Ipswich, 4; Lynn, 80; Lynnfield, 9; Lawrence, 23; Manchester, 7; Marblehead, 38;

Methuen, 26 ; Middleton, 39 ; Newbury, 78 ; Newburyport, 11 ; North Andover, 22 ; Peabody, 861 ; Rockport, 5 ; Rowley, 32 ; Salem, 155 ; Salisbury, 3 ; Saugus, 9 ; Swampscott, 13 ; Topsfield, 5 ; Wenham, 38 ; West Newbury, 33 ; Out of the County, 2 ; Total, 1921 entries.

REPORTS OF COMMITTEES.

FAT CATTLE.

The Committee on Fat Cattle have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- \$10. First premium, to Henry Gardner, Peabody, for 1 pair of oxen, weight, 4330 lbs.
- \$8. Second premium, to B. H. Farnum, No. Andover, for 1 pair of oxen, weight, 3330 pounds.
- \$8. First premium, to Wm. A. Russell, No. Andover, for fat cow, "Maud Clay," Holstein No. 390, age 10 years, weight 1900 lbs.

J. E. Bradstreet, Allen Smith, Geo. E. F. Dane, J. P. Little—*Committee*.

STATEMENT OF HENRY GARDNER'S FOREMAN.

The cattle entered by Henry Gardner are six years old, were raised in Franklin Co., Me., and bought in Watertown one year ago last Spring, then weighing 3360 pounds, now weigh 4330 lbs. They have worked on the farm; feed first summer was hay and two quarts of meal each, morning and night. Last winter the poorer quality of corn fodder and two quarts of cob meal each, once per day. The last summer, good hay and two quarts of meal each, morning and night.

ANDREW J. HAYES, foreman.

STATEMENT OF B. H. FARNUM.

The oxen which I enter for premium, are six years old. I have owned them twenty-three months. They weighed when I bought them, 2550 pounds. They have done all the ox work on my farm, besides working considerable on the road, since I owned them. The first winter, their

feed was meadow-hay, night and morning, and English hay at noon. Also, two quarts of meal each, per day. The first summer, they had pasture feed, and I commenced to meal them in the fall again. Last winter, when they worked hard, I fed them eight quarts of meal each, per day, with meadow hay morning and night, and English hay at noon. They were turned out to pasture last June, and have had meal occasionally, as they were taken home to work. The first of September, they were turned in fall feed, with two quarts of meal each, per day, to the present time. Their weight to-day, is 3330 pounds.

B. H. FARNUM.

STATEMENT OF WM. A. RUSSELL.

The cow, Maud Clay, No. 390, H. H. B., awarded first premium, for Fat Cow, is a full blooded, home-breed, Holstein, ten years old; weight, 1900 pounds. She failed to breed the past season, but is giving some milk. Her feed, through the season, has been four quarts of corn meal, hay, or green corn fodder morning and night, and has been turned out to pasture through the day. The pasture has been fed very close, by overstocking.

Respectfully submitted,

Wm. A. RUSSELL.

By JAS. C. POOR, *Manager*.

BULLS.

The Committee on Bulls, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- \$10. First premium, to John Swinerton, Danvers, for 2 years old Ayrshire bull, No. 3697, A. B. R. "Geo. Essex." Sire, "Glencarne," 2469; Dam, Lady Essex, 4, No. 4450.

- §5. Second premium, to D. A. Massey, Danvers, for Ayrshire bull, No. 8821, A. B. R. "Queer," dropped Nov. 9, 1885.
- §19. First premium, to Isaac C. Wyman, Salem, for Jersey bull, No. 18,401, A. J. C. C. (New York), "Hengist," dropped Aug. 7, 1885. Sire, "Nauticus," (6648); Dam, "Chinchilla" (17,092), owned by present owner, 21 months.
- §2. First premium, to John J. Gould, Ipswich, for Jersey bull calf, "Pojo," No. 18,692.
- §10. First premium, to William A. Russell, Lawrence, for Holstein bull, 4 years old, "Lord of Cornwall," No. 3429, H. H. B., dropped May 5, 1883.
- §5. First premium, to William A. Russell, Lawrence, for Holstein yearling bull, "Lavinia 2d Bismark," No. 2128, H. F. H. B., dropped Jan. 7, 1886. Sire, "Lord of Cornwall," 3429; Dam, "Lavinia 2d, 1115.
- §2. First premium, William A. Russell, Lawrence, for Holstein bull calf, "King Ruiter," dropped May 9, 1887. Sire, "Lord of Cornwall;" Dam, "Queen Ruiter," 4488.

Joshua H. Chandler, Elbridge Mansfield, John L. Shorey—*Committee.*

MILCH COWS.

The Committee on Milch Cows have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- §15. First premium, to Wm. A. Russell, Lawrence, for best milch cow of any age or breed, Holstein Friesian cow, "Madam Aberdare."
- §10. First premium, to William A. Russell, Lawrence, for best milch cow, foreign, native, or grade, 4 to 10 years old, Holstein cow, "Lady Lyons."
- §4. Second premium, to Wm. A. Russell, Lawrence, for next best (as above), Holstein cow, "Lady Noble."

- §10. First premium, to Wm. A. Russell, Lawrence, for milch cow of any recognized breed, 4 years old or upwards, Holstein cow, "Esther Morrison."
- §4. Second premium, to Wm. A. Russell, Lawrence, for next best (as above), Holstein cow, "Madam Wit."

The owners of cows of other breeds did not furnish to the Committee any statements in regard to their cows, as required by the Society, therefore, they were not judged upon.

Doane Cogswell, T. F. Newman, Frank P. Todd—*Committee.*

STATEMENT OF RUSSELL COWS.

To Committee on Milch Cows:

I enter for best milch cow, of any age or breed, Holstein-Fresian cow, "Madam Aberdare," No. 6803, H. H. B., 8 years old. Imported in 1884. Milk record, from March 1, 1885, to March 1, 1886, 13184 pounds. Milk record, from Aug. 20, 1886, to July 1, 1887, 12815 pounds. Dropped last calf, Aug. 19, 1887. Milk record, 30 days, Aug. and Sept., 1840 pounds.

I enter for best milch cows, either foreign, native, or grade, Holstein-Fresian cows.

"Lady Noble," No. 390, H. H. B., 9 years old. "Lady Lyons," No. 6805, H. H. B., 6 years old. "Lady Noble" dropped last calf, Dec. 28, 1886. Milk record, from Jan. 1, 1887, to July 1, 1887, 8925 lbs. "Lady Lyons" dropped last calf, Sept. 1, 1887. Milk record for 10 days in Sept., 609½ lbs. Milk record, from July 1, 1886, to July 1, 1887, 12815 lbs.

For Holstein-Fresians, 4 years old, and upward.

"Esther Marion," No. 1585, H. H. B., 6 years old. "Madam Wit," No. 7476, H. H. B., 5 years old. "Esther Marion" dropped last calf, June 25, 1886. Due to calve Oct. 20, 1887. Milk record, from July 1, 1886, to May 1, 1887, 12692 lbs. "Madam Wit" dropped last calf,

Nov. 13, 1886; is due, Dec. 17, 1887. Milk record, from Dec. 1, 1886, to June 1, 1887, 7825½ lbs.

Statement of Feed and Management.

The winter feed of these cows is 8 to 12 qts. shorts and fine feed, and 4 qts. meal (corn on cob and oats ground together, two parts corn, and one part oats), ensilage once per day, and dry fodder, consisting of English hay, with corn fodder and oats, or barley fodder mixed, fed once per day.

One-half of the above quantity of grain is given with the ensilage, at about 7 A. M. They are watered at about 9 A. M. They get nothing more until 2.30 P. M., when the balance of the above grain is given dry; and after this is eaten they are fed with the above dry fodder, and at 4.30 they are again watered.

Milking begins at 5 A. M. and at 6 P. M. Cows giving a large mess of milk are milked three times a day, morning, noon, and night.

In summer the cows go out to pasture, which is small for the number of cows kept, and are fed with dry hay, clover, oats or barley, fodder, dried, and corn fodder in its season, also have some grain, not as much as in winter.

Respectfully submitted,

WM. A. RUSSELL.

By J. C. POOR, *Manager.*

HERD OF MILCH COWS.

The Committee on Herd of Milch Cows have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

\$18. First Premium, to W. A. Russell, Lawrence, for herd of milch cows.

Geo. L. Hawkes, Francis R. Allen, Wm. B. Carlton, N. P. Perkins—*Committee.*

STATEMENT OF RUSSELL HERD.

To Committee on Herds of Milch Cows :

I enter for best herd of milch cows, Holstein-Fresian cows, "Madam Aberdare," No. 6803, H. H. B., 8 years old. "Lady Lyons," No. 6805, H. H. B., 6 years old. "Lady Noble," No. 390, H. H. B., 9 years old. "Esther Marion," No. 1585, H. H. B., 6 years old. "Madam Wit," No. 7475, H. H. B., 5 years old.

"Madam Aberdare" dropped last calf, Aug. 19, 1887. "Lady Lyons" dropped last calf, Sept. 1, 1887. "Lady Noble" dropped last calf, Dec. 28, 1886. "Esther Marion" dropped last calf, June 25, 1886. "Madam Wit," dropped last calf, Nov. 13, 1886.

"Madam Aberdare's" milk record for two previous seasons, is 13184 lbs. and 12815 lbs. respectively. For past 30 days, 1840 lbs. "Lady Lyons'" record, 10 days in Sept., 609½ lbs. Record for last year, 12 months, 12815 lbs. "Lady Noble's" record from Jan. 1 to July 1, 8925 lbs. "Esther Marion's" record from July 1, 1886, to May 1, 1887, 12692 lbs. "Madam Wit's" record from Dec. 1, 1886, to June 1, 1887, 7825 lbs.

The above records were determined by weighing and recording at each milking.

The winter feed for these cows was from 4 to 6 qts. shorts and 2 qts. meal (corn on cob and oats, ground together, 2 parts corn, 1 part oats), this amount twice per day, ensilage once per day, and dry fodder (a mixture of English hay, corn, oats), or barley fodder, once per day. Watered twice a day, and when fresh in milk, milked three times. They go to pasture in summer (but the pasture is a short one), and they are fed morning and night, with hay, clover, oat or barley, and corn fodder in its season, and have about one-half the amount of grain as in the winter.

Respectfully submitted,

WM. A. RUSSELL.

By J. C. POOR, *Manager.*

HEIFERS, FIRST CLASS.

The Committee on Heifers, first class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- §10. First premium, to W. A. Russell, Lawrence, for Milch heifer, "Queen Abberkerk."
- §4. Second premium, to W. A. Russell, Lawrence, for Milch heifer, "Maud Clay 2d."
- §4. First premium, to W. A. Russell, Lawrence, for Holstein heifer, "Essex Princess," 2 years old, never calved.
- §3. Second premium, to W. A. Russell, Lawrence, for Holstein heifer, "Queen Frederick," 2 years old, never calved.
- §4. First premium, to W. A. Russell, Lawrence, for Holstein yearling, "Esther Shepard."
- §4. First premium, to W. A. Russell, Lawrence, for Holstein calf, "Princess William Archer."
- §3. Second premium, to W. A. Russell, Lawrence, for Holstein calf, "Syreza Archer."
- §10. First premium, to D. A. Massey, Danvers, for Ayrshire heifer, "Mars Dora 2d," No. 7937.
- §4. First premium, to D. A. Massey, Danvers, for Ayrshire calf.
- §3. Second premium, to D. A. Massey, Danvers, for Ayrshire calf.
- §4. First premium, to W. S. Dickson, Salem, for Jersey calf.

John S. Ives, of Salem, entered one 3 year old Ayrshire, without pedigree or number ; a very likely one, but did not come under our class.

G. B. Bradley, John Parker, Andrew Lane, Jr.—*Committee*.

STATEMENT OF RUSSELL HEIFERS.

To the Committee on Heifers, 1st Class :

I enter for Heifer under 4 years old in milk, "Queen Abberkerk," No. 4457, H. F. H. B., 2 years old. "Maud

Clay 2d," No. 9712, H. F. H. B., 2 years old. "Queen Abberkerk" calved July 21st Milk record in August 36 pounds per day. "Maud Clay 2d" calved June 29th. Milk record in July, 34 pounds per day.

Heifers two years old, never calved. "Essex Princess," No. 4480, H. F. H. B. "Queen Frederick," No. 4467, H. F. H. B.

Heifer one year old. "Esther Shepard," No. 3008, H. F. H. B. Dropped March 17, 1886.

Heifer Calves. "Princess William Archer." Dropped May 16, 1887. Sire, "Royal Archer," 3262, H. F. H. B. Dam, "Princess Willem," 4454, H. F. H. B.

"Syreza Archer," dropped June 1st, 1887. Sire "Royal Archer," 3263, H. F. H. B. Dam, "Syreza," 1050, H. H. B.

Respectfully submitted,

W. A. RUSSELL,

By J. C. Poor.

HEIFERS—SECOND CLASS.

The Committee on Heifers, Second Class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- \$10. First premium, to James F. Cody, Peabody, for Milch Grade Jersey heifer, under four years old.
- \$4. Second premium, to Timothy O'Keefe, Peabody, for Milch Grade Jersey Ayrshire heifer, under four years old.
- \$4. First premium, to John Barker, North Andover, for 2 year old Grade Holsteins; never calved.
- \$3. Second premium, to J. A. Jones, Lynn, for 2 year old Jersey and Ayrshire; never calved.
- \$4. First premium, to Daniel G. Tenney, Newbury, for one year old Grade Jersey.
- \$3. Second premium, to City Farm, Salem, for one year old Grade Holstein.
- \$4. First premium, to Jenkin M. Emerson, Middleton, Heifer calf, 7½ months old.

- §3. Second premium, to Stephen Blaney, Peabody, for Twin Calf, 8 weeks old. Dam, 3 years old, has had 3 calves.

O. L. Carleton, A. T. Newhall, J. K. Bancroft, J. Otis Winkley, J. Frank Foster—*Committee*.

WORKING OXEN AND STEERS.

The Committee on Working Oxen and Steers have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- §12. First premium, to Lyman Wilkins, Middleton, for working oxen, 7 years old, weight 2640 lbs.
 §10. Second premium, to Geo. P. Wilkins, Middleton, for working oxen, 5 years old, weight 2720 lbs.
 §8. Third premium, to Wm. P. Christopher, Middleton, for working oxen, 6 years old, weight 2680 lbs.
 §10. First premium, to B. H. Farnum, North Andover, for working steers, 4 years old, weight 2850 lbs.

John B. Jenkins, Nathan Longfellow, Jas. P. Cleveland—*Committee*.

TOWN TEAMS.

The Committee on Town Teams have attended to their duty, and respectfully report to the Secretary that they have made the following award:

- §20. First premium, to Middleton town team, 11 yoke of oxen, 29,775 lbs.

REPORT ON TOWN TEAMS.

The Committee on Town Teams report that only one team of oxen was entered, and none of horses.

This was much to be regretted, as a good team always interests the people, and competition is desirable in a department where the premiums offered are generous, as in this of town teams. One of the committee endeavored

to get C. H. Warren & Co., of Danvers, to exhibit their fine team horses, but the demands of business prevented. Perhaps in no direction is the change in farming more noticeable than in the displacement of oxen by horses, on most of the farms of the county. This affects our show more and more each year, until it is possible that at no distant date, the ox-team will disappear from our show entirely. In view of this, the enterprise of our Middleton friends is to be commended, in showing eleven yoke of fairly good oxen,—not very large nor fancy, but honest workers, and, in the opinion of the committee, worthy of the first premium.

We were pleased with the skill with which Mr. Lyman Wilkins and Mr. William Christopher handled the long string of oxen. for in these days, a good ox-teamer is hard to find.

We should like the experience of some farmer who has changed from oxen to horses, as to the expense of keeping in working condition, wear of outfit, value at end of five years, and value of work done in that time,—if it could be obtained for publication. Mr. Day of this committee, is certain that even at the present low price of beef, and with all its slowness, the ox-team is the most profitable for the farmer. His long experience gives his opinion weight and value.

Could the fact be brought out I think we should find that one reason why horses are so much more popular at present is, that the driver can ride all the time, thus escaping much fatigue, and saving some time on the journey.

Respectfully submitted,

CHARLES J. PEABODY, *for Committee.*

Charles J. Peabody, Royal Day, E. B. Perley—*Committee.*

STEERS.

The Committee on Steers have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

§4. First premium, to B. W. Farnum, No. Andover, for
One pair steer calves, 5 months old.

Sherman Nelson, Charles P. Mighill, John Parkhurst—
Committee.

STALLIONS, FIRST CLASS.

The Committee on Stallions, First Class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

§10. First premium, to H. H. Hale, Bradford, black Percheron stallion, for farm and draft horses, "Major Dome," 4 years old, weight, 1580 lbs. Imported, 1885, No. 4345.

*§8. First premium, to John Parkhurst, Boxford, for grey Grade Percheron stallion, "Romeo," 3 years old, weight, 1300 lbs.

Geo. B. Loring, W. P. Bailey, C. N. Maguire—*Committee.*

*This award was made at Trustees' Meeting, in November, changing this and another award of the Committee.

STALLIONS, SECOND CLASS.

The Committee on Stallions, Second Class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

§10. First premium, to John P. Conant, Wenham, chestnut stallion, four years old, for driving horses.

§6. Second premium, to John Flye, Saugus, for black stallion, 8 years old, "Allen Patchen."

*§8. Gratuity, to John Looney, Salem, bay stallion, "Almot Wedgewood," 4 years old, sired by "Wedgewood."

A. B. Woodis, Wm. R. Roundy, Wm. B. Carleton—
Committee.

*Transferred by order of Trustees, at their November meeting,

from "First Class," where it had been entered, and a premium of \$8 awarded by the Committee, to its proper class, and \$8 gratuity awarded, as premiums in this class had been awarded by the Committee.

BROOD MARES.

The Committee on Brood Mares have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$10. First premium, to Abbott & Reynolds, Salem, for bay mare, 6 years old, weight 1300 lbs., and foal 3½ months old.
- \$6. Second premium, to Michael Looney, Salem, for chestnut mare, 6 years old, weight 1000 lbs., and foal 6 weeks old.
- \$4. Third premium, to Edwin Bates, Lynn, for chestnut mare, 12 years old, weight 1100 lbs., and foal 3 months old.

Horace F. Longfellow, John F. Smith, Henry A. Hayward—*Committee*.

FAMILY HORSES.

The Committee on Family Horses have attended to their duty, and respectfully report to the Secretary the following :

Only one entry, do not deem it worthy a premium.

David Stiles, Edward Harrington, Alden C. Estes—*Committee*.

Only one entry was made, and that was a horse that was labeled as weighing 840 pounds, which your committee thought was a little too light, if there were no other objections, and, therefore, by unanimous verdict the report was, "None worthy of a premium."

Such a report on family horses, probably never was made before in the history of the society. In years past, there have been a large number of entries, and the committee have found it difficult to decide who was entitled

to the first premium. But this falling off is accounted for in the fact that another class of horses has been added, called, "Gentlemen's driving horses," and these are very numerous, embracing nearly the whole herd of horses (except actual work horses), and every business man and every youngster who thinks anything of himself must possess one of these quadrupeds.

Now, where is the noble "family horse," safe at all times, and in all places, so highly prized by the family as they go to church, or to the city, or ride for pleasure over our New England hills. It is a rare thing to find a well-trained horse. Scarcely can we take up a paper but what gives some account of limbs broken or lives lost by unsafe horses. Many a home has been darkened forever, by the antics of some half-broken horse.

Our Society, from the first, wisely appropriated money to call the attention of the public to the important matter of the well training of horses, and yet, there has been a gradual departure from this rule for the last twenty years, and owners of horses have received premiums for animals hardly safe for every one to drive.

A good family horse should weigh about one thousand pounds, well proportioned, sound, stand without tying, trained not to start till the reins are taken up, and then to travel in good shape, from seven to eight miles an hour, without urging, passing objects without shying, and not afraid of the steam whistle, or the rattling cars, not less than seven or eight years old, and not over fifteen. Such a horse is worth not less than two hundred and fifty dollars, and may be twice that sum; while some of these gentlemen's driving horses would cost you about all your neck is worth to ride behind them.

The society, in offering these premiums wishes to encourage the better training of this most noble and useful animal; one that has so much to do for our comfort and safety, in domestic, as well as business life.

This statement has been added to our report, at the suggestion of the committee on family horses.

DAVID STILES, *Chairman.*

GENTLEMEN'S DRIVING HORSES.

The Committee on Gentlemen's Driving Horses, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$10. First premium, to H. H. Hale, Boxford, for black mare.
- \$6. Second premium, to Dr. W. A. Gorton, Danvers, for bay mare.
- \$4. Third premium, to D. J. Tenney, Byfield, for chestnut gelding.

E. P. Barrett, S. W. Hopkinson, Chas. H. Gould, Geo. B. Loring—*Committee*.

FARM HORSES.

The Committee on Farm Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$10. First premium, to F. O. Kimball, Danvers, for dark brown gelding farm horse, 8 years old, weight 1100 lbs.
- \$8. Second premium, to M. H. Poor, West Newbury, for sorrel farm horse.
- \$4. Third premium, to B. H. Farnham, No. Andover, for farm horse, 10 years old gelding, weight 1055 lbs.

Entries nine.—eight competed for premium.

The Committee, after attending to their duties, would say, that all the horses drew the load (2000 lbs.) well, and they regret that they could not award more premiums, especially to the horses of Mr. Bates, of Lynn, and Mr. Holt, of North Andover. They would also call the attention of the Trustees to the fact that the horse of Mr. Perkins, of Lynnfield, was ruled out on account of being entered in the class of pairs of farm horses. All of which is respectfully submitted.

Albert Kimball, D. A. Pettengill, David M. Cole, Chas. M. Lunt—*Committee*.

PAIRS OF FARM HORSES.

The Committee on Pairs of Farm Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$12. First premium, to A. F. Lee, Beverly, for pair farm horses, weight 2300 lbs.
- \$8. Second premium, to Peter Holt, jr., North Andover, for pair farm horses, weight 2500 lbs.
- \$4. Third premium, to C. N. Maguire, Newburyport, for pair farm horses, weight 2200 lbs.

Nathan F. Abbott, Moses H. Poor, Thos. E. Cox, jr.—*Committee.*

DRAFT COLTS.

The Committee on Draft Colts have attended to their duty, and respectfully report to the Secretary that they have made the following award :

- \$10. First premium. to Harry H. Hale, Bradford, for "Marita," imported Percheron black mare, 4 years old, weight 1509 lbs.

Daniel D. Adams, Nathaniel S. Harris, J. Henry Nason—*Committee.*

COLTS FOR DRAFT PURPOSES, SECOND CLASS.

The Committee on Colts for Draft Purposes, Second Class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$10. First premium, to James Kinnear, Ipswich, for black stallion, "Wallace," 2 years old, weight 1100 lbs.
- \$6. Second premium, to James J. Abbott, Andover, for sorrel colt, 2 years old, weight 1000 lbs.

John Q. Evans, James B. Smith, John A. Hoyt—*Committee.*

COLTS FOR GENERAL PURPOSES, FIRST CLASS.

The Committee on Colts for General Purposes, First Class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$10. First premium, to Eben S. Keye , Rowley, for 4 years old colt.
- \$6. Second premium to O. A. Blackinton, Rowley, for 4 years old colt.
- \$4. Third premium, to Daniel G. Tenney, Newbury, for 4 years old colt.
- \$8. First premium, to L. S. Morrison, Danvers, for 3 years old colt.
- \$5. Second premium, to Wm. A. Russell, North Andover, for 3 years old colt.
- *\$4. Gratuity. We recommend a gratuity of \$4 to Woodbury Smith, of Rowley, for 4 years old colt.

Nathan A. Bushby, M. B. Chesley, Geo. B. Austin, Geo. W. Peabody—*Committee*.

*The Trustees did not suspend the rule to allow this gratuity.

COLTS FOR GENERAL PURPOSES, SECOND CLASS.

The Committee on Colts for General Purposes, Second Class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$6. First premium, to H. H. Hale, of Bradford, for two year old colt, a Bay Stallion.
- \$4. Second premium, to Edwin Bates, Lynn, for two year old stallion, "Eaton Wilkes."
- \$6. First premium, to Chas. Sanders, Salem, for bay yearling stallion.
- \$4. Second premium, to D. G. Tenney, Byfield, for one year old bay mare, "Sprite."

Chas. H. Gould, S. W. Hopkinson, Geo. B. Loring—*Committee*.

SWINE, FIRST CLASS.

The Committee on Swine, First Class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- £5. Second premium, to Elizabeth Saunders, W. Peabody, for breeding sow, and eight pigs.
- £5. Second premium, to Robert G. Buxton, Peabody, for breeding sow, "Chester White."
- £5. Second premium, to Samuel P. Buxton, Peabody, for breeding sow and ten pigs. "Yorkshire."

George Beecher, Daniel E. Moulton, Samuel Longfellow,
—*Committee.*

SWINE, SECOND CLASS.

The Committee on Swine, Second Class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- £8. First premium, to Munroe Bros., Lynnfield, for Yorkshire Boar.
- £8. First premium, to Robert G. Buxton, Peabody, for Yorkshire Sow.
- £5. Second premium, to Robert G. Buxton, Peabody, for Yorkshire Breeding Sow.

George A. Dow, Francis Marsh, T. C. Thurlow,—*Committee.*

SHEEP.

The Committee on Sheep have attended to their duty, and respectfully report to the Secretary that they have made the following award :

- £8. First premium, to R. S. Brown, Peabody, for Shropshire buck.

John L. Shorey, Elbridge Mansfield, Joshua H. Chandler,
—*Committee.*

POULTRY.

The Judge of Poultry has attended to his duty, and respectfully reports to the Secretary that he has made the following awards :

- \$2.00. First premium, to Charles M. Poor, Peabody, for Buff Cochín fowls.
- 2.00. First premium, to W. H. Downes, Salem, for Light Brahma fowls.
- 1.00. Second premium, to Fred H. Wiley, Peabody, for Light Brahma fowls.
- 2.00. First premium, to Jos. H. Peirson, Newbury, for Light Brahma chicks.
- 2.00. First premium, to E. O. Bragdon, Danvers, for Dark Brahma chicks.
- 1.00. Second premium, to Charles M. Poor, Peabody, for Dark Brahma chicks.
- 2.00. First premium, to Samuel Rogers, West Newbury, for White Wyandotte fowls.
- 1.00. Second premium, to Samuel Rogers, West Newbury, for White Wyandotte fowls.
- 2.00. First premium, to L. W. Floyd, Newbury, for Laced Wyandotte fowls.
- 2.00. First premium, to Geo. H. King, Peabody, for White Leghorn chicks.
- 2.00. First premium, to W. E. Sheen, Peabody, for Brown Leghorn chicks.
- 2.00. First premium, to Nathan H. Poor, Peabody, for Plymouth Rock chicks.
- 2.00. First premium, to C. M. Poor, Peabody, for B. B. Red Game Bantam fowls.
- 2.00. First premium, to C. M. Poor, Peabody, for B. B. Red Game Bantam chicks.
- 1.00. Second premium, to Elmer Bates, Marblehead, for B. B. Red Game Bantam chicks.
- 2.00. First premium, to L. W. Floyd, Newbury, for White Game chicks.
- 2.00. First premium, to W. P. Perkins, Danvers, for lot of ducks.

- 2.00. First premium, to W. P. Perkins, Danvers, for lot of geese.
- 1.00. Second premium, to W. P. Perkins, Danvers, for lot of geese.
- 1.00. Second premium, to L. W. Floyd, Newbury, for lot of ducks.
- 5.00. First premium, to Fred H. Wiley, Peabody, for coop of 10 or more fowls, with statement of keeping and profit.
- 2.00. First premium, to G. D. Walton, Peabody, for dressed chickens.
- 2.00. First premium, to G. D. Walton, Peabody, for dressed ducks.
- 1.00. First premium, to Charles P. Preston, Danvers, for best dozen eggs.
- First premium, Society's diploma, to Warren Newhall, Peabody, for breeding pen Bantams.
- First premium, Society's diploma, to Charles M. Poor, Peabody, for breeding pen Dark Brahma chicks.

W. F. BACON, *Judge.*

Essex County Agricultural Society :

GENTLEMEN :—Supplementary to the regular report on poultry, I would most respectfully present for your consideration, a suggestion or two that I think would improve that department, increasing the number of exhibits, and improving the quality exhibited.

The general custom, at all poultry exhibitions, and at the majority of agricultural fairs, is to offer a premium on each variety of the following ducks and geese, while your society only offers a general premium for best lot.

Namely : In my opinion, you would encourage the breeding of water fowl, by offering premiums on Aylesbury, Rouen, Cayuga, Pekin, white and colored Muscovy, and Brazilian ducks ; and Toulouse, Emden, Brown China, and African geese.

In entering exhibition of Breeding Pens, I believe a man should be allowed to mark one female, which, with the

male bird, should be entitled to compete for the general premium for best pair; also, go to make up the pen. This also is the general rule in most societies.

I would recommend that the exhibiting of mongrel or cross bred stock be discouraged, by offering no premium or gratuity, except on first-class birds; and, in order to assure that end, require a pair to figure 176 points, to win first premium. I would also recommend that a premium be offered for best dozen eggs, by each of the following classes: Asiatic, American, Game, French, and Spanish classes; the Hamburgs, Polish, and Dorkins to compete in the Spanish class.

Very respectfully yours,

W. F. BACON, *Judge*.

NOTE. The Trustees at their November meeting adopted above recommendations. See premium list for 1888.

POULTRY ACCOUNT OF FRED. H. WILEY, OF PEABODY, MASS.,
FOR EIGHTY-ONE WEEKS.

1886.	Dr.	Cr.
Feb. 8, To 13 head of stock on hand,	\$13 00	
Feb. 10, By 2 Cockerels, sold,		\$2 40
“ “ 52 eggs,		1 40
“ 13, To 50 lbs. shorts,	55	
Mch. 8, “ 1 lb. sulphur,	05	
“ 17, “ 10 lbs. lime,	10	
“ 19, “ 1 bag of corn,	1 00	
“ “ “ 1 bag of oats,	1 00	
“ 23, “ 10 lbs. oyster shells,	20	
March, By 12 dozen eggs, at 30 cts.,		3 60
April, “ 15 dozen eggs, at 25 cts.,		3 75
Apr. 10, To 1 pound sulphur,	13	
“ “ “ 5 hens and cockerel,	8 00	
“ 15, “ L. Brahma eggs,	3 00	
“ 23, By 1 bushel hen manure,		35

May,	By 15 doz. eggs, at 18 1-3 cts.,		2 75
" 17,	To L. Brahma eggs,	4 50	
" 19,	" 1 bag of meal,	1 05	
June,	By 11 doz. eggs, at 22 8-11 cts.,		2 50
" 3,	To 1 bag of wheat,	1 80	
" " "	1 bag of Ck. corn,	1 05	
" " "	1 bag of Meal,	1 05	
July,	By 15 doz. eggs, at 25 cts.,		3 75
" 12,	To 1 bag of Ck. corn,	1 05	
" 12,	" 1 bag of meal,	1 15	
August,	By 12½ doz. eggs, at 30c.,		3 75
Aug. 15,	To 1 bag of corn,	1 15	
" " "	1 bag of meal,	1 15	
" 17,	By 5 hens, sold,		2 12
Sept. 18,	To 1 bag cracked corn,	1 15	
" 20,	To 100 lbs. oyster shells,	85	
" " "	1 bag corn,	1 10	
" 23,	By 11 pullets, at 50c.,		5 50
" 24,	" 2 cockerels,		2 65
Sept.	" 7¾ doz. eggs, at 30c.,		2 32
Oct. 7,	To 1 bag meal,	1 10	
" " "	1 bag dessicated fish,	1 50	
" 9,	By 5 cockerels,		4 58
" " "	6 Light Brahmas, at \$1.25,		7.50
" " "	5 doz. eggs, at 39c.,		1 95
Nov. 7,	To 1 bag meal,	1 10	
" " "	3 bags of corn,	3 30	
" 8,	By 4 chickens, sold,		4 14
Dec. 3,	" 3 chickens, sold,		3 50
1887.			
Jan. 8,	To 1 bag of meal,	1 10	
" 11,	" 1 cockerel,	5 35	
" 15,	" 2 pullets,	7 00	
" 17,	" 1 bag of wheat,	1 60	
Jan. 19,	By 9 chickens,		11 37
Feb.	" 5 eggs,		10
Mch. 2,	To 1 bag corn,	1 10	
" 14,	" 4 setters,	4 00	

Mch. 18,	To 2 setters,	2 00	
Mch.	By 26 Eggs,		50
Apr. 5,	To 3 setters,	2 50	
“ 18,	By 1 setting of eggs,		3 00
“	“ 20 eggs,		40
May 2,	To 1 setter,	75	
“ 7,	“ 1 bag of wheat,	1 70	
“ “	“ 1 bag of corn,	1 15	
“ “	“ 1 bag of meal,	1 15	
“ “	“ 20 lbs. lime,	20	
“ 9,	“ 3 setters,	1 35	
“ “	“ 1 bag of oats,	1 00	
“ “	“ 1 bag of barley,	1 40	
“ 12,	“ 2 setters,	1 50	
“ 18,	By 6 setters,		2 00
May,	“ 8 doz. eggs, at 22c.,		1 76
June 10,	To 1 bag meal,	1 15	
“ 10,	“ 1 lb. copperas,	05	
“ 18,	“ 10 lbs. lime,	10	
“ 19,	By 5 setters,		3 20
“ 20,	“ 20 eggs for hatching,		2 00
June,	“ 6 doz. eggs, at 22 and 25c.,		1 44
July 9,	To 1 bag of corn,	1 05	
“ 18,	“ 1 bag of meal,	1 05	
“ “	“ 1 bag of wheat,	1 75	
“ 29,	By 4 bushels hen manure,		1 40
“ “	“ 1 hen,		30
July,	“ 9 $\frac{3}{4}$ doz. eggs,		2 58
Aug. 29,	To 1 bag bolted meal,	1 25	
	By 8 eggs,		30
Total,		<u>\$92 23</u>	<u>\$88 86</u>

STOCK ON HAND.

68 chickens, valued at \$2.00,	\$136 00
11 hens, valued at \$2.00,	22 00
1 cock, valued at	5 00
Total,	<u>\$163 00</u>

Credits,	\$88 86
Total Credits,	\$251 86
Expenses,	92 23
Net proceeds,	\$159 63

NOTE.—His receipts for 59 head of stock, 81 weeks,	\$49 26
“ “ “ 129 doz. eggs, 81 weeks.	37 85
“ “ “ 5 bushels hen manure,	1 75
Value of 80 head of stock, on hand Aug. 29, 1887,	163 00
Total,	\$251 86
Value of original stock, 13 head, Feb. 8, 1886,	\$13 00
Cost of feed, 81 weeks,	38 65
Cost of disinfectants,	63
Cost of eggs for breeding,	7.50
Cost of stock for breeding,	32 45
	92 23
Profit for 81 weeks, (average of \$1 97 per week),	159 63
	\$251 86

STATEMENT OF FRED H. WILEY, IN REPLY TO INQUIRIES BY THE
SECRETARY.

Dear Sir :

I had eleven hens and two cockerels, eight of which were Plymouth Rocks, and three Leghorns. I valued them at \$13. They were nothing but common hens.

I give my hens bolted meal, scalded, every morning, except in the summer months. At noon, different kinds of grain, such as wheat, oats, barley, and cracked corn; at night, about four o'clock in cold weather, and six o'clock in hot weather, I give them whole corn. I also give them fresh water twice a day. I clean off the roost boards every morning, and sweep down the cobwebs if there are any. To keep free from vermin, I kerosene the roosts, once a week, and I don't have any trouble with lice; this is the best remedy to keep lice away I know. I use air-slack lime in my nests. I raise my chickens with hens. I hatched out 75 chickens this year. I do not feed them until they

are twenty-four hours old, and then I give them boiled eggs and bread crumbs, the first two or three days. I give them chopped green grass every single day of their lives, because I have no chance for them to run on grass ground. I rake the grass from the lawn in summer, and dry it, and then in winter pour hot water on it and it turns green. The way I break up setters is, to put them in a slat coop that is set up off the ground, so that there will be a draft on all sides of them. They won't set long after they have been in there a while.

The value of the Light Brahma pure-bred stock I now have, is the market value of my hens and chickens. The reason I value the cock so highly, is, because when I bought him I paid \$5, and I claim he is worth that to-day.

I was sixteen years old last February, the 28th day.

I keep oyster shells on hand for the hens, all the time, as they need them to make egg shells.

Yours respectfully,

FRED H. WILEY.

PLOUGHING WITH DOUBLE TEAMS.

The Committee on Ploughing, Double Teams, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

\$12. First premium, to B. H. Farnum, North Andover, for ploughing with Hussey's No. 16 plough.

E. G. Nason, J. W. Blodgett, G. W. Sargent, Abel Stickney, James Noyes—*Committee*.

PLOUGHING WITH SINGLE TEAM.

The Committee on Ploughing, Single Team, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

\$10. First premium, to Washington Winslow, Hamilton, for ploughing with one yoke oxen, with Oliver plough.

Samuel S. Pratt, W. P. Fisher, Horace Ware—*Committee*.

PLOUGHING WITH HORSES.

The Committee on Ploughing with Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$10. First premium, to Moses D. Poor, W. Newbury, for ploughing with No. 106 Hussey plough.
 - \$7. Second premium, to W. M. Bent, Danvers, for ploughing with Syracuse plough.
 - \$5. Third premium, to Edwin A. Durkee, Peabody, for ploughing with No. 104 Hussey plough.
- O. L. Carleton, Paul T. Winkley jr., Wm. H. Smith, Reuben Alley—*Committee*.
-

PLOUGHING WITH SWIVEL PLOUGH.

The Committee on Ploughing, Swivel Plough, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$12. First premium, to Solomon W. Weston, Middleton, for ploughing with one pair oxen, IXL. plough.
- \$10. Second premium, to Wilkins & Christopher, Middleton, for ploughing with one pair oxen, Barrows & Sargent plough.
- \$10. First premium, to Jonas Rollins, Danvers, for ploughing with one pair horses, Granger plough.
- \$6. Second premium, to James C. Poor, No. Andover, for ploughing with one pair horses.

C. N. Maguire, Ansel W. Putnam, Aaron Low, John A. Hoyt—*Committee*.

PLOUGHING WITH SULKY PLOUGH.

The Committee on Ploughing, Sulky Plough, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$8. Second premium, to J. E. Page, Salem, for work done by Cassidy plough.

§10. First premium, to Francis O. Kimball, Danvers, for work done by National Reversible plough.

J. J. H. Gregory, Samuel E. Marsh, Albert Emerson—*Committee.*

There were two entries: The Cassidy, by Mr. J. E. Page, of the Pickman farm, and the National Reversible, by Mr. Francis O. Kimball. The committee had a very interesting duty to perform, in comparing the work done by these two ploughs. Our judgment was that each of the ploughs did as good work in stony land, as would a common plough; that each turned under the sod, as a rule, and the Cassidy even better, than any single team plough on the ground. The National Reversible was evidently of easier draught than the Cassidy, for, though this was drawn by a heavier pair of horses which had worked all summer, they evidently labored harder than the smaller pair attached to the Reversible, while these latter ploughed on an average, a quarter deeper. The Reversible leaving no dead furrows, is an invention along the line of modern improvement in ploughs. On the whole, your committee was very favorably impressed by this new applicant for patronage, the "National Reversible," and would advise any fellow-farmer who finds himself with \$55 to spare at the close of the season, to invest it in this plough, rather than put it in any savings bank, believing that when so invested it will pay a much larger interest than four per cent.

J. J. H. GREGORY, *for the Committee.*

AGRICULTURAL IMPLEMENTS.

The Committee on Agricultural Implements have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

§5. First premium, to George E. Daniels, Rowley, for farm cart.

§5. First premium, to Dole & Osgood, Peabody, for grocery wagon.

- \$5. First premium, to H. P. Whipple, Peabody, for milk wagon.
- \$3. Gratuity, to E. L. Blake & Co., Peabody, for seed drills and weed hoes.
- \$3. Gratuity, to Robert Baker, Manchester, for patent ladder.
- \$1. Gratuity, to John Barker, North Andover, for O. K. harrow.
- \$5. First premium, to J. H. Smith, Peabody, for exhibition of horse shoes.

S. E. Marsh, J. A. Ilsley, J. J. H. Gregory—*Committee*.

AGRICULTURAL IMPLEMENTS.

There was, this season, a most striking poverty in the exhibit in the implement department. I cannot recall an exhibition so poor in numbers, in the experience of a quarter of a century. Still, this poverty in the exhibit is not to be wondered at, when we consider the great increase there has been of late years, in agricultural fairs. The result is inevitable, that some location must occasionally have but a poor show in this department, for the obvious reason that our great agricultural establishments cannot be present in force, everywhere, at the same time. It is obvious that the present season has brought our turn.

The striking novelty of the season, was Clark's "Cut-away Disk Harrow," exhibited by the Higanum Manufacturing Company. This differed from other disk harrows in having four pieces cut out of the disk, leaving them of about the shape of a Greek cross; by crossing two of our fingers in the middle, at right angle, we will get the idea. It was claimed that this new form would cut deeper into the soil, and free itself from lumps more easily than the standard pattern. The trial, made after the plowing match, appeared to well substantiate the first claim. I consider it an implement well worthy of the attention of farmers who need a disk harrow. There is one objection I have to it, in common with most of the disk harrows,—the ball and socket joint, *as sold with them*. Mind you, I have no ob

jection to the ball and socket system of forming a joint; in its easy and varied motion it cannot be surpassed,—but when made of a soft material, the ball, after rather a limited use, works its way out of the socket, as it has in my experience, in two instances, in this class of harrows (my harrows have but little rest), then my pocket-book, at the next purchase, pays for another style of joint,—and this I found in the Climax, which thus far has proved itself to be an excellent implement.

Blake's Improved Danvers seed drill, when used with care, no doubt is a good implement with which to plant onions and such other seed as do not tend to pack together, from the jarring caused by the movement of the machine while planting; but for use for many varieties of seed, it is defective, having only a shaking motion. This is not sufficient to keep some varieties of seed, carrot, for instance, if it is not perfectly cleaned, from packing together over the drop hole, and so clogging it.

One must have either the force feed or those machines which have a finger motion acting just over the drop hole, and by keeping the seed continually stirred, keeps them from clogging. The force feed implements are those which carry the seed in sunken depressions (which can be made more or less capacious by turning the screws which are at the bottom of them), around the circumference of a wheel, to a brush of bristle so arranged as to force them out.

The Sargent machine, used largely in the vicinity of Newbury, and the Willis machine, used in Arlington and vicinity, are good illustrations of this class. The Mathews seed drill is a good illustration of the agitator class. The latter I have used for small seed for many years, and am well satisfied with it.

It must be borne in mind, when using any implement, no matter how great its artistic excellencies may be, that a machine is but a machine, and its success or failure will always depend largely upon how much of brains the man who uses it presents it with. I have two men planting onion seed, side by side, and I can usually see plainly, throughout the season, the difference in the result.

There was a good exhibit of several styles of onion hoes, excellent for working between the rows, but there were none of the class which straddle the rows, weeding both sides at the same time. In some sections of New England, these are in common use, and there is certainly a good argument for them, in the fact that they save a good deal of hand weeding. I know it may be said that with the common slide, or wheel hoe, the results secured are the same, for though they do not weed each side of a row, they do weed one side of two rows. True, but the great advantage of the straddle hoe is, that they can be regulated to go as close to the row as we may find it for our advantage to go, and having each side of the row close under the eye, we can do closer work than with the common style of hoe, even when different widths are at hand. The Fuller weed hoe, Planet Jr., and Bridgeport hoe are examples of the straddle class; the Fuller differing from all others in the fact that the two hoes working close to the onions are always under complete control of the operator.

“The O. K. Steel Coulter harrow” is recommended as an implement that would cover manure remarkably well. That may be, and I think it likely, but to the eye it looks very like a Bastard Share harrow, a style that was in use about fifteen years ago.

This subject of agricultural implements is one of huge proportions, and, located as we are, in about the center of yankee ingenuity, it is one of great importance, and well worthy of more thorough attention than it has yet received. We have had excellent exhibitions of the various ploughs, and do have them every year at our annual ploughing matches, but how is it of cultivators, harrows, and weeding hoes? Has not agriculture advanced sufficiently among us, to have the importance of these implements more fully recognized? Every farmer in our county, who owns a plough, owns also a cultivator and harrow, and usually a seed sower and weed hoe. Should not our system of premiums recognize these, not only in the exhibition tent, as show implements, but in the work they will actually do?

To do this at its best, it would be necessary that they should be used among growing crops, and to witness this work, a mid-summer assembling would be necessary. At that time of the year all of us farmers are very busy,—but I believe that if a handbill should be issued by the society, giving the names of the different kinds of implements that would be tested, and the varieties of each kind, farmers would be so interested that quite a body would gather. I could contribute nearly a dozen varieties of onion hoes to such an exhibition. About half way between planting and haying, would be apt to find crops in their best condition, and farmers with the nearest approach to a leisure day.

J. J. H. GREGORY, *Chairman.*

CARRIAGES.

The Committee on Carriages have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

Diploma and \$10 gratuity, to H. H. Pillsbury, Danvers, for goddard buggy.

\$10. Gratuity, to Dole & Osgood, Peabody, for end spring buggy.

\$10. Gratuity, to H. Whipple, Peabody, for carpet wagon.

R. M. Leach, Ira Foster, Edward Kent—*Committee.*

DAIRY.

The Committee on Dairy have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

\$10. First premium, to D. G. Tenney, Newbury, for 16 lbs. butter.

\$8. Second premium, to Mrs. B. H. Farnum, No. Andover, for 7 lbs. butter.

\$6. Third premium, to Mrs. Oliver Patch, Hamilton, for 14 lbs. butter.

John A. Putnam, Eldred S. Parker, Dudley Bradstreet—*Committee.*

STATEMENT OF D. G. TENNEY.

I present, for your inspection, sixteen lbs. of September butter, made from the milk of Native, Grade, Dutch, and Hereford cows. The milk is set in tin pans, and the cream taken off when the milk has soured. When churned, work out the buttermilk with hands, and salt to taste. The next morning, work again, and weigh into pound balls, and square with boards.

STATEMENT OF MRS. B. H. FARNUM.

I make my butter in the old-fashioned way. Churn twice a week; work out the buttermilk by hand. Have no ice, or milk cellar, nor any suitable place to keep my milk. This seven pounds of butter is a fair sample of my make for the past year. Use no coloring. It will keep in shape on a dining-table, the warmest day in summer, without ice. The past season has been unfavorable for making butter, on account of dull weather.

STATEMENT OF MRS. OLIVER PATCH.

I enter, for premium, fourteen pounds of butter, made last week, from the milk of two cows, partly Buffalo. The milk is skimmed, after standing thirty-six hours; adding a little salt to the cream, and stirring every day. When put into the churn, add a quart of cold water. Never use water after the butter comes. After taking from the churn, the buttermilk is thoroughly worked out, and butter salted, an ounce to a pound. The next day it is worked over again, and made into pound lumps.

 BREAD, HONEY, AND CANNED FRUIT.

The Committee on Bread, Honey, and Canned Fruit, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- §3. First premium, to Mrs. Lyman S. Wilkins, Middleton, for white bread.

- \$2. Second premium, to Mary Morrison, Peabody, for white bread.
- \$1. Third premium, to Mrs. C. H. Goulding, Peabody, for white bread.
- \$2. First premium, to Mrs. J. F. Patch, Hamilton, for graham bread.
- \$1. Second premium, to Annie C. Horsch, Rowley, for graham bread.
- \$1. Gratuity, to Olivia J. Spencer, Peabody, for rolls and cake.
- 50c. Gratuity, to Mrs. E. A. Cole, W. Boxford, for brown bread.
- 50c. Gratuity, to Mrs. Erastus Ward, Peabody, for brown bread.
- \$3. Gratuity, to N. N. Dummer, Rowley, for display of prepared and cooked grains, from Glen Mills.
- \$3. First premium, to Mrs. A. Wilson, North Beverly, for jellies and canned fruits.
- \$2. First premium, to Mrs. A. C. Osborn, Peabody, for canned fruit.

SPECIAL PREMIUMS, OFFERED BY N. N. DUMMER, OF GLEN MILLS,
ROWLEY, FOR GRAHAM BREAD MADE FROM "GLEN MILLS
IMPROVED GRAHAM OR ENTIRE WHEAT FLOUR."

- \$5. First premium, to Mrs. J. F. Patch, Hamilton, for "Improved Graham Flour" bread.
- \$2.50. Second premium, to Annie C. Horsch, Rowley, for "Improved Graham Flour" bread.
- \$1. Third premium, to Mrs. George Z. Goodell, Salem, for "Improved Graham Flour" bread.

The exhibit of bread submitted for exhibition, and for premium, although not as large in amount as usual, was exceptionally good. In some instances, the rules of the society were not entirely complied with; for instance, the brown bread the society orders made with yeast (not commonly used now), and that exhibited was made without yeast in every case. In some of the wheat bread the rules

of the society were not *strictly* complied with in minor points, but were excused by your committee. In some cases the bread was entered too late, therefore, it had to be set aside. Gratuities were also given to some fine collections of rolls and cake which were sent in without statements.

The exhibit entered by N. N. Dummer, of Glen Mills, Rowley, of grains, cooked and uncooked, were full and very interesting.

Bees, Hives and Honey. In this department there was no honey entered. Bees and hives, without statements as to amount of honey made, or how the bees were cared for, were entered, and, therefore, could receive no premium. The exhibits of preserves and jellies were very small, and no exhibits of dried fruits or pickles were sent to this department.

Mrs. Charles B. Emerson, chairman, Mrs. W. L. Bowdoin, Amanda F. Low—*Committee*.

STATEMENT OF MRS. LYMAN S. WILKINS, FIRST PREMIUM WHITE BREAD.

Haxall flour, 3 pints; 1 pint of milk, $\frac{1}{2}$ cup of yeast, 1 tablespoonful of lard, 1 tablespoonful of sugar, 1 tablespoonful of salt. Mixed with a spoon; not kneaded at all. Raised $5\frac{1}{2}$ hours; baked 1 hour.

STATEMENT OF MARY MORRISON, SECOND PREMIUM WHITE BREAD.

1 quart of flour, $\frac{1}{4}$ teaspoonful of salt, $\frac{1}{2}$ tablespoonful of sugar, 1-8 compressed yeast cake. One-half milk and one-half water. Knead twenty minutes.

STATEMENT OF MRS. J. F. PATCH.

Bread made from Glen Mills Improved Graham Flour,—put up by N. N. Dummer, Rowley, Mass.

Process of making: 1 quart graham flour, 1 teaspoonful salt, 1 large spoonful shortening, 1 large spoonful sugar, $\frac{1}{2}$ cup potato yeast, 1 pint milk and water, mixed warm. Set

to rise over night; in the morning, knead, put in tins, and rise again one hour. Bake an hour and ten minutes, in moderate oven.

STATEMENT OF ANNIE C. HORSCH, SECOND PREMIUM.

Glen Mills Improved Graham Bread. At noon make a sponge of $\frac{1}{2}$ Warner's yeast cake, about $\frac{1}{2}$ pint warm water and flour. At night, take 1 pint of milk, 2 teaspoonfuls of salt, and 2 dessertspoonfuls sugar, with the sponge, and graham flour enough to stiffen. In the morning, mould about five minutes, put into tins, and raise; then bake 2 loaves.

STATEMENT OF MRS. A. WILSON, OF JELLIES.

Boil the fruit until tender, and strain through hair sieve and then through flannel bag. Add 1 pound of sugar to a pint of juice, and boil twenty minutes, and strain through muslin, into glasses.

STATEMENT OF MRS. ABRAHAM C. OSBORNE, CANNED FRUIT.

LADIES:—I enter, for premium, specimen of the several varieties of fruits and berries, canned by me, for family use. All of the fruits and berries were grown in our own garden; not a single one was obtained elsewhere. My method of canning is simple, as follows:—The pears are canned whole. It was formerly my practice to cut them in quarters, but recently, finding that they would keep just as long and well, canned whole, also, it being much less labor, I have adopted that method. Granulated sugar is used entirely by me, in canning. The quantity, one-half as many pounds as there are fruit or berries. I do not name this as a fixed rule for everyone to follow. People differ so much in their tastes, that it is almost impossible to have a general rule for everyone to adopt. Perhaps it would be a better and more satisfactory course to be pursued, for every one to sweeten to their taste. The rhubarb, Black Naples currants and gooseberries are not sweetened when they are

canned. As they are used for so many different purposes, the sugar is not put in until they are wanted for use. More sugar was used for the crab apples and plums than any of the other varieties.

PEARS.

The Committee on Pears have attended to their duty and respectfully report to the Secretary that they have made the following awards :

- §3. First premium, to Edwin Bates, Lynn, for 12 Bartlett pears.
- §3. First premium, to A. Stickney, Groveland, for 12 Belle Lucrative pears.
- §3. First premium, to D. A. Pettengill, Danvers, for 12 Beurre Bose pears.
- §3. First premium, to Samuel Spalding, Danvers, for 12 Beurre d'Anjou pears.
- §3. First premium, to Edwin Bates, Lynn, for 12 Duchess d'Angouleme pears.
- §3. First premium to B. F. Southwick, Peabody, for 12 Dana Hovey pears.
- §3. First premium, to John O'Brien, Bradford, for 12 Lawrence pears.
- §3. First premium, to Edwin Bates, Lynn, for 12 Louis Bon de Jersey pears.
- §3. First premium, to A. J. Hubbard, Peabody, for 12 Maria Louise pears.
- §3. First premium, to J. H. Hill, Amesbury, for 12 Onondaga pears.
- §3. First premium, to B. R. Symonds, Salem, for 12 Paradise d' Automne pears.
- §3. First premium, to D. A. Pettengill, Danvers, for 12 Seckle pears.
- §3. First premium, to Amos Raddin, Peabody, for 12 Sheldon pears.
- §3. First premium, to W. W. Perkins, Newbury, for 12 Urbaniste pears.

- \$3. First premium, to David A. Pettengill, Danvers, for 12 Vicar of Winkfield pears.
- \$3. First premium, to J. H. Hill, Amesbury, for 12 Beurre Langliera pears.
- \$3. First premium, to Edwin Bates, Lynn, for 12 Howell pears.
- \$3. First premium, to E. F. Webster, Haverhill, for 12 Beurre Hardy pears.
- \$3. First premium, to F. N. Carlton, Peabody, for 12 Beurre Clairgeau pears.
- \$1.50. Gratuity, to R. H. Brown, Peabody, for 12 Doy de Comice pears.
- \$1.50. Gratuity, to A. Stickney, Groveland, for 12 Goodale pears.
- \$2. Gratuity, to Edwin Bates, Lynn, for 24 Duchess de Angouleme pears.
- \$2. Gratuity, to Edwin Verey, Salem, for 24 Buerre Bose pears.
- \$1. Gratuity, to J. Lamson, Haverhill, for 24 Beurre Bose pears.
- \$1. Gratuity, to C. B. Haven, Peabody, for 24 Seckle pears.
- \$1. Gratuity, to F. N. Carlton, Peabody, for 12 Beurre Bose pears.
- \$1. Gratuity, to F. N. Carlton, Peabody, for 12 Onondaga pears.
- \$1. Gratuity, to F. N. Carlton, Peabody, for 12 Duchess de Angouleme pears.
- \$1. Gratuity, to C. B. Haven, Peabody, for 12 Seckle pears.
- \$1. Gratuity, to G. D. Walton, Peabody, for 12 Bartlett pears.
- \$1. Gratuity, to A. Raddin, Peabody, for 12 Lawrence pears.
- \$1. Gratuity, to A. Raddin, Peabody, for 12 Howell pears.
- \$1. Gratuity, to A. Raddin, Peabody, for 12 Beurre Clairgeau pears.

- §1. Gratuity, to A. C. Osborn, Peabody, for 12 Crispin pears.
- §1. Gratuity, to C. E. Brown, 2nd., Peabody, for 12 Beurre d' Anjou pears.
- §1. Gratuity, to Edwin Bates, Lynn, for 12 Bosc pears.
- §1. Gratuity, to Edwin Bates, Lynn, for 12 Sheldon pears.
- §1. Gratuity, to J. W. Dodge, Danvers, for Dodge Seedling pears.
- §1. Gratuity, to R. H. Brown, Peabody, for 12 Howell pears.
- §1. Gratuity, to W. P. Hutchinson, Danvers Center, for 12 Beurre Clairgeau pears.
- §1. Gratuity, to Walnut Farm, Essex, for 12 Sheldon pears.
- §1. Gratuity, to S. Southwick, Peabody, for Pyramid of pears.

John R. Langley, Abraham C. Osborn, Peter M. Neal.
George Pettengill—*Committee*.

There were 272 dishes of 12 specimens each, and 3 of 24 each. The Committee would recommend that there be no premium offered for 24 specimens, but that the amount of that premium be added to the gratuities to be given to 12 specimen dishes.* They also recommend that the Beurre Langlier be dropped from the list recommended for cultivation in Essex County, and that the Doyenem de Comice be added to the list.*

GEORGE PETTENGILL, *for the Committee*.

*NOTE.—The Trustees at November meeting struck from the list, the premiums for 24 specimens of Pears, and Apples, and offer the amount for *Collection of Pears and Apples*. The Committees on Pears and Apples are already authorized to award \$1.50 Premiums for any other varieties than those recommended, if deemed worthy of it. The recommendation in regard to the Beurre Langlier Pear was adopted.

D. W. Low, *Secretary*.

APPLES.

The Committee on Apples have attended to their duty and respectfully report to the Secretary that they have made the following awards :

- §3. First premium, to Simon P. Buxton, Peabody, for Hubardtson Nonsuch.
- §3. First premium, to Thomas Sawyer, Boxford, for King of Tompkins County.
- §3. First premium, to Wm. W. Perkins, Newbury, for Tolman Sweet.
- §3. First premium, to Wm. W. Perkins, Newbury, for R. I. Greening.
- §3. First premium, to Thomas Hale, Rowley, for Gravenstein.
- §3. First premium, to Francis T. Marstin, Danvers, for Sweet Baldwin.
- §3. First premium, to S. B. George, Groveland, for Hunt Russett.
- §3. First premium, to D. Bradstreet, Topsfield, for Drap d'Or.
- §3. First premium, to Wm. B. Little, Newbury, for Smith's Cider.
- §3. First premium, to Monroe Bros., Lynnfield, for Danvers Winter Sweet.
- §3. First premium, to J. Henry Hill, Amesbury, for Bailey's Sweet.
- §3. First premium, to J. Henry Hill, Amesbury, for Granite Beauty.
- §3. First premium, to J. Henry Hill, Amesbury, for Red Russett.
- §3. First premium, to Wm. R. Kimball, West Boxford, for Porter.
- §3. First premium, to Moses H. Poor, West Newbury, for Baldwin.
- §3. First premium, to Joel L. Southworth, West Peabody, for Hurlburt.
- §3. First premium, to David Warren, Swampscott, for Pickman Pippin.

- \$1.50. First premium, to Lyman S. Wilkins, Middleton,
 for Russian Crab.
 \$6. First premium, to Marcellus Janes, West Newbury,
 for best 24 specimens Hubbardston Nonsuch.
 \$1.50. Gratuity, to William K. Cole, West Boxford, for
 William's Favorite (excellent).
 \$1. Gratuity, to Frank A. Whitman, Wenham, for Snow.
 \$1. Gratuity, to Frank A. Whitman, Wenham, for Un-
 known (very fine).
 \$1. Gratuity, to Thomas C. Thurlow, West Newbury,
 for 20 ounce Pippin.
 \$1. Gratuity to S. F. Newman, Newbury, for Drap d'-
 Or.
 \$1. Gratuity, to T. K. Bartlett, Newburyport, for Brad-
 ford Nonsuch.
 \$1. Gratuity, to W. P. Smith, Rowley, for Blue Pear-
 main.
 \$1. Gratuity, to Thomas P. Hale, Rowley, for Baldwin.
 \$1. Gratuity, to Thomas Hale, Rowley, for Spitzenberg.
 \$1. Gratuity, to Thomas Hale, Rowley, for Conn. Green-
 ing.
 \$1. Gratuity, to Wm. W. Perkins, Newbury, for Rox-
 bury Russets.
 \$1. Gratuity, to Mrs. Dr. White, Danvers, for Hubbard-
 ston Non.
 \$1. Gratuity, to C. C. Blunt, Andover, for Strawberry.
 \$1. Gratuity, to Patrick Murphy, Peabody, for Osgood's
 Favorite.
 \$1. Gratuity, to S. W. Spaulding, Danvers, for Wealthy.
 \$1. Gratuity, to E. K. Lee, Essex, for Gravenstein.
 \$1.50. Gratuity, to S. Southwick, Peabody, for pyramid
 of assorted apples.

Geo. W. Chadwick, Thomas K. Leach, Joseph Howe,
 William B. Little, T. P. Hale—*Committee*.

PEACHES, GRAPES, AND ASSORTED FRUITS.

The Committee on Peaches, Grapes, and Assorted

Fruits, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- £3. First premium, to W. P. Hutchinson, Danvers, for Niagara grapes.
- £3. First premium, to A. J. Hubbard, Peabody, for Concord grapes.
- £3. First premium, to Geo. W. Gage, Methuen, for Worden's Seedling grapes.
- £3. First premium, to S. M. Titcomb, West Newbury, for Brighton grapes.
- £3. First premium, to Chas. E. Marsh, Lynn, for Hartford Prolific grapes.
- £3. First premium, to W. P. Hutchinson, Danvers, for Delaware grapes.
- £3. First premium, to C. B. Haven, Peabody, for Martha grapes.
- £3. First premium, to W. P. Richardson, Danvers, for Moore's Early grapes.
- £1.50. First premium, to Geo. D. Walton, Danvers, for Croton grapes.
- £1.50. First premium, to W. P. Hutchinson, Danvers, for Prentiss grapes.
- £6. First premium, to Aaron Low, Essex, for Cold House Black Hamburg grapes.
- £4. Second premium, to Geo. W. Gage, Methuen, for Black Hamburg grapes.
- 50c. Gratuity, to C. B. Haven, Peabody, for Bush Orange quinces.
- £2. First premium, to Miss Minnie A. Walton, Peabody, for peaches.
- £1. Gratuity, to D. H. Southwick, Peabody, for Clinton grapes.
- £1. Gratuity, to Rufus Goodwin, Ayer Village, Haverhill, for Concord grapes.
- £1. Gratuity, to Rufus Goodwin, Ayer Village, Haverhill, for Delaware grapes.

- 50c. Gratuity, to A. C. Osborne, Peabody, for Pocklington grapes.
- 50c. Gratuity, to A. C. Osborne, Peabody, for Concord grapes.
- 50c. Gratuity, to Mrs. G. P. Osborne, Peabody, for Renia Claud plums.
- 50c. Gratuity, to Mrs. G. P. Osborne, Peabody, for Cole's Golden Drop plums.
- \$2. Gratuity, to E. F. Webster, Haverhill, for Orange quince.
- \$1. Gratuity, to Mrs. J. F. Farran, Salem, for Orange quince.
- \$1. Gratuity, to Samuel Cammett, Amesbury, for Martha grapes.
- \$1. Gratuity, to Geo. Pettengill, Salem, for Ives' Blood peach.
- \$1. Gratuity, to Edwin Verry, Salem, for White Flesh Essex County peach.
- 50c. Gratuity, to Edwin Bates, Lynn, for Lombard plums.
- \$1. Gratuity, to Mrs. W. O. Safford, Salem, for Yellow Egg plums.
- \$3. First premium, to Frederick Lamson, Salem, for collection of peaches.
- \$2. First premium, to Frederick Lamson, Salem, for Essex County Seedling peaches.
- \$2. First premium, to S. D. Rollins, Amesbury, for yellow flesh peaches, "Late Crawford."
- \$2. First premium, to Henry M. Meek, Salem, for white flesh peaches, "Stump of the World."

J. HENRY HILL, *Chairman.*

FLOWERS.

The Committee on Flowers have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- 50c. Gratuity, to Joseph Symonds, Salem, for Asters.
- 50c. Gratuity, to Mrs. Geo. Reynolds, Peabody, for Cockscombs.
- 50c. Gratuity, to W. J. Walton, Salem, for 2 plates flowers.
- \$2. Second premium, to Miss E. M. Perley, Danvers, for collection Foliage Plants.
- \$3. Second premium, to Andrew Nichols, Jr., Danvers, for native plants, named.
- \$5. First premium, to Miss Mary W. Nichols, Danvers, for native plants, named.
- 50c. Gratuity, to Jessie F. Hapgood, Middleton, for Quilled Asters.
- \$1. First premium, to Agnes H. Hale, Rowley, for Zinnias.
- \$1. First premium, to Mrs. A. Raddin, So. Peabody, for 6 varieties of Dahlias.
- \$1. Gratuity, to Miss S. H. Newhall, So. Peabody, for Roses, and Sweet Peas.
- \$1. First premium, to Miss S. H. Newhall, So. Peabody, for 3 varieties of Roses.
- 50c. Gratuity, to Mrs. N. E. Ladd, Groveland, for Nasturtiums.
- 50c. Gratuity, to Mrs. H. M. Osborn, Peabody, for cut flowers.
- 75c. Gratuity, to Mrs. C. Marsh, Lynn, for Gladiolus.
- \$1. Gratuity, to Mr. S. Blaney, Peabody, for collection of Asters.
- \$1. First premium, to Mrs. Chas. Perley, West Boxford, for Calendulas.
- \$1. Gratuity, to Mrs. J. H. Hill, Amesbury, for Roses (tender).
- \$1. First premium, to Joseph Symonds, Salem, for 24 Asters.
- \$1. Gratuity, to Miss S. H. Newhall, So. Peabody, for collection.
- \$1. First premium, to Miss S. H. Newhall, So. Peabody, for 6 varieties of Verbenas.

- \$1. First premium, to Mrs. J. E. Page, Salem, for bouquet garden Flowers.
- \$1. Gratuity, to Mrs. W. W. Kimball, Lynn, for bouquet Wild Flowers.
- \$1. First premium, to Mrs. Wm. Perkins, Peabody, for Begonia.
- \$1. Gratuity, to T. C. Thurlow, W. Newbury, for Gladiolus.
- \$1. First premium, to T. C. Thurlow, W. Newbury, for Hardy Phlox.
- 50c. Gratuity, to T. C. Thurlow, W. Newbury, for collection.
- 50c. Gratuity, to P. M. Neal, Lynn, for Dahlias.
- \$1. First premium, to Mrs. S. P. Weston, Danvers, for Immortelles.
- \$1. First premium, to E. & C. Woodman, Danvers, for Carnations.
- \$1. First premium, to E. & C. Woodman, Danvers, for Geraniums.
- \$1. First premium, to E. & C. Woodman, Danvers, for Nasturtiums.
- 75c. Gratuity, to Miss M. F. Putnam, Danvers, for Wild Flowers.
- \$1. Gratuity, to Aaron Low, Essex, for Gladiolus.
- \$1. First premium, to Mrs. M. P. Nichols, Lynn, for Mourning Bride.
- 50c. Gratuity, to Mrs. Oscar Fellows, Peabody, for Pot Plants.
- 75c. Gratuity, to Mrs. M. E. Fuller, Middleton, for Wild Flowers.
- 50c. Gratuity, to Mrs. M. E. Fuller, Middleton, for Native Ferns.
- \$3. First premium, to G. W. Creesy, Salem, for Cut Flowers.
- \$2. Second premium, to Mrs. J. M. Ward, Peabody, for Cut Flowers.

Mrs. William S. Horner, Mrs. J. Henry Hill, Mrs. David Warren, Eben True—*Committee*.

VEGETABLES.

The Committee on Vegetables have attended to their duty, and respectively report to the Secretary that they have made the following awards :

- \$3. First premium, to David Warren, Swampscott, for
 Eclipse beets.
 50 cts. Gratuity, to F. H. Appleton, Peabody, for Lima
 beans.
- \$2. First premium, to B. P. Ware, Marblehead, for
 nutmeg melons.
- \$2. Second premium, to B. Henry Wilson, Peabody, for
 savoy cabbages.
- \$3. First premium to B. Henry Wilson, Peabody, for
 Clark's No. 1 Potatoes.
- \$3. First premium, to Thomas C. Durkee, Peabody, for
 marrow squashes.
- \$2. Second premium, to Thomas C. Durkee, Peabody,
 for Brunswick cabbages.
- \$1. Gratuity, to Andrew Curtis, Peabody, for corn in
 milk.
- \$1. Gratuity, to Andrew Curtis, Peabody, for collection
 of squashes.
- 50 cts. Gratuity, to B. H. Taylor, Peabody, for Fottler's
 cabbages.
- \$1. Third premium, to L. G. Moulton, Peabody, for
 cranberries.
- \$3. First premium, to David Warren, Swampscott, for
 Essex Hybrid Squashes.
- \$3. First premium, to David Warren, Swampscott, for
 red cabbages.
- \$2. Gratuity, to David Warren, Swampscott, for Danvers
 onions.
- 50 cts. Gratuity, to Batchelder Farm, West Wenham,
 for Belle potatoes.
- \$1. Gratuity, to Batchelder Farm, West Wenham, for
 Winslow potatoes.

- §1. Gratuity, to Batchelder Farm, West Wenham, for Carter's improved turnips.
- §2. First premium, to A. F. Lee, Beverly, for short horn carrots.
- 50 cts. Gratuity, to J. E. Herrick, West Peabody, for Globe turnips.
- §1. Gratuity, to Geo. Reynolds, Peabody, for herbs.
- §1. Gratuity, to Geo. Reynolds, Peabody, for cabbages.
- 50 cts. Gratuity, to B. H. Taylor, Peabody, for Beauty of Hebron potatoes.
- §3. First premium, to B. H. Farnum, N. Andover, for sweet German turnips.
- §3. First premium, to A. P. Alley, Marblehead, for Marblehead squashes.
- §3. First premium, to A. P. Alley, Marblehead, for Turban squashes.
- §3. First premium, to A. P. Alley, Marblehead, for Danvers onions.
- §2. Second premium, to A. P. Alley, Marblehead, for red cabbages.
- 50 cts. Gratuity, to Edwin Bates, Lynn, for Bay State squashes.
- §3. First premium, to Edwin Bates, Lynn, for mangolds.
- §3. First premium, to Edwin Bates, Lynn, for Long Orange carrots.
- §3. First premium, to Edwin Bates, Lynn, for Livingston's tomatoes.
- §3. First premium, to Edwin Bates, Lynn, for Hebron potatoes.
- §1. Gratuity, to Wm. E. Sheen, W. Peabody, for collection of potatoes.
- §3. First premium, to Richard Jaques, Newbury, for flat onions.
- §1. Gratuity, to Richard Jaques, Newbury, for Short Horn carrots.
- §3. First premium, to Richard Jaques, Newbury, for Dewing's beets.

- \$2. First premium, to E. C. Smith & Son, Rowley, for celery.
 \$3. First premium, to Aaron Low, Essex, for Early Sweet corn.
 \$1. Gratuity, to Aaron Low, Essex, for Bay State squashes.
 50 cts. Gratuity, to Aaron Low, Essex, for White Spine cucumbers.
 \$3 First premium, to Aaron Low, Essex, for Essex Hybrid tomatoes.
 \$3. First premium, to Aaron Low, Essex, for collection tomatoes.
 \$1. Gratuity, to J. P. King, Peabody, for Danvers onions.
 \$3. First premium, to H. A. Stiles, Middleton, for Strap Leaf flat turnips.
 50 cts. Gratuity, to J. O. Goodale, Peabody, for Crook-neck squashes.
 \$3. First premium, to J. O. Goodale, Peabody, for Hubbard squashes.
 \$1. Gratuity, to J. O. Goodale, Peabody, for Victor squashes.
 50 cts. Gratuity, to J. O. Goodale, Peabody, for Purple Top turnips.
 \$3. First premium, to J. O. Goodale, Peabody, for cauliflowerers.
 50 cts. Gratuity, to Issachar Foster, jr., Beverly, for pumpkins.
 \$3. First premium, to Philip Bushby, Peabody, for Danvers carrots.
 50 cts. Gratuity, to Philip Bushby, Peabody, for parsnips.
 50 cts. Gratuity, to Philip Bushby, Peabody, for Strap Leaf Purple Top turnips.
 \$3. First premium, to Richard Jaques, Newbury, for parsnips.
 50 cts. Gratuity, to Rufus Goodwin, Haverhill, for Danvers onions.

- \$1. Gratuity, to Rufus Goodwin, Haverhill, for Seedling potatoes.
 50 cts. Gratuity, to W. H. Cole, W. Boxford, for Early Sweet corn.
 \$3. First premium, to W. H. Cole, W. Boxford, for cranberries.
 50 cts. Gratuity, to W. H. Cole, W. Boxford, for cauliflowers.
 \$2. Second premium, to W. H. Greenleaf, Salisbury, for cauliflowers.
 \$3. First premium, to S. F. Newman, Newbury, for Savoy cabbages.
 \$3. First premium, to S. F. Newman, Newbury, for Fottler's Brunswick cabbages.
 \$2. Second premium, to S. F. Newman, Newbury, for Stone Mason cabbages.
 \$3. First premium, to S. F. Newman, Newbury, for Red Globe onions.
 \$3. First premium, to E. & C. Woodman, Danvers, for Livingston tomatoes.
 \$1. Gratuity, to Joel E. Southwick, W. Peabody, for Turban squashes.
 50 cts. Gratuity, to Wm. Barrett, Peabody, for Marrow squashes.
 50 cts. Gratuity, to John J. Mason, Amesbury, for White Egg turnips.
 \$2. First premium, to John J. Mason, Amesbury, for water melons.
 \$3. First premium, to John J. Mason, Amesbury, for Ruta Baga turnips.
 \$1. Gratuity, to Nathan Bushby, Peabody, for Lima beans.
 \$2. Second premium, to W. H. Johnson, Essex, for cranberries.
 50 cts. Gratuity, to Berton Putnam, Danvers, for Peanuts.
 50 cts. Gratuity, to John Baker, Manchester, for Stone Mason cabbages.

- £3. First premium, to Chas. W. Mann, Methuen, for Stone Mason cabbages.
- £1. Gratuity, to Chas. W. Mann, Methuen, for Methuen Early Sweet corn.
- £1. Gratuity, to Chas. W. Mann, Methuen, for Danvers carrots.
- 50 cts. Gratuity, to F. Buckminister, Methuen, for Queen of Valley potatoes.
- 50 cts. Gratuity, to Aaron Low, Essex, for Edmand's beets.
- £1. Gratuity, to Porter's Market, Salem, for horn of plenty.
- 50 cts. Gratuity, to Amos S. Buxton, Peabody, for Queen of Valley potatoes.
- £8. First premium, to Jas. J. H. Gregory, Marblehead, for collection of vegetables.
- £6. First premium, to Chas. W. Mann, Methuen, for collection of vegetables.

B. F. Huntington, John M. Danforth, B. P. Pike, John Baker, Albert W. Howe—*Committee*.

B. F. HUNTINGTON, *Chairman*.

GRAIN AND SEED.

The Committee on Grain and Seed have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- £1. First premium, to C. F. Webster, Haverhill, for 1 peck shelled corn.
- £1. First premium, to Pickman Farm, Salem, for 1 peck barley.
- £1. First premium, to Pickman Farm, Salem, for 1 peck rye.
- £5. First premium, to B. H. Taylor, Peabody, for 25 ears Field corn.
- £3. Second premium, to J. W. Yeaton, Georgetown, for 25 ears Field corn.

- §2. Third premium, to Frank Witham, Middleton, for 25 ears Field corn.
- §3. First premium, to B. H. Taylor, Peabody, for 25 ears Pop corn.
- §2. Second premium, to Wm. A. Walton, Ipswich, for 25 ears Pop Corn.
- §8. First premium, to J. J. H. Gregory, Marblehead, for 243 samples Field and Garden seed.
- §5. Second premium, to Charles W. Mann, Methuen, for Field and Garden seed.

A large variety of seeds was exhibited by Morrison & Trask, of Peabody, which, not being grown in the county, could not compete for premiums. N. W. Edson & Co., of Peabody, covered their attractive "booth," containing samples of their goods, with trace corn, which the committee are glad to notice, both for its excellence and taste of arrangement.

Rufus Kimball, P. Albert True, W. H. Greenleaf—*Committee.*

GRAIN AND SEED.

Much might be written of the antiquity of seeds and grain, but where the seeds of some of our garden vegetables came from is likely to remain in doubt.

The potato, the most valuable and widely cultivated of esculent tubers, is a native of the elevated tropical valleys of Mexico, Peru, and Chili. It was unknown in New England until near the middle of the eighteenth century, although described by Gerard, in his *Herball*, in 1597, under the name of *Batata Virginiana*. It is allied to several powerful narcotics, such as tobacco, henbane, and belladonna, as well as to other esculents. In production, it exceeds that of any other esculent, yielding, according, to Humbolt, thirty times greater weight than wheat, on an equal amount of ground.

There is positive evidence that the radish was grown in the gardens of the Pharoahs, although it did not reach

England until about three hundred years ago, according to the reckoning of the London Standard. The children of Israel, when they loathed manna in the wilderness, remembered "the cucumbers, and the melons, and the leeks, and the onions, and the garlick," which they did eat in Egypt.

Most authorities agree that the many varieties of cabbage, cauliflower, turnip, etc., are natives of the temperate and cold regions of Europe and Asia, and they are believed to owe their parentage to the wild brassica of the cliffs and seashore, although, after their long cultivation, it is difficult to trace any semblance to the original.

The gourd is a native of Africa and Asia, perhaps, also, of America; and the squash, called edible gourd in England, and cultivated upon both continents long before the time of Columbus, probably had a hybrid origin.

The common spinach has been cultivated in this country for more than three hundred years. It was noticed in Turner's "Herbal," published in 1568, as "an herb lately found and not much in use." It is generally supposed to be a native of Western Asia, but no positive evidence of its origin can be had.

The tomato, now grown as an article of food in all warm and temperate climates, is a native of tropical America; and the garden lettuce, believed to have been introduced from Asia, is said to be traced from a wild plant, but the statement has never been satisfactorily corroborated.

The first mention of wheat occurs in the account of Jacob's sojourn with Laban (Gen. 30: 14). Egypt was celebrated for wheat, and it was plentiful in Syria and Palestine. Corn, as usually applied, is the generic name for all seeds used in making bread, and especially the seeds of cereals. The grains and leaves of Indian corn (maize) have been found under the heads of Egyptian mummies, and it is supposed to be mentioned by Homer.

The offering in Lev. 2: 14, was of "green ears of corn dried by the fire, even corn beaten out of full ears."

The writer has been interested, during the past summer, in watching the growth of several hills of corn in the garden of Mr. John H. B. Grover, in Whiting street, Lynn. The stalks were very similar to those of the common field corn, raised by Essex County farmers, with the exception that a white stripe was shown in the centre of each leaf or lance. But the principal peculiarity was in the fact that no ear appeared, but the kernels grew upon the flower or tassel, forming a bunch on the top of each stalk, which yielded half a pint or more of hard white corn, about the size of pop-corn, and the kernels being of the same shape as that variety. The seed from which this corn grew was procured by a gentleman making a tour in the East. While in Egypt, a mummy was exhumed, and a quantity of corn was found in the coffin. The gentleman, finding that the corn was apparently in good condition, thought that perhaps it might germinate, and sent some of it to a friend in California, who, in turn sent a few kernels to a farmer by the name of Cisson, in New Jersey. Both the gentlemen who received the corn planted it, and were surprised that the kernels grew where the tassel forms on our native corn. It is believed that the mummy from which this corn was taken had been buried nearly four thousand years, and that it retained the power to germinate is truly wonderful. The corn raised this year, by Mr. Grover, was the second year's product of the seed sent from Egypt. The mummy was found twenty feet below the surface, the depth being accounted for, perhaps, by the drift of sand during the centuries. The facts as here related, concerning the finding of the seed and its history, were received directly from Mr. Cisson, and it seems that there can be no doubt of the correctness of the statements.

There is, undoubtedly, wheat now in the United States which sprang from seed taken from mummies which had

been buried four thousand years, but it will be surprising to many, to learn that "there is corn in Egypt" of such an age which will sprout and prove as productive as our native maize.

It is, undoubtedly, true that barley is more widely distributed than any other grain. Cultivated by the ancient Hebrews, Greeks, and Romans, it was a most important article of food in a remote antiquity. It is first mentioned in Exodus 9: 31,—“And the flax and the barley was smitten, for the barley was in the ear, and the flax was balled.” This grain is adapted to almost all climates, the Himalaya barley producing good crops at the height of 14,000 feet above the level of the sea. It has been the subject of song and humorous composition, and many a swain has sung.

“Here’s health to the Barley Mow.”

Oats are the “corn” of Scotland, and probably a development of the wild oat found in Europe, and now growing wild, and spreading over large tracts of land in California. It is a northern plant, though it does not reach so far north as barley, and degenerates very rapidly in hot southern summers. Its annual production in the United States has been as high as 3,000,000 bushels.

Rye, the annual production of which in the United States is estimated at 20,000,000 bushels, is grown in the largest quantities in Pennsylvania, New York, and Illinois. Less nutritious than wheat, it is nevertheless a wholesome grain. Its greatest use is for distillation of whiskey in the United States, gin in Holland, and *quass* in Russia. Its straw is more valuable than that of any other grain, and it thrives upon poor soil and in the higher latitudes of the temperate zone. It is mentioned in Exodus as “rie.”

Beans have been cultivated in Asia and Europe since the earliest ages, and the many varieties used as food for men, cattle, and swine. In New England they have proved a profitable crop on dry and moderately rich soil.

Many other seeds should perhaps be included in this report, but its length suggests the wisdom of bringing it to a close.

RUFUS KIMBALL, *Chairman.*

COUNTERPANES AND AFGHANS.

The Committee on Counterpanes and Afghans have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$4.00. First premium, to Mrs. R. G. Nelson, Peabody, for silk quilt.
- 2.00. Second premium, to Miss Alice Patterson, Peabody, for counterpane.
- 2.00. Gratuity, to Mrs. C. E. Stone, Peabody, for silk quilt.
- 1.00. Gratuity, to Mary A. Brennan, Salem, for quilt.
- 1.00. Gratuity, to Mrs. Jacob Osborn, Peabody, for quilt.
- .50. Gratuity, to Mrs. J. B. Shepard, Salem, for quilt.
- .50. Gratuity, to Mrs. John Silk, Peabody, for quilt.
- .50. Gratuity, to Mrs. C. P. Dodge, Beverly, for quilt.
- .50. Gratuity, to Mrs. H. F. Marsh, Peabody, for quilt.
- .50. Gratuity, to Mrs. S. W. Mackintire, Peabody, for quilt.
- .50. Gratuity, to Mrs. Wm. Stimpson, Danvers, for quilt.
- .50. Gratuity, to Mrs. Henry M. Ives, Salem, for quilt.
- .50. Gratuity, to Mrs. E. W. Merrill, Salem, for quilt.
- .50. Gratuity, to Mrs. Annie Gower, Salem, for quilt.
- 1.50. Gratuity, to Mrs. Emma French, Peabody, for two quilts.
- .50. Gratuity, to Mrs. R. Jacobs, Peabody, for quilt.
- .50. Gratuity, to Mrs. A. Gowing, Peabody, for quilt.
- .50. Gratuity, to Mrs. John Moulton, Peabody, for quilt.

- .50. Gratuity, to Mrs. M. L. Bodge, Peabody, for quilt.
 - .50. Gratuity, to Mrs. C. H. Tigh, Peabody, for quilt.
 - .50. Gratuity, to Mrs. I. E. Jackman, Peabody, for quilt.
 - .50. Gratuity, to Mrs. Mary A. Teague, Peabody, for quilt.
 - .50. Gratuity, to Mrs. J. L. Oliver, South Peabody, for quilt.
 - .50. Gratuity, to Miss Cora M. Bushby, Danvers, for quilt.
 - .50. Gratuity, to Mrs. Ernest A. Harriman, Peabody, for quilt.
 - .50. Gratuity, to Miss N. E. Fellows, Peabody, for quilt.
 - .50. Gratuity, to Mrs. Wm. Peck, Salem, for quilt.
 - .50. Gratuity, to Mrs. M. H. Stevens, Salem, for quilt.
 - .50. Gratuity, to Mrs. F. E. Green, Peabody, for quilt.
 - 2.00. First premium, to Mrs. C. S. Goldthwaite, Peabody, for afghan.
 - 1.00. Second premium, to Mrs. D. B. Lord, Peabody, for afghan.
 - 1.00. Gratuity, to Mrs. Geo. H. Little, Peabody, for afghan.
 - 1.00. Gratuity, to Mrs. Susan P. Newhall, Peabody, for afghan.
 - .50. Gratuity, to Miss Grace M. Cone, South Peabody, for afghan.
 - .50. Gratuity, to Mrs. Stephen Fernald, Peabody, for afghan.
 - .50. Gratuity, to Mrs. L. M. Balcomb, Peabody, for afghan.
 - .50. Gratuity, to Mrs. L. N. Putnam, Danvers, for afghan.
 - .50. Gratuity, to Mrs. J. S. Hodgkins, Peabody, for afghan.
 - .50. Gratuity, to Mrs. Jessie F. Barrett, Peabody, for afghans.
- Mrs. O. L. Carleton, Chairman, Mrs. J. P. King, Mrs.

Charles O. Brooks, Mrs. Alonzo Raddin, Mrs. Edward W. Jacobs—*Committee*.

CARPETS AND RUGS.

The Committee on Carpets and Rugs have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

Diploma, to George Foan, Peabody, for 27 wool mats.

\$3.00. First premium, to Mrs. J. Fairbanks, Salem, for rugs.

2.00. Second premium, to F. A. Perkins, Peabody, for rug.

2.00. Gratuity, to Mrs. E. D. Folsom, Peabody, for rug.

1.00. Gratuity, to Mrs. John Goldthwaite, Lynn, for rug.

1.00. Gratuity, to Miss I. L. Roberts, Salem, for rug.

1.00. Gratuity, to Mrs. W. Sleeper, Salem, for rug.

1.00. Gratuity, to Mrs. H. C. Torr, Peabody, for rug.

.50. Gratuity, to Mrs. John Torr, Peabody, for rug.

.50. Gratuity, to Mrs. Samuel Trask, Peabody, for rug.

.50. Gratuity, to Mrs. Ira Foster, Peabody, for rug.

.50. Gratuity, to Mrs. Samuel Ferguson, Peabody, for rug.

1.00. Gratuity, to Miss Jane L. Stevens, Peabody, for rug.

1.00. Gratuity, to Mrs. Frank Witham, Middleton, for rug.

1.00. Gratuity, to D. B. Lord, Peabody, for rug.

1.00. Gratuity, to Henrietta Pushee, Beverly, for rug.

1.00. Gratuity, for rug.

2.00. Gratuity, to B. F. Calley, East Saugus, for rug.

2.00. Gratuity, to Mrs. Abbie Wallace, Salem, for rug.

1.00. Gratuity, to Mrs. L. P. Burbank, Salem, for rug.

1.00. Gratuity, to Mrs. Robert Hamilton, Salem, for rug.

1.00. Gratuity, to Mrs. S. T. Stoddard, Peabody, for rug.

1.00. Gratuity, to Mrs. H. A. Begg, Peabody, for rug.

.50. Gratuity to Mrs. Geo. E. Dodge, Peabody, for rug.

.50. Gratuity, to Mrs. Annie Gower, Salem, for rug.

.50. Gratuity, to Mrs. Wm. Pack, Salem, for rug.

Nancie T. Morrison, Sarah P. Cogswell, Mrs. N. E. Ladd, Andrew Nichols—*Committee*.

ARTICLES MANUFACTURED FROM LEATHER.

The Committee on Articles Manufactured from Leather have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$5.00. First premium, to Charles McTurner, Danvers, for team harness.
- 5.00. First premium, to H. H. Pillsbury, Danvers, for carriage harness.
- 5.00. First premium, to H. H. Pillsbury, Danvers, for express harness.
- 3.00. Gratuity, to Herbert Gardner, Peabody, for double harness.
- 2.00. Gratuity, to Herbert Gardner, Peabody, for express harness.
- 3.00. Gratuity, to Charles P. Spencer, Salem, for exhibit.
- 2.00. Gratuity, to J. W. Dane & Co., Salem, for carriage harness.
- 2.00. First premium, to G. H. Flint, Danvers, for youth's shoes.

G. W. Clapp, E. C. Foster, W. H. Foster, Samuel Trask
— *Committee.*

MANUFACTURES AND GENERAL MERCHANDISE.

The Committee on Manufactures and General Merchandise have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- Diploma, to Charles F. Curwin, Salem, for water motor.
- Diploma, to Alfred Taylor, Peabody, for soap.
- Diploma, to J. H. Smith, Peabody, for horse shoes.
- Diploma, to Peabody Reporter, Peabody, for printed cards.
- Diploma, to Standard Thermometer Co., Peabody, for Standard thermometers.
- Diploma, to J. R. Fogg, Amesbury, for weather and door strips.
- Diploma, to G. H. Little, Peabody, for articles of brass manufacture.

Diploma, to Willey & Poor, Peabody, for kip and split leather.

Diploma, to L. B. Southwood & Co., Peabody, for finished sheep skins.

Diploma, to F. Osborn, jr. & Co., Peabody, for kip and split leather.

50 cts. Gratuity, to B. F. Calley, East Saugus, for pop corn sheller.

\$1.00. Gratuity, to G. L. Richardson, So. Peabody, for hen fountain.

50 cts. Gratuity, to Francis A. Lane, Peabody, for balls, and wooden chain.

50 cts. Gratuity, to Mrs. A. K. Blackington, Rowley, for two pairs knit mittens.

William Hilton, Chairman, Dean A. Perley, Osman Babson—*Committee*.

FANCY WORK AND WORKS OF ART.

The Committee on Fancy Work and Works of Art have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

.50. Gratuity, to Nellie E. Skinner, Salem, for painting.

\$1.00. Gratuity, to Mrs. W. F. Chapple, Salem, for clayoid work.

1.50. Gratuity, to Nellie A. Magoon, Danvers, for cattle piece.

1.00. Gratuity, to Alice M. Bushby, Peabody, for three oil paintings.

.75. Gratuity, to Henry H. Buxton, Peabody, for crayon pictures.

.50. Gratuity, to Mrs. Chas. O. Stone, Peabody, for oil painting.

.50. Gratuity, to Mrs. Mary D. Bomer, Peabody, for knit edging.

.75. Gratuity, to Mrs. C. C. Roberts, Salem, for night dress.

- .50. Gratuity, to Mrs. D. P. Grosvenor, Peabody, for basket hood shirts.
- 1.50. Gratuity, to Lillie M. Little, Newburyport, for bureau scarf.
- 1.50. Gratuity, to Anna R. Thacher, Peabody, for crayons.
- 1.00. Gratuity, to Percy Grosvenor, Peabody, for oil paintings.
- .50. Gratuity, to Mrs. R. G. Nelson, Peabody, for sofa pillow.
- .50. Gratuity, to Alice Nelson, Peabody, for sea moss pictures.
- .50. Gratuity, to Ora Dow, Danvers, for piano cover.
- .75. Gratuity, to Henry H. Buxton, Peabody, for wood carving.
- .50. Gratuity, to Mrs. C. C. Teague, Peabody, for banner.
- .50. Gratuity, to Mrs. C. A. Warner, Peabody, for banner.
- 1.00. Gratuity, to Mrs. E. W. Jacobs, Peabody, for paintings.
- .50. Gratuity, to Mr. C. A. Sanger, Peabody, for laundry work.
- .50. Gratuity, to Alice H. Berry, Peabody, for painting golden-rod.
- .50. Gratuity, to Mrs. Howard Bott, Peabody, for toilet set.
- .50. Gratuity, to Mrs. Lucretia Hildreth, Salem, for netted tidy.
- 1.25. Gratuity, to Mrs. A. P. Newhall, Lynn, for tray and corn cloths.
- 1.00. Gratuity, to Nellie M. Morrill, Peabody, for scarf, banner and pottery.
- .50. Gratuity, to William Cheever, Danvers, for pillow cases.
- .50. Gratuity, to Mary A. Forness, Peabody, for bureau scarf.
- .50. Gratuity, to Nellie O'Brien, Peabody, for tidy.
- .50. Gratuity, to Mrs. S. R. Osborn, Peabody, for shoulder cape.

- .50. Gratuity, to Mary Walton, Peabody, for Mexican work.
- .50. Gratuity, to Alice Stoye, Peabody, for four drawings.
- .50. Gratuity, to Mr. S. Lord, Peabody, for bureau scarf.
- .50. Gratuity, to Mrs. D. P. Grosvenor, Peabody, for hand bag.
- 1.00. Gratuity, to Mrs. A. L. Robson, Salem, for oil painting.
- 1.50. Gratuity, to Mrs. W. H. Hall, Peabody, for oil painting.
- 1.00. Gratuity, to Lizzie Hall, Peabody, for Mexican work.
- .50. Gratuity, to Mrs. W. Simonds, Lynn, for Swedish tidy.
- .50. Gratuity, to Mrs. Ruth Clavridge, Peabody, for stockings.
- .50. Gratuity, to Hattie Buxton, Peabody, for painting in oil.
- .50. Gratuity, to Mrs. Edward Paige, Peabody, for plaque.
- .50. Gratuity, to Mary Lynch, Peabody, for sofa pillow.
- .50. Gratuity, to Mary Lynch, Peabody, for table cover.
- .50. Gratuity, to Mrs. W. C. Reade, Beverly, for oil painting.
- 1.00. Gratuity, to James F. Callahan, Peabody, for fancy table.
- .50. Gratuity, to May Herrick, West Peabody, for handkerchief.
- 1.50. Gratuity, to Carrie Lummus, Peabody, for set of table mats.
- 1.25. Gratuity, to Miss M. O. Barrett, Peabody, for pen sketching.
- .50. Gratuity, to S. B. Mansfield, Peabody, for plaque.
- .50. Gratuity, to Mrs. J. H. Tibbetts, Peabody, for worked suspenders.
- .50. Gratuity, to Mrs. Henry Wilkinson, Peabody, for Mexican work.
- .50. Gratuity, to Vienna A. Batchelder, Peabody, for knitted lace.

- .50. Gratuity, to Mrs. James P. King, Peabod , for carriage blanket.
- .50. Gratuity, to Mrs. H. H. Campbell, Peabody, for cy-press vase and lamp.
- .50. Gratuity, to Miss A. Moulton, West Peabody, for crochet trimming.
- 1.50. Gratuity, to Clara B. Crossman, Swampscott, for paintings and easel.
- .50. Gratuity, to Fred Tigh, Danversport, for carved clock case.
- .50. Gratuity, to Mrs. Alice Stanwood, Salem, for paper flowers.
- 2.00. Gratuity, to N. W. Starbird, Danvers, for photographs.
- .50. Gratuity, to Miss A. C. Symonds, Salem, for table top.
- .50. Gratuity, to Miss A. C. Symonds, Salem, for oil painting.
- 1.00. Gratuity, to Annie Symonds, Peabody, for oil paintings.
- .50. Gratuity, to Annie Tibbetts, Peabody, for table scarf.
- .50. Gratuity, to Abbie Symonds, Peabody, for foot rest.
- .50. Gratuity, to Mrs. J. B. Palmer, Peabody, for vase.
- .50. Gratuity, to Mrs. J. B. Palmer, Peabody, for rose jar.
- .50. Gratuity, to Jennie Verry, Salem, for oil painting.
- .50. Gratuity, to Mrs. C. E. Stone, Peabody, for tidy.
- .50. Gratuity, to Mary A. Tigh, Peabody, for table top.
- .50. Gratuity, to Lizzie Baxter, Beverly, for set of tidies.
- .50. Gratuity, to Malinda Webster, Peabody, for pillow cases.

Mrs. Wm. A. Gorton, Mrs. D. P. Grosvenor, Mrs. Charles Perley—*Committee.*

With few exceptions the works exhibited were considered by the committee as worthy of notice, but as the amount placed at their disposal was limited to \$50, gra-

tuities could not be awarded upon every article. Several articles exhibited came too late to be entered for competition, some of which were among the most meritorious of the exhibits. Of these may be especially mentioned two oil paintings, a figure and a fruit piece, by Miss Susie Poor, and several paintings by Mrs. Riddle, one of which, a study of chrysanthemums, was especially fine.

The "New Complete Tailor System," exhibited by the agent, Mr. J. H. Taylor, seemed very well adapted to the use of those who do their own dress-making, as it is simple, accurate and inexpensive. The committee feel that some explanation of their delay in the announcement of awards is proper, and desire to say, that had they been supplied with sufficient cards upon the first day of the fair,* the announcements would have been made in due season.

For the committee,

M. E. GORTON.

*The Premium Cards were duly provided and were in charge of Superintendent of Hall at opening of fair. D. W. Low, Secretary.

WORK OF CHILDREN UNDER TWELVE YEARS OF AGE.

The Committee on Work of Children under Twelve Years of Age have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$3.00. First premium, to Miss Lizzie Goldthwait, Peabody, for afghan.
- 2.00. Second premium, to Marian Appleton, Peabody, for water colors.
- 1.00. Gratuity, to Jenny F. Nichols, Peabody, for patch work quilt.
- 1.00. Gratuity, to Willie E. Gilson, Peabody, for oil painting.

- .50. Gratuity, to N. Elva Fellows, Peabody, for scarf.
- 1.00. Gratuity, to Daniel Lord, Peabody, for bag.
- 1.00. Gratuity, to Emily N. Longfellow, Groveland, for tidy.
- 1.00. Gratuity, to Gertrude E. Wilkins, Middleton, for variety of fancy and plain work.
- .50. Gratuity, to Clara M. Trask, Peabody, for plain sewing.
- .50. Gratuity, to C. Lena Wilkins, Middleton, for patchwork.
- .50. Gratuity, to Hattie F. Pushee, Beverly, for tidy.
- .50. Gratuity, to Annie W. Lovett, Beverly, for tidy.
- .50. Gratuity, to Sadie Estes, Peabody, for gypsy kettle.
- .50. Gratuity, to Gertie W. Carleton, Rowley, for tidy.

The number of entries was twenty-one, by fourteen different children. After awarding the first and second premiums, the committee thought it proper to award a small gratuity to each of the other contributors, as an encouragement to them to persevere in industry.

Mrs. N. W. Starbird, Chairman, Mrs. Mary E. Fuller, Mrs. Amanda F. Low—*Committee*.

IMPROVING WET MEADOW AND SWAMP LANDS.

To the Trustees of the Essex Agricultural Society :—

The committee on the improvement of wet meadow and swamp lands have attended to their duty and submit the following report :—

There was but one entry made to your committee, that of Mr. Luther P. Tidd, of Georgetown. Mr. Tidd has complied with the rules of the society, his experiment including two years' time, and the accompanying statement will show the result, and the cost of producing it, and from what your committee saw at their two visits to the meadow, we should think the statement of Mr. Tidd was

entirely reliable and strictly true, and your committee would recommend that the premium of fifteen dollars (\$15) be awarded to Mr. Luther P. Tidd of Georgetown.

Signed.

O. S. BUTLER,
GEO. S. PERRY,
CHARLES HAZELTINE.
Committee.

STATEMENT OF LUTHER P. TIDD.

The piece of land that I have entered for premium contains one acre and one hundred and fifty-three and one-half rods. It was soft bog meadow and produced a crop that was worth little or nothing more than the cost of making. It was worth not over six dollars an acre. From a bank a few rods from the meadow, was carted two thousand loads, composed of sand, gravel and loam. Ten cords of common stable manure were spread on the lot, and harrowed in. The 15th of July, 1885, it was sown with grass seed, and harrowed in with a brush harrow and roller.

Last year, 1886, from the above described lot, was cut, by the estimate of good judges, seven tons of hay, besides one ton rowen or second crop. The year 1887, was cut, by estimate, three and one-half tons of hay, and one ton rowen.

EXPENSES.

Carting two thousand loads gravel,	\$180 00
Ten cords manure, at \$7 per cord,	70 00
Grass seed,	5 00
Sowing, harrowing, and rolling in the grass seed,	5 00
Value of the land previous to reclaiming,	12 00
Cost of cutting and curing the hay of 1886,	24 00
Cost of cutting and curing the hay of 1887,	13 50
	<hr/>
	\$309 50

Present value of the land,	\$200 00
Crop of 1886, seven tons first crop,	126 00
One ton rowen or second crop,	12 00
Crop of 1887, three and one-half tons first crop,	63 00
One ton rowen,	12 00
	<hr/>
Total,	\$413 00
Deduct expense,	309 50
	<hr/>
Balance,	\$103 50

LUTHER P. TIDD, Georgetown, Mass.

Oct. 1, 1887.

NOTE.—Production and previous value of Land, per acre,	\$210 72
Expenses and present value of land, per acre,	157 92
	<hr/>
Profit per acre,	\$52 80

IMPROVING PASTURE AND WASTE LANDS.

The Committee on Improving Pasture and Waste Lands have had but one application for premium. This was by Charles W. Mann, of Methuen, for improving "Waste Land."

The notice to the Committee came July 1, when it was the most busy time with farmers, making it impracticable to inspect the land with crops, at that time. The chairman notified the committee to meet at Mr. Mann's, Aug. 26th. But one besides the chairman, was present.

Mr. Mann's statement annexed, explains the condition of the land previous to his work on it. It was the same as a great deal of pasture in Essex County, with the added advantage of being naturally of strong, moist soil, with a hard subsoil, thus retaining all that is put on to it. Being a moist hill it can be relied upon to carry through, in adverse seasons of wet or dry, the crops put upon it. Thus it will be seen that it is desirable land to improve, and once reclaimed, becomes valuable to the farmer.

There are many such lands in Essex County, that might be profitably reclaimed, and your committee regret the evident lack of enterprise on the part of farmers in this direction, from the fact that so few applications are made for premiums, under this head.

Mr. Mann, with his characteristic energy and prudence, started with the determination to make it pay. While his statement of expense and returns thus far, is not as definite as might be desired, he is confident that it has been a profitable venture. He has had the advantage over many farmers, in an available market for the stones taken from the land. Mr. Mann has in mind still more thorough working of this land. Your committee felt that while great improvement had been made, the condition of the land was not up to the standard demanded by the society, for its first premium, but would recommend the second premium of \$10.

WM. B. CARLETON, *Chairman.*

To the Committee on Improving Waste Lands :

The field which I enter for premium for "improving waste lands" is about ten acres in extent, on the westerly side of a high hill, and was all in pasture when I began to work on it three years ago, and about six acres of it was as rough and rocky as most any land in our county, and a part of it covered with a vigorous growth of alders ; altogether it might have kept one cow alive through the summer.

I have cleared off all the alders and other trees, and cleaned out the stone to the amount of over one thousand perch, or two thousand tons, and teamed them to market in Methuen and Lawrence, distant two and three miles. The stone sold have just about paid for the work of reclaiming, and the crops this year have been two one-horse loads of oat fodder, eleven loads of Hungarian, seven loads of good hay, at least five bushels of beans, and now

there are ten thousand cabbage still growing (Oct. 10), or partly sold, all of which goes to show that it is still practicable, and also profitable, to take hold of the rough parts of our Essex County farms, if near market, and a man has grit enough to try it, and beside the more practical view of the achievement comes the pleasure of subduing the "wilderness" and making it bring forth its hidden beauties and possibilities.

It would be almost, or quite, impossible for me to give a detailed account of expenses and receipts with this field, as it is only a part of the work I undertook, but the stone were sold for from 80 cents to \$1.50 per perch (25 cubic feet), and have paid for the clearing of the land, or very nearly so, leaving the crops produced to pay for work of cultivation and fertilizers as with older fields.

CHAS. W. MANN.

UNDERDRAINING LAND.

The Committee on Underdraining of Lands would make the following report:

We are sorry to state that there has been but one entry, that made by Charles W. Mann, of Methuen. The past summer has been an uncommonly good one to test the efficiency of underdrains, as very heavy and continuous rains have prevailed to an unusual extent.

At the time of our visit, August 26, after one of those rains, we found the drains working well. The land underdrained was naturally cold and wet, with a fall of about four feet to a brook on its easterly side. We found it dry and solid or firm, while upon the other side of the brook where not drained, it was quite wet and miry. We think he has well earned the first premium of \$15, and would award it to him. We saw a good crop of onions upon it.

Andrew Nichols, James Noyes, Frank P. Todd—*Committee.*

STATEMENT OF CHARLES W. MANN.

To the Committee on Underdraining :

The piece of land I enter for premium contains one acre, and has never grown a crop worth fifty dollars, previous to this season, on account of its wet and soggy condition. The soil is a heavy black loam, about a foot deep, with a foot to two feet of hard clayey subsoil underlying it, and beneath the latter a sharp gravel or coarse sand. Along one side of the piece runs an open brook which has been lowered to the depth of three and one-half feet; on the opposite side from the brook a ditch was dug the whole length of the piece, and across the lower end to connect with the brook, and ten cross drains were also put in at about forty feet apart, and at a depth of three feet, running from the long drain to the brook. The drains were laid with hard pine boards well filled with oil, taken from the floors of the old Washington Mills in Lawrence, laid so as to make an open channel, perhaps six by ten inches, then covered with small stones, and the soil returned. The drains were dug deep enough to go below the clay into the sand or gravel, and would have been useless if only two feet deep, instead of three feet, but two or three hours after one of the heaviest showers this season, would find no water standing on the surface, while every drain was doing good work.

The cost of draining was,

Eighty-two days' work, at \$1.25.	\$103 00
Boards.	10 00
	<hr/>
	\$113 00

This year's crop was 300 bushels of good onions, worth at least \$250, and the ground is now in condition for fine crops in years to come. It would be hard for the committee, or any stranger, to fully realize the change in this piece of ground from the wet meadow that at times was too soft for a team to cross it, to the mellow garden it now is.

GRAIN CROPS.

The Committee on Grain Crops regret to report but one entry for the society's premiums, that of R. Frank Dodge, of Wenham, on his crop of Indian corn, and we award to him the first premium \$10.

Mr. Dodge's crop was viewed September 12, and the committee were pleased to see so fine a field of corn, and such evidences of clean and careful culture. Scarce a weed was seen; not a missing hill was noticed. The crop was remarkably even, with few barren, and no overgrown, unripe stalks seen.

We emphasize the regret first expressed, for we feel that far too little attention is given to the grain crops of old Essex, and trust that more attention will be given them in the future.

Respectfully submitted,

William Little, Aaron Low, Charles J. Peabody—*Committee.*

STATEMENT CONCERNING A CROP OF INDIAN CORN,
RAISED BY ROBERT FRANK DODGE, IN THE TOWN
OF WENHAM, MASS., 1887.

Gentlemen:

The land upon which my corn was raised had been in grass for several years. The crop of 1885 was English hay, about 1500 pounds per acre. No manure was used. The hay of 1886 amounted to about 1200 pounds, with no manure. The soil is dark loam, and is seldom affected by drought. Plowing was done May 11, six inches deep. Barn manure was spread after plowing, twenty-five loads of thirty bushels each, and harrowed in. Value of manure \$2 per load. Cost of plowing and harrowing, \$8. Used 500 pounds of fertilizer in the hills, at a cost of \$10. Planted the field May 14, by hand, using one peck of eight-rowed yellow corn, with hills three and one-half feet apart. Cost of planting, \$4. Cultivated twice each

way, and hoed by hand twice. Cost of both, \$5. Corn was cut and stooked Sept. 21. Of the twenty-six rows contained in the acre, eighteen have been husked and found to yield 140 bushels of ears of corn. Allowing the remainder of the field the same average, it gives me 202 $\frac{1}{4}$ bushels, nearly, of corn in the ear, and at least three tons of well-cured fodder.

I have shelled some of the corn, and from seventy pounds of corn in the ear obtained fifty-six pounds of shelled corn. This gives a little more than 101 bushels of shelled corn from the acre.

COST OF CROP.

Barn manure,	\$50 00
Fertilizer,	10 00
Plowing and harrowing,	8 00
Seed and planting,	4 00
Cultivating and hoeing,	5 00
Harvesting,	12 00
	<hr/>
	\$89 00
Allowing half value of manure to remain in ground,	30 00
	<hr/>
Total cost per acre,	\$59 00

ROBERT FRANK DODGE, Wenham, Mass.

I hereby certify that I have measured one acre of land, planted to corn, for Robert Frank Dodge, of Wenham, to be entered for premium with Essex Agricultural Society.

R. E. DODGE, Wenham.

Oct. 22, 1887.

This is to certify that I have weighed and measured the 140 bushels of corn already husked, raised by Robert Frank Dodge, of Wenham, and entered for premium.

FRANCIS S. LOVETT, JR.

Oct. 1887.

REPORT OF COMMITTEE ON ROOT CROPS.

The Committee chosen to examine the Root Crops entered for premiums of Essex Agricultural Society, have attended to that duty, and respectfully submit the following, for 1887 :

- \$10. First premium, to Robert Frank Dodge, Wenham, for potato crop.
- \$10. First premium, to John H. George, Methuen, for onion crop.
- \$10. First premium, to Charles W. Mann, Methuen, for cabbage crop.
- \$10. First premium, to David Warren, Swampscott, for squash crop.
- \$10. First premium, to James P. King, Peabody, for Ruta Baga turnip crop.

NATHANIEL T. KIMBALL, *for Committee.*

There have been in all eleven entries, from eight different competitors :

Robert Frank Dodge, Wenham, two lots potatoes. John H. George, Methuen, onions. Charles W. Mann. Methuen, onions and cabbages. W. Smith & Co. Methuen, turnips and squashes. Rufus Goodwin, Ayers Village, Haverhill, for potatoes. J. E. Page, Superintendent of Pickman Farm, Salem, cabbages. David Warren, Swampscott, squashes. James P. King, Peabody, turnips.

Your committee were wisely selected from different sections of the county, and by an agreement among themselves those in the different parts were specially called upon to examine the crops near them. It is sometimes very difficult to secure the presence of a committee of six at any and all points of our county, so this arrangement was made.

One member of our committee we have not had the pleasure of seeing at any meeting, though he has been notified several times, of time and place to meet. There-

fore, let it be added just here, that if any member of a committee elected is not inclined to serve, it would be, in our judgment, a kindness to notify the secretary of the society, so that the committee may be apprised of the fact, and govern themselves in view of it. Two or more of your committee, however, have, in every instance, personally seen the crops entered for society premiums.

It would be a favor if every party who designs to enter any crop, would notify, as early as possible in the season, of this fact; and name the date, as near as possible, when he would like to have the committee see the crop.

All of those who have been upon this committee, and have taken part in its work this year, agree with those who have served upon it in other years, that, though considerable time and expense are involved, they have been well paid. The compensation comes from personal contact with some of the most enterprising of our farmers and our best men; from the opportunity of a closer inspection of their varied work than we could otherwise have; and from the uniformly social and cordial reception given.

Mr. Robert Frank Dodge, of Wenham, entered two lots of potatoes, Early Rose, and Clark's No. 1. But when he was visited by the committee a blight seemed to show itself upon the Early Rose, and he withdrew this lot from competition and no return was made from it.

The other lot promised more, and though the potatoes were not the largest in size, they averaged well, and were very smooth, and seemed to show no indication of rot. This crop was raised upon land planted last year with corn. Mr. Dodge does not omit the prerequisite to large crops,—proper care and plenty of fertilizers.

From Wenham we went to the Pickman Farm, Salem, and visited Mr. J. E. Page, superintendent, who entered a half acre of cabbages. It was about one o'clock P. M. when we arrived. Though a little late for a farm house dinner, we regaled ourselves upon the grass under the

beautiful, wide-spreading shade trees in the yard, looking at a magnificent field of cabbage for but few moments, when we were invited to partake of a very bountiful and complete dinner. We had further proof that some of the ladies of Essex county understand the art of cookery, even if the men do not fully know all there is to understand about farming. After dinner was served, we went with Mr. Page to look more carefully at the cabbage yard. The half acre which he had selected and entered, was very promising. There were but very few vacant spaces and but rarely a plant which showed the least sign of defect. We regret exceedingly that the return statement was not sent in so that the committee could pass upon it at the meeting of the trustees, Nov. 15, when Dr. Loring, proprietor of the Pickman Farm, moved to withdraw the crop. The statement was only taken from the post office when the chairman of your committee returned from that meeting. Mr. Page showed us a fine barn full of hay, and one of the stoutest crops of ensilage corn you often see, and the farming utensils all in order. We shall not soon forget our visit at Dr. Loring's place and the very kind people we found there.

A week or so later we had the pleasure of visiting the other end of the county.

At Methuen we found the place of W. Smith & Co. They entered a crop of Marrow squashes and a crop of turnips. There appeared to be a fair crop of squashes with what had already been taken off for market. Turnips looked fairly well, but there seemed to be quite a good many bare spots which might materially affect the harvest. The statements upon both of these crops hardly brought them up to standard of a premium, though the returns were quite good. Had they been worthy of premium, the statements did not conform at all with the requirements of Society offering premium. See page 227, Transactions of Essex Agricultural Society for 1886.

We next visited Mr. Chas. W. Mann, one of the very

thrifty young farmers of our north end of the county who is doing very successful and meritorious work in seed growing. He showed us some low and very wet ground which he has but recently brought into a productive state by running through its centre a main and open drain and covered drains at right angles with this and emptying into it. Upon this and adjoining higher land he raises his onions and seed. Mr. Mann's onions would ordinarily have come up to standard of premium. They looked like an onion of fine quality and enough in number for the space of ground upon which they were grown. But the average onion looked to us (they were raked out when we saw them) rather under size, caused by what Mr. Mann called a "blight stopping the growth when little more than half grown." This seems to be no fault of Mr. Mann's methods or any lack of his efforts to secure the best of results.

His cabbage lot upon the top of one of the highest hills of Methuen was well worth our going to see, though we had a hard climb to get to it. This land was once only used for pasturage, and was covered with stones, which, with great perseverance and labor, have been dug out and removed by Mr. Mann, and with a moderate amount of fertilizer this land has produced cabbages which received First Premium at the fair in Peabody, and to which crop we also recommend an award.

We next visited Mr. John H. George, a near neighbor of Mr. Mann. Here we were invited to dine. We should be obliged to award to Mrs. George, as to Mrs. Page, in Salem, first premium for a sumptuous and well-served dinner. The ladies of Essex county know how to prepare and spread the table with the fruits of the soil.

Mr. George's onions were ripened and fit to rake out a full week before they were seen by us, about Sept. 1. They were upon a piece of land reclaimed from meadow with peat bottom. A ditch simply being cut round his entire lot with no under drain whatever. The soil is very deep. We saw a rake handle thrust down to the head and the

bottom of the soil not reached. A moderate amount of dressing is used, good seed of Mr. Mann's production planted. Hardly a space of six inches in any of the rows where you could not find a fine silver skin. They were very uniform in size and but few very small stock could be seen.

Let it be borne in mind here that some of the most unpromising spots to which we attach little or no importance whatever, have in them the elements of the greatest productiveness and permanent value. And it should be the aim of every farmer to do something to reclaim these waste places.

In the afternoon we found ourselves in Ayers Village, Haverhill, and made a call upon Mr. Rufus Goodwin. This gentleman has a small farm, but makes every inch of it count, the same spot yielding two and even three crops per year. Even the stone wall was covered with cultivated grapes of different variety, and loaded with the luscious fruit.

The special object of our visit was to see his crop No. 3, Goodwin's seedling potato entered for premium.

He had dug most of the crop. Enough, however, were left to show us a sample of the vine and the appearance of the potato when just dug. Vine small, potato near top of ground, smooth and not showing much sign of rot. We saw a pile of them in the cellar, some of which showed more marks of decay. This crop was raised from the small potatoes of the previous year and so on back. Mr. Goodwin has made great effort to bring forward a seedling which shall be a standard potato. His efforts are very commendable, and we are not sure but he has one which will prove to be such. This year, from some cause unknown to us, his crop seems to be undersize as a whole, more than one-third being under No. 1, while those of this grade were only average in size, and while we might look favorably upon this as a new specimen of the potato, we could not award premiums upon such ground, but only upon the consideration of the crop itself.

Mr. David Warren, of Swampscott, was called upon next in order by your committee. He planted the Essex Hybrid squash seed, three or four seeds in the hill upon land planted in 1885 with cabbage, and in 1886 with potatoes.

No extravagant amount of dressing per acre was used. Eight cords stable manure to acre. The crop was highly satisfactory, and this was entered for premium.

It is to be regretted by some of the committee as in other cases that they could not have the pleasure of seeing the crop for themselves.

Mr. James P. King, the last on the list of competitors, called the committee to see a crop of turnips which was raised by him on one of the high points of land in Peabody. The crop was produced upon ground which never felt the point of a plough until the year 1886. It had been an old stony pasture, and was cleared up and planted last year for the first time. Corn being the crop, Commercial Fertilizer only being used as dressing. The crop of turnips this year upon the same ground moderately dressed with compost, was a very handsome one.

The plants were from planted seed equidistant from each other, and with rarely a bare spot in any of the rows. There was nearly an acre and one-third in the entire piece, and scarcely a place which might not have been taken for a sample spot.

Your committee pronounce this one of the finest and smoothest lots of Ruta Bagas seen for many seasons.

This and the onion crop of Mr. George, of Methuen, have shown to your committee that some of the best conducted experiments in our root crops have been made upon lands (both high and low) which have been long unused. There are many such acres in Essex county which are themselves a mine of wealth; but will yield it only to thought and persistent effort.

STATEMENT OF ROBERT FRANK DODGE, OF WENHAM, ON
POTATO CROP.

Gentlemen :

The crop of 1885 was grass ; 1500 pounds to the acre, with no manure. Crop of 1886, an excellent yield of corn, planted with twenty loads, of thirty bushels each, of barn manure, and 400 pounds fertilizer. Soil is a dark, gravelly loam, with slight mixture of clay.

Ground was ploughed April 28, about six inches deep, at a cost of \$4. Spread twenty-five loads, of thirty bushels each, of barn manure, and 500 pounds of fertilizer, and harrowed it in. Value of barn manure, \$2 per load ; fertilizer, \$12 per 500 pounds. Cost of harrowing and furrowing, \$2. Planted in drills three and one-half feet apart, with seed one foot apart in the drill. Used 500 pounds of fertilizer in drill. Cost, \$12. Planted eight bushels of Clark's No. 1 potatoes, covering with horse. Cost of seed and planting, \$12. Brushed once ; cultivated and hoed twice ; cost, \$6. Turned potatoes out by plough. Cost of digging, five cents per bushel.

Gathered upon the one-half acre entered for premium, 170½ bushels, giving 341 bushels of potatoes per acre.

Cost of crop per acre :

Ploughing,	\$4 00
Harrowing and furrowing,	2 00
Barn manure,	50 00
One-half ton fertilizer,	24 00
Seed and planting,	12 00
Cultivating and hoeing,	6 00
Harvesting,	17 00
	<hr/> \$115 00

For one-half acre, \$57.50.

Value of one-half acre, at \$1 per bushel, \$170.50.

NOTE—Product per acre, 341 bushels of potatoes,	\$341 00
Cost of crop, per acre,	115 00
	<hr/>
Profit per acre, exclusive of land rent and interest,	\$226 00

This is to certify that I have measured the potatoes raised by Robert Frank Dodge, of Wenham, and entered by him, for premium, and that his statement is correct.

FRANCIS S. LOVETT, JR.

Oct. 1887.

I hereby certify that I measured one-half acre of land, planted to potatoes, for Robert Frank Dodge, of Wenham, to be entered for premium with Essex County Agricultural Society.

JOHN P. M. GREEN.

Oct. 1887.

STATEMENT OF JOHN H. GEORGE, METHUEN, ON ONION CROPS.

The half acre of onions, which I enter for the Society's premium, is in two pieces of one-quarter acre each, treated in an entirely different manner, so it will be proper for me to treat them separately in this report. For convenience, I will call them Lots No. 1 and 2.

Lot No. 1 had onions on it last year. In 1885, it had potatoes. For manure, it had, last year, eight cords compost, similar to that used this year, to the acre. The soil of both pieces is reclaimed meadow land.

This year it had at the rate of eight cords compost, made of stable manure, night soil, road dust, and coal ashes, to the acre. The compost, two cords, was put on last fall, with a Kemp manure spreader, and cultivated in. In the spring, the piece was harrowed with an O. K. harrow, brushed with a brush harrow, dragged, and sown with five pounds yellow Danvers seed per acre (except one-quarter pound which was early red globe). This piece was hoed five times; weeded three times; when ripe, cut up with a circular hoe, raked out with a wooden toothed lawn rake, topped and stored. The yield was 236 bushels, measured.

Cost of crop :	Dr.
To two cords compost on land, at \$4,	\$8 00
“ preparing soil, one man and one horse, 1-4 day,	1 50
“ seed and sowing,	5 00
“ hoeing five times, one and one-half days' work,	3 00
“ weeding three times, six days' work for boy, at 75c.,	4 50
“ harvesting and topping, at 5c. per bushel,	11 80
“ interest and taxes on land,	4 00
	<hr/>
	\$37 80

Lot No. 2 was planted in 1885 and 1886, with potatoes. In 1886 was treated with four cords manure and 500 pounds phosphate on the one-quarter acre. This year it had 500 pounds steamed bone, and twelve bushels Canada ashes on the one-quarter acre. The land, in other respects, was prepared in exactly the same manner as Lot No. 1. It was hoed but four times, and weeded but twice, not being near as weedy as where manure was used. The yield was 135 bushels.

The onions on both pieces were A 1, except on Lot 2 they were thin skinned. There was not a half peck scallions on the whole piece.

The cost of Lot No. 2, was :	Dr.
To one-quarter ton steamed bone, at \$18,	\$4 50
“ twelve bushels Canada ashes, at 25c.,	3 00
“ preparing land for seed,	1 50
“ seed and sowing,	5 00
“ hoeing four times,	2 00
“ weeding twice, four days' work, boy, at 75c.,	3 00
“ harvesting, topping, and storing, at 5c. bushel,	6 75
“ interest and taxes on land,	4 00
	<hr/>
	\$29 75
Dr. Total cost of half acre onions,	\$67 55
Cr. Total yield of half acre, 371 bushels onions. Sold at 96 cts.	

NOTE—Product per acre of Lot No. 1, 944 bushels onions,	\$906 24
Cost per acre of crop on Lot 1,	<u>151 20</u>
Profit of crop per acre, on Lot 1,	\$755 04
Product per acre, on Lot 2, 540 bushels onions,	\$518 40
Cost per acre, of crop on Lot 2,	<u>119 00</u>
Profit per acre, on Lot 2,	\$399 40
Rate of product per acre, on both lots together, 742 bushels,	
at 96 cents,	\$712 32
Cost per acre, of crop on both lots together,	<u>135 10</u>
Profit per acre, on Lots 1 and 2 together,	\$577 22

METHUEN, Sept. 3, 1887.

This certifies that I have this day measured a tract of land, having on it a crop of onions, owned by John H. George, of Methuen, and entered by him, for the Essex Agricultural Society's premium, and that said tract contains one-half an acre.

JOS. S. HOWE, Surveyor.

STATEMENT OF CHARLES W. MANN, OF METHUEN, ON
CABBAGE CROP.

To the Committee on Root Crops :

The piece of cabbage which I enter for premium, was grown on the highest hill in the county, on land that was planted to beans in 1885, and sowed to Hungarian in 1886, only a small quantity of phosphate being used each time. The land was in pasture when I bought it four years ago, and has had no manure for at least ten years. The soil is a deep, dark mellow loam, somewhat sprinkled with small stone.

I ploughed and harrowed June 4th, spreading on twenty loads of manure before ploughing, 1200 pounds of ground steamed bone, and applying 950 pounds of Tucker's Bay State Superphosphate in the hill.

The seed was planted in the hill June 8th and 9th ; cul-

tivated and hoed three times ; and one hundred days from planting could cut plenty of eight and ten pound heads. Cut and sold 108 barrels in Lawrence and Methuen (two and three miles), and put away 1886 heads for seed purposes.

The land measured 24,946 square feet, being 3,166 feet more than one-half acre.

Dr.

5 cords manure, at \$8,	\$40 00
1200 pounds bone,	12 00
950 pounds Bay State phosphate,	18 05
Plowing and harrowing,	3 00
Planting,	4 12
Seed,	2 00
Cultivation,	15 00
Cutting and marketing,	21 60
	<hr/>
Total cost,	\$115 77
Cost per acre,	\$202 70

Cr.

108 barrels sold,	\$92 05
Fodder sold,	5 00
Fodder used,	1 00
250 plants sold,	75
1886 heads for seed, at 5c., in the field,	94 30
	<hr/>
Total receipts,	\$183 10
Profit,	77 33
Receipts per acre,	338 08
Profit per acre,	135 38

Showing 40 per cent. profit.

You will notice that I charge the whole amount of fertilizers to the one crop, and also make a liberal allowance for marketing, believing that it is just as well to figure that I get fair pay for fertilizers and labor, as to make out a tremendous profit and leave the idea that I do the work for

nothing; interest and taxes are omitted, for the land is certainly improved enough to cover that amount.

CHARLES W. MANN.

Methuen, Mass.

STATEMENT OF DAVID WARREN, OF SWAMPSCOTT, ON
SQUASH CROP.

The crop of squashes which I enter for premium, was raised on land which was planted with cabbages in 1885, and in 1886 with potatoes; about eight cords of stable manure applied to acre each year. The soil is a black loam, with sandy sub-soil. Ploughed in fall and spring, about five inches deep. Stable manure applied in spring, eight cords to the acre, and harrowed in with Randall harrow. Planted the last of May, with Essex Hybrid squash, in hills eight feet apart, with from three to four seeds in a hill. Cultivated twice, and hoed twice. Harvested Sept. 30th, 11,620 pounds No. 1 squashes, market price of which was \$20 per ton, and 2500 pounds of seconds, which were \$16 per ton.

The cost of crop was as follows:

Ploughing and preparing land,	\$7 00
Value of manure,	20 00
Seed and planting,	1 50
Cultivating and hoeing,	3 00
Cutting and storing,	5 00
	<hr/>
	\$36 50

DAVID WARREN.

NOTE—Rate per acre, of squash crop:

22,672 pounds, or 11.34 tons, at \$20,	\$226 80
4880 pounds of seconds, or 2.4 tons, at \$16,	39 04
	<hr/>
Total,	\$265 84
Cost of crop, per acre,	71 22
	<hr/>
Profit per acre,	\$194 62

SWAMPSCOTT, Oct. 4, 1887.

The following loads of squashes were weighed by me, viz.:

Six loads, total net weight, 11,620 lbs.

Load of small squash, estimated, 2,500 lbs.

14,120 lbs.

C. S. LEWIS, Weigher.

MARBLEHEAD, Oct. 20, 1887.

This certifies that the land upon which grew the crop of Hybrid squashes offered for premium, by David Warren, of Swampscott, measures one-half acre and two square rods.

BENJAMIN P. WARE.

STATEMENT OF JAMES P. KING, OF PEABODY, ON RUTA
BAGA TURNIP CROP.

My turnip crop (Ruta Bagas), I offer for premium on land never ploughed until the year 1886. Planted with corn last year on fertilizer. This year I used for the turnips, at the rate of six cords of compost manure to the acre, spreading it broadcast. The seed was sown in rows, on the level, twenty-four inches apart. Two sample loads were weighed by Charles Emmerton; the rest were measured in bulk, as near the sample loads weighed as possible. The result was 300 bushels of merchantable turnips.

Cost of ploughing and levelling,	\$6 00
“ “ manure on the land, three cords,	21 00
“ “ seed, and sowing the same,	2 00
“ “ cultivated twice,	2 00
“ “ once weeding and thinning,	4 00
“ “ harvesting,	6 00
	<hr/>
Whole expense,	\$41 00

Value of Ruta Bagas, 300 bushels, at 40c.	
per bushel,	\$120 00
Expense,	41 00
Profit,	<u>\$79 00</u>

NOTE—Rate of turnip crop per acre, 600 bushels,	\$240 00
Rate of cost of crop, per acre,	82 00
Rate of profit, per acre,	<u>\$158 00</u>

This is to certify that I, Nathaniel W. Felton, surveyed the land for Mr. James P. King, where the 300 bushels Ruta Bagas grew, and found it to be one-half acre.

NATHANIEL W. FELTON.

REPORT OF COMMITTEE ON ORNAMENTAL TREES.

To the Trustees of the Essex Agricultural Society:

GENTLEMEN.—Your committee have been called to act upon only one entry, and having received notice from the Secretary, Colonel David W. Low, that Mr. George L. Hawkes, of Lynnfield, had entered a lot of ornamental trees, immediately arranged to visit his farm the latter part of the third week in September. It was regretted that Mr. T. C. Thurlow was unable to attend and unite his knowledge and experience to that of the remainder of the committee in considering the interesting entry made by Mr. Hawkes. We had, however, the valuable knowledge of Prof. John Robinson, added to that of Messrs. John L. Shorey, E. P. Barrett, and what the undersigned could give. Mr. French retired because he was unable to serve. They have awarded the prize of \$10 to George L. Hawkes, of Lynnfield.

Mr. Hawkes has long been a most interested worker in doing much in the line of tree culture, that can only be accomplished by individuals where co-operation in the

form of local societies cannot be advantageously brought to bear, and it was with much pleasure that the results of his efforts were examined and his hospitality enjoyed on the occasion of our visit.

The statement herewith appended is a modest and brief explanation upon which the writer will endeavor to enlarge.

Mr. Hawkes' residence and farm are situated a short distance east of the Montrose station on that branch of the Western Division of the Boston & Maine R. R. which connects Boston with Essex county via Lynnfield, Peabody and Salem, and which runs through a tract of country that nature has made beautiful and healthful by its rolling, elevated, and picturesque land, which has the white pine, some hemlocks and a few red pine, pitch pine, a variety of oaks and maples, ashes, some chestnuts and elms, walnuts and white birches, locusts and red cedars among its prominent natural growth of trees. It is a country that well deserves to become more developed as homes with cultivable land around them. Such briefly describes the character of that part of Essex county in Mr. Hawkes' neighborhood. The railroad management is evidently making efforts to attract and accommodate such citizens as will make their homes on its line. In driving for either business or pleasure, such pleasing and sheltering lines of trees as your committee found on the highway passing through Mr. Hawkes' farm, must always be appreciated by the public, as well as be a delight in varied ways to those who have wisely done the planting, and show a farsightedness as to the value of such planting. Let those, whose roadsides offer no shade to the passer-by, plan before another spring to plant, at least, on the more sunny side of their streets, such deciduous trees as are best adapted to their soil, which shall in good time afford shelter from the sun's rays, and beautify the landscape during the summer seasons.

By reference to the appended statement it will be

found that Mr. Hawkes planted his maples chiefly in three lots; the first were planted by seed sown 41 years ago, and transplanted to their present location in a grove in 1853, which are large and handsome specimens; the second lot was set out on the roadside about 25 years ago; while the third lot was set about 13 years ago, and with very few exceptions all look well. The foregoing amounted to about 40 trees, ranging from 41 to 13 years, measuring from 7 to 16 inches in diameter, and up to 45 feet in height.

There were two Norway maples of large size planted at the western side of the house, which in summer acted as a shelter from the hot western rays of the sun, and under whose spreading branches there was a delightful spot to work, or rest in hammock or chair. When the leaves have fallen, the warm rays fall gratefully upon the homestead. These maples were presented to the father of our host by the late ex-President R. S. Fay, of Lynn. They are now 17 inches in diameter, and "while resembling the rock maple in general appearance, have a larger leaf and fuller, deeper green foliage, and in the spring an abundance of yellow blossoms" as we find given in the following statement.

In addition to these we viewed a lot of white pines which had been taken, when small, from another part of the farm and set as a screen and wind break along that part of a field bordering the railroad embankment. In order to hasten their growth upward, several tiers of their lower limbs had been removed.

Two or three specimens of the sugar maples had been gradually dying for the past year or two, and none of your committee could explain the cause. Those who can give information upon this subject are requested to offer their knowledge and experience in the form of an essay next year.

Mr. Hawkes has also had experience with the American white ash, and stated that "its limbs are liable to decay;

it puts on its foliage late and loses it early, and in its early years is a slow grower," and he does not consider it a very desirable ornamental tree.

Its wood is, however, useful, and while we find that its main stem is generally healthy, may not the facts he states against it as an ornamental tree, make it a good tree for thick planting as a forest crop? I know of Ashes being planted by a gentleman of Middlesex county as such a crop.

It may be true that we have a sufficient proportion of woodland compared with open land in Massachusetts, viewed from the standpoint of usefulness: but there can be no harm in increasing that proportion in favor of woodland, provided there exists land which can be made more useful by planting it with trees. I am one who believes that there are few farms in this good Commonwealth where there is not some land, even if the quantity may sometimes be small, that could be improved, to the benefit of itself and surroundings, by a judicious planting of trees.

There is a sufficient amount of good and interesting literature upon this subject, which can be placed in every public library at small cost, and which would give useful advice, not only upon the characteristics of the different kinds of trees and shrubs suitable for the different purposes of planting, but the interest promoted by their perusal would probably result in an increased planting on farm lands, as well as for the more ornamental planting of home grounds and roadsides.

These last are a most useful, simple and delightful work to undertake, and especially in our climate where the heat of summer is often very severe. We all know how grateful is the shelter from the rays of the sun, when returning from or going to work, and in resting from the toil of the day; and those who plant to provide it, should and must receive the appreciative thanks of all who share in its protection.

Let us also aim to encourage our Surveyors of High-

ways and land-owners, to unite in trying to preserve rows of deciduous trees on our roadsides, where nature has been the planter. Where roadways run in an east or west direction, advantage can be taken of the opportunity to plant or preserve our beautiful white pine or other evergreen trees on the northerly side, where it cannot in the spring-time delay the frost from leaving the road-bed in a uniform manner.

All of which is respectfully submitted, trusting that it will meet with your approval.

FRANCIS H. APPLETON, *Chairman.*

STATEMENT OF GEORGE L. HAWKES.

To the Committee on Forest Trees:—

I desire to make the following statement regarding the ornamental trees which I offer for premium.

The rock maples, twenty in number, making a part of the grove in front of the house, were set thirty-four years ago, and are from six to twelve inches in diameter, and from thirty-five to forty-five feet high. They and some others are from seeds that I brought from Vermont and planted forty-one years ago.

Owing to a rather dry soil and their proximity to a large elm tree, they have not grown so fast as those by the highway. There are also in the grove a few white pines, American elms and white ashes. The limbs of the white ash are liable to decay; it puts on its foliage late and loses it early, and in its early years is a slow grower. I do not consider it a very desirable ornamental tree. The most of the thirty-eight rock maples along the highway and near the house were bought at a nursery and planted twenty-five years ago about twenty-five feet apart. A few were set thirteen years ago, and are from seven to sixteen inches in diameter, and will average forty feet in height. There are two fine Norway maples near the house, seventeen inches in diameter, and while resembling

the rock maple in general appearance have a larger leaf, and fuller, deeper, green foliage, and in the spring an abundance of yellow blossoms.

A few mountain ashes grew finely for several years, when they were attacked by borers and all died.

Respectfully submitted,

GEORGE L. HAWKES.

REPORT ON CRANBERRIES.

There was but one application for premium on cranberries, namely, that of Mr. James P. Butterfield, of Andover.

Your committee, consisting of Silas M. Titcomb, H. A. Stiles, and C. C. Blunt, on the sixth of September, visited the cranberry meadow of Mr. Butterfield. This plot of land upon which the cranberries were growing, contained about one and three-fourths acres, and was formerly a natural pond, but was filled up and cultivated, as will be seen by Mr. Butterfield's statement, but was of not much value. This plot was a few feet below the surface level, and gravelled over with gravel from the adjoining bank, and well covered with a heavy growth of vines, laden with an abundance of beautiful berries, high colored and of large size, and a handsome sight to behold, well worth a visit from any man in Essex county who has a boggy meadow. Your committee, after hearing Mr. Butterfield's statement and beholding with their own eyes the result of his very successful experiment (his crop this season being over six hundred bushels), were unanimous in recommending that he be awarded the first premium of fifteen dollars. Appended will be found Mr. Butterfield's statement.

The culture of the cranberry has not come up to its place among farm crops which its importance demands.

Webster says of it that it forms a sauce of exquisite flavor, and we are told that the American aborigines prepared poultices from cranberries to extract the venom from wounds made by poisonous arrows, and they are used as a

popular remedy for erysipelas. Thus we see how valuable the cranberry is, not only as food but as a medicine. That the cranberry is a favorite luxury is abundantly proved by the high price which a good, and not unfrequently an inferior article will command in the markets.

That it is easy of cultivation, and that there is an abundance of land now lying waste which is just adapted to its growth, is perhaps not so generally known. There are hundreds of acres in Essex county of meadow and swamp land that might be converted into profitable cranberry beds that are now lying waste and almost worthless to the owner, and this healthful and delicious fruit would become still more popular if larger quantities were raised for more general use: and when you come to the profit of raising cranberries, there is hardly a farm crop that pays so well, surpassing even the orange culture of Florida.

Some of the worthless farms in the county that hardly pay for cultivating, have upon them boggy meadow land which, with a little enterprise, and not a large expenditure of money, could be converted into a well paying investment. A most important consideration in selecting a cranberry meadow is its location. This should be, if possible, below the surface of a natural or artificial pond or reservoir, from which the meadow may be filled, and the vines covered in a short time, if necessary, and at the same time have the advantage of being easily drained, so at a proper time the water may be rapidly withdrawn. In such a location the vines can be readily protected from frost, which often gives scarcely an hour's notice of its approach, and also without the danger of scalding, which arises when water is suffered to remain about the vines, through the bright sunshine which sometimes follows a September frost.

In such a location the whole surface can be flowed in the winter to such a depth as to secure the roots from injury through the heaving of the soil, and the flowing can be continued at such a depth and to such a time in the spring as in the judgment of the grower it will be necessary for the destruction of the cranberry worm.

Let it not be understood that the cranberry does not succeed only on land that can be overflowed. Very successful experiments in cranberry culture have been made on land which is never flowed, but which is dry enough for the plough at almost any season of the year. It will grow on almost any soil, sometimes flourishes where the soil seems entirely free from any matter, either animal or vegetable. This berry may be said to live entirely on air and water.

Because peat, which supplies the natural food of the cranberry plant and in which it grows spontaneously, is usually saturated with water, it is sometimes inferred that this is a sort of half and half water plant, which will thrive only where water greatly abounds.

This is a mistake. Cranberries can be successfully grown in any soil, however elevated, in which mould, from woody or vegetable fibre, largely predominates, and in a suitable soil the danger of injury from drought is not greater than in the case of other cultivated plants.

Cranberry meadows are prepared by removing the turf to such a depth that neither grass nor bushes will start from the roots, and setting the vines either in the pure peat or in a surface covering of sand or gravel to the depth of from two to four inches, but not so deep as to prevent the roots of the vines from taking hold of the peat, from which it takes its life and vigor. The former method is preferred by some for the reason that the grasses, which will take root in the peat after cultivation becomes impracticable, are much less formidable enemies to the vines than the rushes and other wiry plants that invariably gain a foothold in sanded or gravelled meadows. It has been the experience of some that sand and gravel check rather than promote the growth of the vines, and that they are useful only as they facilitate the process of clean cultivation, while the vines are acquiring complete possession of the soil.

But whatever opinions exist in regard to the use of sand or gravel, no one would think of reclaiming a meadow for the culture of the cranberry without its use. For trans-

planting, vines should be selected whose fruit is of good size and of dark red color when ripe. The egg-shaped berries are usually the largest and considered the most saleable, though not so heavy as some of the smaller varieties. The vines should be carefully separated from all grasses and other roots, and bound in bunches of half a dozen or more by twisting about them one of the long runners, and in this condition they can be set very rapidly, in hills fifteen inches apart and rows twenty inches apart. Vines may be set at any season, but the spring is much the better time, as vines set early become more firmly rooted and better able to withstand the winter than those set later in the season. After the vines are set, it should be the aim of the cultivator, as soon as he can, to get such a growth as to completely cover the ground. To this end all weeds, grass, moss and bushes should be kept down with a hoe, while a hoe can be used, and afterwards by hand, until the vines have complete possession of the ground, which under favorable conditions will be in about three or four years, when cultivation is generally discontinued.

After the vines have completely covered the ground, little remains to be done except to use all available means for protecting and securing the fruit. Where vines cannot readily be covered with water, the time of harvesting must be made earlier than where flowing can be done at any time. Unripe and immature fruit will sell, but perfectly ripe fruit keeps best and sells best, and of course brings the highest price.

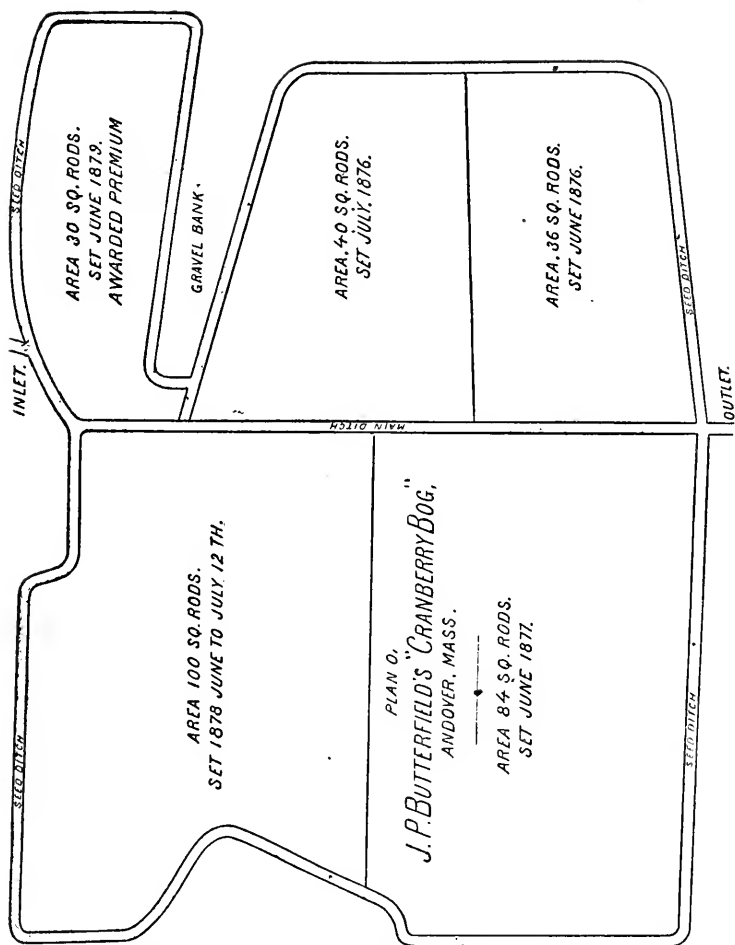
It is estimated that there will be shipped from Cape Cod the present season 100,000 barrels, which goes to show the great importance of this industry.

C. C. Blunt, Chairman, S. M. Titcomb, H. A. Stiles—*Committee.*

STATEMENT OF J. P. BUTTERFIELD, OF ANDOVER, ON CRANBERRY CROP.

ANDOVER, Oct. 31, 1887.

The plat of land represented in the accompanying plan



was formerly a natural pond from four to six feet deep, which was drained and gravelled nearly eighty-six years ago, and was cultivated until 1875, when the writer ploughed nearly one-half acre of it, and after leveling and adding a little more gravel, set it with cranberry vines in June and July, 1876.

(This part is represented in the plan, in 36 and 40 rods.)

The weather was very dry when this plat was set and

nearly all of the vines died above ground, but the roots lived, and the vines covered the ground the third year.

The fourth year I picked 128 bushels on the seventy-six rods. I set about ninety bushels of vines on this plat, which I am convinced is double what there should be. The plat represented in the eighty-four rods was ploughed Oct., 1876, and set the following June. It was prepared in the same manner as the first piece, and set with over one hundred bushels of vines; these vines thrived so well they covered the ground the second year. The third year one variety yielded three bushels to the rod; the fourth year the vines were from twelve to fifteen inches deep, which condition necessitated gravelling. In 1885 this piece yielded 250 bushels, one variety yielding six bushels to the rod; this year (1887) it bore 212 bushels.

The plat represented in the 100 rods was prepared the same as the other two, but only one-half as many vines set. It has thrived as well as the others for a term of years.

The plat represented in the thirty rods was set in 1879, previous to which all the sods and mud had been carted off and it had been filled with stone and levelled with sand. There were a smaller quantity of vines set here than on either of the other pieces; in the seven years since 1879 it has borne 253 bushels of berries, ready for the market when picked, which is about the 20th of September. The largest quantity picked on this piece in one year (1887) 62 bushels; this piece was set with early varieties.

The ditch around the border of the bog marked *seed ditch* is eight inches higher than the middle of the piece, which gives the surface quite an incline. This I consider too much. It only requires sufficient incline to prevent the water from standing on the surface.

I have thought best to take the 30 rod piece set in 1879. This part of the bog had very little muck on it, which, as stated before, was carted off with the turf, and the lowest part filled with stone, gravel and loam from the edge of the meadow, and covered with sand and gravel (the land

around the whole bog is coarse sand and gravel), any of it good for the setting of vines. This piece is 11 rods long, and 30 to 50 feet wide, and the centre is left about 2 in. higher than the outside, the reverse of the main part of the bog, as the *seed ditches* answer to drain the surplus water off as well as to keep the seed from the upland from washing among the vines in a heavy shower. These ditches around the bog are about 10 in. deep and 18 in. wide, cost nothing as the material taken out goes on the piece to level it. The vines were set in rows 18 in. apart, and 6 in. apart in the rows as near as the men could guess.

The cost per acre to set vines as thick as this, is between forty and fifty dollars, that is, to punch the holes and set the vines as some do cabbage plants. The cost of setting the vines on this piece was not kept separate as we set the vines as fast as we levelled the ground. The vines were cuttings about 8 to 10 in. long, set in the ground 5 or 6 in. The cost of the vines was in the gathering, as they were taken from a patch of wild vines, from day to day, as we were ready for them. I would remark, it will take one hand to sort and cut the slips the right length, for two to set. The cost of this plat will have to be given in a lump as you will see by the above. When we had the last row levelled, the men were ready to set it; one reason for so doing was the lateness of setting and dry weather. I did not wish the ground to get dry before the vines were in. Perhaps this is as cheap as any method if one has the required help. The 30 rods cost \$73, or nearly \$2.50 per square rod. With regard to fertilizer I never use any, only to put on about an inch of gravel once in four or five years.

I will take for examples the two last seasons.

In 1886 I gathered from the before mentioned plat (30 sq. rods)	17 1-2 barrels of berries, which sold in Boston	
	for \$6.75 per barrel,	\$118 12
Cost of picking berries at 50 cts. per bn.		\$25 65
Cost of sorting and screening,		6 56

Cost of barrels,	8 75	
Cartage and commission,	14 52	
Weeding vines and clearing ditches,	6 50	
	<u> </u>	\$61 98

Profit, \$56 14

This autumn (1887) we gathered 21 barrels, sold
at \$7.75 per barrel in Oct., \$162 75

Cost of harvesting and marketing,	\$57 75	
Cost of weeding and graveling,	12 50	
	<u> </u>	\$70 25

Profit, \$92 50

Respectfully yours,

J. P. BUTTERFIELD.

NOTE.—Cranberry crop of 1886, per acre, 93 1-3 bbls. at \$6 75	\$629 94
Cost of crop per acre,	<u>330 56</u>
Profit per acre, exclusive of land rent and interest on investment,	\$299 38
Cranberry crop of 1887, per acre. 112 bbls., at \$7.75,	\$868 00
Cost of crop per acre,	<u>374 66</u>
Profit per acre, exclusive of land rent and interest,	\$493 34
An average of \$396.36 yearly profit.	

REPORT OF COMMITTEE ON STRAWBERRIES AND OTHER SMALL FRUITS.

Your Committee on Strawberries and Other Small Fruits submit the following :

There were but two entries, one of strawberries and one of raspberries, both entered by George J. Peirce, of West Newbury. The committee visited Mr. Pierce's early in July, and found his strawberries in full bearing, and loaded with luscious fruit. The bed No. 1 was perfectly free from weeds, the vines completely covering the ground, still the berries were of good size. There were, I think, four varieties,—Wilson, Crescent, Charles Downing, and Manchester.

We looked the raspberries over. The Cuthberts were as fine as I ever saw. I did not see them when in bearing, it being impossible for me to attend to it at that time. Your committee consider the strawberries and raspberries both worthy, and report awards as follows :

§10. First premium, to George J. Peirce, West Newbury, for strawberry crop.

§10. First premium, to George J. Peirce, West Newbury, for raspberry crop.

Mr. Peirce has sent the following statement which I forward :

J. HENRY HILL,

Chairman of Committee.

STATEMENTS OF GEORGE J. PEIRCE, OF WEST NEWBURY, ON STRAWBERRY CROP.

On strawberry bed No. 1, area 101 square rods, soil slaty, sloping north. Land broke up in 1885; three cords of dressing spread and harrowed in, and planted with potatoes, 200 pounds of "Ames'" fertilizer put in the hills. In 1886, ploughed, and 6000 strawberry vines, mostly Wilsons and Crescents, a few Manchester and Charles Downings, set on the bed in May, 1886. Four barrels hen manure and one load of barn manure mixed, and put on in June. In December, covered with mulch. In 1887, when vines were in blossom, applied three barrels of wood ashes. Weeded three times.

CROP OF 1887.

1886.—Cost of ploughing and preparing land,	\$4 00
Four barrels hen manure, \$3, one load barn manure, \$2, mixed, and applied in June, at \$7.92 per acre,	5 00
6000 "Crescent" and "Wilson" strawberry plants,	15 00
Planting same in May, at \$3 per acre,	1 89

Salt and fresh hay for mulching in Dec.,	10 00
Weeding three times, at \$3. boy fifteen days,	
at 60 cents,	9 00
1887.—Three barrels wood ashes, applied when in blossom,	2 25
Picking 5297 quarts strawberries, at 2 cents,	105 94
Marketing same, at 1 cent.	52 97
Rental value of land, one and one-half years,	4 50
Interest on investment, about one year,	2 10

Total cost of crop,	<u>\$212 65</u>
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First picking of berries, June 21, 189 quarts. Largest picking of berries, June 27, 961 quarts. Last picking of berries, July 12, 152 quarts.

1887.—Received for 5297 quarts of strawberries, sold at from 9 to 20 cents per quart, averaging 12 cents per quart,	\$635 64
Less cost of crop,	<u>212 65</u>

Profit on crop,	<u>\$422 99</u>
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Strawberry bed No. 2, on 308 1-2 square rods of land, which required no weeding in 1887.

(For description of the planting and crops of this land previous, see statement of George G. Peirce (deceased), in "1886 Transactions," and in "Note " below).

1886.—Cost of dressing with eight loads of horse-coarse stable manure,	\$8 00
1887.—Cost of picking 5385 quarts berries, at 2c.,	107 70
Cost of marketing same, at 1c.,	53 85
Cost of land, estimated rental value for one year,	9 00
Interest on investment,	<u>5 00</u>
Total cost of 1887 crop,	\$183 55
Receipts for 5385 quarts berries, average price 12 cents quart.	\$646 20
Profit from 1887 crop,	<u>462 75</u>

NOTE.—Bed No. 1, planted 1885. Crop per acre in 1887, 8391 quarts, at average price, 12 cents quart,

Expense of bed No. 1, in 1887, per acre,	\$1006 92
Profit per acre, for Bed No. 1,	336 80
Bed No. 2, planted 1885. Crop per acre, in 1887, 2793 quarts, at 12 cents,	\$670 12
Expense of Bed No. 2, in 1887, per acre,	335 16
Profit per acre, for Bed No. 2,	95 20
Bed No. 2. Crop in 1886, 6381 quarts per acre,	\$239 96
“ “ Crop in 1887, 2793 quarts per acre,	797 62
	335 16
Total for two years' crops,	\$1132 78
Cost of 1886 crop, per acre,	\$280 43
Add for land and interest on investment,	8 00
Expense of 1887 crop, per acre,	95 20
	383 63
Profit per acre, for two and one-half years' planting, or an average of \$299.66 yearly.	\$749 15

“Bed No. 2 was planted with two rows each, of Crescent, Wilson, Manchester, and Charles Downing. No difference in variety was made in picking and marketing them. He believes that he has better success mixing different kinds together, and they cover the ground better.”

STATEMENT OF GEORGE J. PEIRCE, OF WEST NEWBURY, ON RASPBERRY CROP.

On raspberry bed No. 1, crop of Cuthbert raspberries from 71 1-2 square rods of land, third year of picking, and requiring no cultivation or dressing in 1887. (For description of the planting and crop on this land previous, see statement of George G. Peirce (deceased), in 1886 “Transactions,” and note below).

Cost of pruning, 1887,	\$ 90
Cost of picking 2814 pints berries,	28 14
Cost of marketing same,	28 14
Rental value of land, per acre, \$5,	2 30
Interest on investment, per acre, \$5,	2 30
Total cost,	\$61 78
First picking of berries, July 13, 20 pints. Greatest	

picking of berries, July 25, 501 pints. Last picking of berries, August 5, 23 pints.

Picked 2814 pints raspberries, at 8 cents,	\$225 12
Less cost of crop,	61 78
	<hr/>
Profit from 71 1-2 sq. rods,	\$163 34

NOTE.—Crop of 1887, per acre, 3148 quarts at 16 cents,	\$503 68
Less cost per acre,	138 25

Profit per acre,	\$365 43
Bed No. 1. Crop in 1886, per acre, 2803 qts. at 15c.,	\$420 45
“ “ Crop in 1887, per acre, 3148 qts. at 16c.,	503 68

Two years' products,	\$924 13
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Cost per acre, in 1886 (land and interest not included), \$218.35

Add for rental, value of land, and interest on investment,	10.00
Cost per acre, in 1887,	138.25
	<hr/>
	366 60

Two years' profit, per acre,	\$557 53
Average yearly profit,	\$278 76

On raspberry bed No. 2, crop of Cuthbert raspberries on thirty-five square rods of land. Second year of picking, no cultivation or dressing.

Cost of picking 1450 pints berries,	\$14 50
Cost of marketing same,	14 50
Cost of pruning, at \$2 per acre,	44
Rental value of land, at \$5 per acre,	1 10
Interest on investment, at \$5 per acre,	1 10
	<hr/>
	\$31 64

First picking, July 19, 125 pints. Greatest picking, July 27, 391 pints. Last picking, August 5, 39 pints.

Receipts for 1450 pints berries, average 8 cents,	\$116 00
Less cost of crop,	31 64
	<hr/>
Profit in 1887, from 35 square rods,	\$84 36

NOTE.—Crop per acre, 3314 quarts, at 16 cents,	\$530 20
Less cost of crop, per acre,	144 64
	<hr/>
Profit per acre, in 1887,	\$385 56

REPORT ON NEW VARIETIES OF WINTER
APPLES.

Last year there were two varieties of new winter apples that originated out of the county, entered for premium at the fair at Newburyport, one by C. M. Kent of Newbury the other by Joseph Horton of Ipswich. The apples appeared well, and they were requested to present a sample of them to the trustees at their meeting in June. Mr Kent appeared with specimens of his apples that were fresh and good. Mr. Horton was not present, but appeared at the fair in Peabody with good specimens of his fruit. It takes considerable time to fully test the comparative value of different varieties of fruit, as there are so many qualities to be considered.

The flavor of the apples, their size, their bearing quality, their keeping quality, their color, which has much to do in the sale of the apples, all of which should be considered.

Several years ago the Northern Spy, then a new variety, was highly recommended as a late keeping winter apple, that would keep longer than the Baldwin and of superior quality.

Being in Boston market one summer day I noticed a dish of beautiful apples said to be the Northern Spy, a variety I had been long looking for. Price 6 cents each. I took one, put it in my pocket and carried it home that others might partake of the luxury. In the spring I procured scions.

I gave them a fair trial. I grafted a thrifty Baldwin stock that stood in a patch of raspberry bushes, the ground being manured and cultivated. The scions grew vigorously and soon produced fruit large and fair. When time to gather winter apples many of them were specked with rot and unfit for winter use, which has been characteristic of them since, when the tree would bear several bushels in a year. I also grafted two or three Runnels

apple stocks with them on grass land that was kept in good condition by top dressing. The apples on these trees were many of them small and unfair, not fit for market.

The above experiment agrees with our former experience that constant cultivation and manuring will produce large apples, but not as good for use or to keep as those less prolific. There should be, however, cultivation or fertilizing sufficient to keep the trees in a thrifty bearing condition, to produce the best fruit.

These apples rotted worse than others have done under like circumstances. The question arose before the committee on apples at the late fair at Peabody whether the largest apples should have the premium in consequence of their being large, or those of less size that were thought to be better apples. It was decided that the best apples should have the premium, taking both the size and quality into consideration.

Two years ago a history of the Baldwin apple was published in the transactions of the Essex Agricultural Society, which is briefly as follows:—In the latter years of the last century Col. Laomi Baldwin, a distinguished engineer, while engineering for the Middlesex canal from Chelmsford, now Lowell, to Boston, discovered these apples on a tree in a wood in Wilmington, perceived their value and disseminated them. They spread gradually, the Rhode Island Greening, a popular apple (but not red), being their competitor. The first account we have of them was in the south part of the county in 1812 or 1813. They gradually spread over the county. The winter of 1832, a severe winter, that commenced about the middle of November after a mild autumn, before nature had prepared the trees for winter, many beautiful young orchards were almost entirely destroyed, which greatly checked the ardor of the people in propagating them.

Now the Baldwin apple as a variety has become old,

far beyond the common age of man, and by being grafted over and over many times has depreciated and become less valuable, and liberal premiums have been offered by the society for new varieties.

One variety has appeared and in the Ordway apple. It originated in a wood like the Baldwin, and was brought into notice by Mr. Alfred Ordway of Bradford. It much resembles the Baldwin and is hoped to be its equal, but is to be tested and proved by experience. Two other varieties have been brought before the society for premium and it is hoped they will prove what they are represented to be. To prove the value of a variety of apples we think they should be tested in different orchards.

The apple crop is of vast importance to the people of Essex county, not only to the producer but to the whole community. We are as a whole a great brotherhood, all more or less interested in the apple crop and its improvements, and in new varieties, and in the success of each other (or ought to be). We have, during our long experience, many times grafted from other orchards apples that did not prove what they were represented to be.

I have not seen all the committee to consult with them in regard to recommending a premium, as I think more information is necessary as to their production in other orchards. We now hope that our brother farmers will take scions from these trees and test and compare them with other varieties that we may know their comparative value. We also hope the producers will still continue their efforts after new and better varieties, and they will in time be rewarded.

JOSEPH HOW, *Chairman.*

NEW MEMBERS.

The Committee on New Members has attended to that duty, and respectfully reports the following award:

\$6. First premium, to John Meacom, Beverly. for obtaining ten new members from Beverly.

Other than those who became members by rule of the Society (a premium of \$7 or upwards, having been awarded them), the new members of the society, during the year ending November 1. were ten from Beverly, ten from Peabody, three from Lynnfield, two from Andover, two from West Newbury, two from Rockport, two from Newburyport, and one each from Bradford, Manchester, Wenham, Danvers, Georgetown, Lynn, Salisbury, Methuen.

Your committee would recommend members of the society to show this book of "Transactions of the Society," to their neighbors and friends, and thus convince them that if they are interested in agriculture or horticulture, that in no way can they get so much practical information returned to them, as by investing \$3 in a life membership in this society, and yearly receiving its printed "Transactions," besides all the rights and benefits that such membership confers, to say nothing of the pride every such man should have in maintaining the standing and success of a society which Essex county receives such a credit for, that its agricultural people may well be proud of.

DAVID W. LOW, Secretary, *Committee.*

REPORT OF THE COMMITTEE ON TREADWELL FARM.

The lease of the farm to Thomas W. Pierce, had, last April, two years of its term unexpired. The trustees of his estate desired to be relieved from its obligations, and by the payment of \$100 the lease was canceled, thus leaving the farm on the hands of the committee. As it proved too late to secure a suitable tenant, arrangements were made with Charles J. Peabody, of Topsfield, to sell the grass standing, for the benefit of the society, and to seed down to grass some thirty acres of land that had been in cultivation for several years previous, and to conduct several experiments, without expense to the society, all of which has been done in a satisfactory manner, by Mr. Peabody, as is shown by his annexed statement.

The farm is now without a tenant, but the committee hope to lease it to a suitable person before the next season. The barn and adjoining shed, built twenty-five years ago, and then shingled with second quality shaved shingles, without repairs since, were in such a leaky condition as to make a new covering a necessity, which is now being done with first quality of sawed cedar shingles, and if they prove as serviceable as those they replace, the society will have reason to be satisfied. There are some broken down gates that are to be put in respectable condition. The committee feel that under the circumstances the farm has made a creditable showing, with receipts of \$350. This, with the following statement, is respectfully submitted.

BENJAMIN P. WARE, *Chairman*.

STATEMENT OF EXPERIMENTS ON TREADWELL FARM, IN TOPS-FIELD, DURING THE SEASON OF 1887.

First. Experiment with corn, to test comparative value of manure from the barn, and Darling's fertilizer. Lot 1, containing one acre, was manured with four cords of barn manure, applied in the hill. Value on the land, \$40; yielded thirty-three (33) bushels shelled corn, and one and one-half tons stover. Value of crop, \$37.80, at an estimate of sixty cents per bushel, for corn, and \$12 per ton, for stover, or reckoning the seventy pounds corn on the ear as worth the same price for grinding cob and corn together, as an equal weight of western meal costs, as it actually is for feeding purposes, and we have a value of \$27.70 for corn, and for making milk, the stover is worth \$15 per ton, or \$21.50 on the acre. By this estimate, the crop is worth \$49.20, and, in my judgment, the latter value, less the cost of grinding, is the true one to the farmer.

On Lot No 2, containing also one acre, was used 1435 pounds Darling's fertilizer, costing \$25.07, and producing thirty-two bushels shelled corn, and one and one-half tons stover. Value to sell, \$37.20. Value to use, \$48.50, on same basis as before. Actual difference in crop on the two lots, one bushel shelled corn in favor of manure.

It is probable that the yield of both lots was reduced one quarter part by the August gale, which so twisted and broke the roots that many ears did not fill out as they should have done under favorable conditions. The corn was also planted much later than usual, as the farm did not come under my care till the season was considerably advanced. Both lots were planted the sixth and seventh of June. The variety of corn was the eight-rowed Canada.

Experiment No. 2. To determine the comparative value of sweet corn for market, and field corn as a crop. On an acre planted with Marblehead Mammoth Sweet corn was raised four hundred and fifty dozen ears, worth in the field, six cents per dozen.

Value of corn sold,	\$27 00
Value of small ears, fed to cows,	5 00
Four tons stover, at \$15 per ton,	60 00
	<hr/>
	\$92 00
Value of one acre of field corn, as by previous account,	\$49 20
	<hr/>
Balance in favor of sweet corn,	\$42 80

A significant fact in regard to the value of sweet corn stover, fed green, is, that by actual test, twenty pounds of the stover, fed to each of my herd of nine cows daily, produced as much milk as eight pounds of meal and shorts, the cows having the same pasture in both cases. I tried it for a week at a time, and measured the milk every day.

Experiment No. 3, with Hungarian grass, to try the relative value of Ames' and Darling's fertilizers. Each was used at the rate of three hundred pounds per acre, a lot of six acres being equally divided between the two brands. The Ames produced, on three acres, four tons of dry hay, weighed on public scales. The Darling yielded three and one-half tons, on the same area. The land was sandy rye stubble, considered as poor as any on the farm.

The crop where no fertilizer was used, was fifteen hundred pounds per acre.

The experiment with potatoes cannot be reported, as they were so largely destroyed by the rot.

The Farm may be considered in satisfactory condition in most respects, at present. Thirty acres have been seeded to grass, the past season, with a good catch assured on most of the land. The walls around the pasture have been poled and repaired. The woodwax partially checked, by mowing: and an attempt made to carry on the place in a workmanlike manner. There have been eighteen cords of manure used on the farm, and nearly two tons of fertilizers. No rent has been received from the house, which has been unoccupied.

C. J. PEABODY.

FARMERS' INSTITUTES.

The first Farmers' Institute held by this Society was held at Plummer Hall, Salem, March 18, 1879, and was opened at 9.30 A. M. on the subject of "Vegetables and Seed," by Hon. J. J. H. Gregory, and in the afternoon on the "Planning and Management of Farms."

The 52d one was held March 25, 1887, (at the same place as the first), which not only shows that this Society complied with the order of the State Board of Agriculture, "that each Society receiving the State Bounty should hold at least three farmers' institutes within its limits in the course of a year," not as a matter of compulsion, but because it early found that they were of great value to the agricultural interests of the county, and as such should not be limited to a sufficient number to satisfy the requirements of the State, and has therefore set apart since 1878 an average of six and one-half days annually for institutes, holding two meetings on each day, each meeting, in most cases, being devoted to different subjects, and held where the different agricultural sections of the county could be

most benefited by attendance, inquiry and discussion. And not satisfied with its institutes for farmers, it set apart the past season its closing day, which although called a "Farmers' Institute," was designated as "Ladies' Day," and the subjects of the day, opened by ladies,* were handled so well and with the after discussion were so interesting and instructive to farmers and their wives, daughters and friends, that it is an institute that has come to stay, and not only on that day may we expect to hear the voice of women instructing and counselling, but at others of the season, to which, our society invites them so cordially.

Our young farmers need not be afraid they intrude when they attend our institute meetings and ask questions or give result of any experiment they have made connected with the subject then under discussion, for our Society extends to all such throughout the county a hearty greeting and urges that more of them be present, for none can go away from such meetings without benefit, intellectually and socially, if not practically.

The Society has held eight "Farmers' Institutes" during the past season, the 45th and first one being held in the Town Hall, Georgetown, December 9, 1886. at 9.30 A. M. Hon. J. J. H. Gregory was introduced by President Ware, and gave a very instructive and interesting talk on the "Improvement of Meadow Lands," showing its structural formation and chemical properties, and how it should be treated. The discussion which followed was taken part in by men of experience in this and other counties of this State, and also from New Hampshire, and the general verdict from such experience was that it pays to improve wet meadow land. In the afternoon the subject of "Root Crops" was opened by Hon. Asa T. Newhall, of Lynn, a successful grower of such crops, who gave in a general way much information, which, with questions after its close, and the successes and disasters of others in cultivating certain crops, made the afternoon, as well as the forenoon, one of profit to those in attendance.

The 46th Institute was held at Rowley Town Hall, with large attendance, on December 30, 1886. The forenoon discussion was on the subject of "Which is most profitable for Farmers, to raise their own Cows or to buy them?" opened by C. J. Peabody, of Topsfield, who treated the subject in a manner which showed his experience and observation and that he favored the raising of cows by farmers for their own use. The discussion gave a great deal of information on the subject of raising, feeding and care, and the points of a good cow. The question was left with the evidence rather in favor of farmers raising their own cows.

After dinner, the meeting was called to order at 2 P. M., and the members of the Society proceeded to elect a delegate to the State Board of Agriculture from this Society. Benjamin P. Ware, of Marblehead, was elected.

Hon. John E. Russell, Secretary of the State Board of Agriculture, was then introduced, and after complimenting the Society on re-electing Mr. Ware as its delegate, and on its influence as an agricultural instructor, spoke on the subject of "Sheep Husbandry as adapted to Massachusetts." He treated his subject in his usual able, sprightly, interesting manner, and advocated the keeping of sheep in spite of dogs, of which he said there were 150,000 owners to 3000 of sheep owners, and said that the best way to renovate the hilly pastures of Essex County was by sheep husbandry. The after discussion by various persons brought out their experiences with sheep and dogs and of their profit and loss with sheep keeping.

The 47th Institute was held at Memorial Hall, Methuen, on Jan. 14, 1887, with "Forage Crops," for the forenoon discussion, to have been opened by John Q. Evans, of Amesbury, who was delayed, and Hon. J. J. H. Gregory was called upon, and taking the experiments made with feeding different kinds of forage to cattle at one of the experiment stations as his text, commented upon them in a very interesting manner. During the

discussion which followed, Mr. Evans arrived, and read a very instructive paper on "Forage Crops," which was discussed afterwards until dinner time.

In the afternoon, James C. Poor, Manager of Hon. Wm. A. Russell's stock farm, of North Andover, read a paper and answered numerous questions on the "Care of Farm Stock," which gave much interesting and practical information as did also the discussion of others which followed.

The 48th Institute was held at the Town Hall, Topsfield, January 28, 1887. The subject in the forenoon, "Agricultural Implements," opened by Hon. J. J. H. Gregory, of Marblehead, was one of great value to all farmers, and was listened to with close attention for two hours. He divided farm implements into five classes; first, those with which to prepare the ground; second, those to plant with; third, those to cultivate the ground; fourth, those to harvest with; fifth, those to utilize the crop with, each of which were thoroughly treated, and was followed by the experiences of others with farm implements, all of which gave information of special value on various implements.

The afternoon subject, "The Growing of Potatoes," by Edmund Hersey, of Hingham, illustrated with the stereopticon, showing different stages of growth at same time, of potatoes planted in different shape, also showing their products when harvested, which, with his lecture, was very interesting and instructive. From result of experiments he stated that whole potatoes yield better than cut ones, and the seed end better than the stem end. The crop three times more from a whole potato than from a single eye.

The 49th Institute was held Feb. 11, 1887, at Town Hall, Bradford, where the subject of "The Value of Corn Stover in comparison with English Hay," was opened by Benjamin P. Ware, of Marblehead, who claimed that good corn stover which had been cut and stooked just as the corn was commencing to glaze and then carefully cured

and housed, was equal in value to English hay, and gave evidence in support of his claim. Some thirteen gentlemen took part in the discussion which followed. Some, while admitting its value, believed that Mr. Ware's estimate of value was set much too high.

The afternoon meeting was opened by Dr. Wm. Cogswell, of Bradford, with an essay on "The Building and Repairing of Country Roads," which contained many valuable suggestions on the subject. The discussion which followed brought out practical ideas from Surveyors of Highways and road builders located in various parts of the county.

The 50th Institute was held at Town Hall, Beverly, February 25, 1887, Nathan Bushby, of Peabody opening the meeting on the subject of "Vegetable Culture," which, from his practical and successful experience, furnished an able talk, with questions answered, of two hours or more, followed by the experiences of the leading vegetable and seed growers of the county and others upon the subject.

In the afternoon the subject of "Fertilizers" was opened by Prof. George H. Whicher, of New Hampshire Agricultural College, who for an hour and a half gave a forcible and practical talk on the value of *chemicals as fertilizers*, illustrating his subject with specimens and giving descriptions of experiments tried at his College and their results.

The results from a test of chemicals beside three "commercial fertilizers" named, as reported by the N. H. State Grange, the figures given representing the increase of sound corn due to \$1.00 worth of each tested were:—

\$1.00 worth of		gave increased value at
Pacific Guano,		\$1.40
Bradley's,		1.72
Stockbridge,		2.16
Chemicals,	{ bone black, muriate potash, sulphate ammonia, }	3.36

He recommended the following combinations of chemicals for fertilizers, the "bone black" containing 16 per cent. phosphoric acid, the "muriate of potash" 50 per cent. of actual potash, and the "sulphate of ammonia" 20 per cent. of nitrogen.

Comb'n for corn, $\left\{ \begin{array}{l} \text{bone black, 325 lbs.} \\ \text{muriate of potash, 100 lbs.} \\ \text{sulphate of ammonia, 75 lbs.} \end{array} \right\}$ cost \$11.

Comb'n for potatoes, $\left\{ \begin{array}{l} \text{bone black, 340 lbs.} \\ \text{muriate of potash, 160 lbs.} \end{array} \right\}$ cost \$9.

Comb'n for oats, $\left\{ \begin{array}{l} \text{bone black, 300 lbs.} \\ \text{muriate of potash, 150 lbs.} \\ \text{sulphate of ammonia, 25 lbs.} \end{array} \right\}$ cost \$8.50

These combinations are for one acre where *no manure* is used, and in case of corn and potatoes, 150 lbs. of each is to be used in the hills, the remainder broadcast.

More potash would have an injurious effect if injudiciously used. He said that fertilizers were not stimulants as much as *necessary food* for the land, as much so, if not more, than manure is.

His instructive and valuable talk was followed by that of others of large experience in the use of fertilizers, who agreed with the Professor in urging upon the farmers the economy to them of manufacturing their own fertilizers.

The 51st Institute was held in Peabody Institute, Danvers, on March 11, 1887, on the subject of "Progress of Ensilage," opened by Rev. O. S. Butler, of Georgetown, who gave an instructive history of it in this country, where it only dates back to 1875, while in Germany and Prussia it was preserved 100 years ago. He gave the opinions of 95 farmers, whose testimony he had collected, and their general tenor was, that ensilage had come to stay, as a permanent institution for the promotion of agriculture. Samples of ensilage corn and ensilage cut in inch lengths were shown.

The afternoon Institute was opened by Francis H. Appleton, of Peabody, on "Encouragement of Tree Plant-

ing" as a subject, who said that forest growths were a necessity in this country to enrich the soil with their discarded foliage : by retaining water in the soil ; their protection against tornadoes, frosts, and other changes of climate, not only important in an agricultural view, but the source of our water ways from which large industries have sprung.

He appealed for the use of our hardy trees and shrubs in decorating and beautifying our homes and grounds and to encourage all such efforts among our people. He gave information of value on the hardy and desirable trees for Essex county, their propagation, etc., and was pleased to see the good effects of "Arbor Day" in many localities, and that "tree planting" should be encouraged in all rational ways.

T. C. Thurlow, of West Newbury, followed Mr. Appleton, and for half an hour interested his hearers with hints from his own abundant experience. He thought more attention should be given in our towns to public improvements in the way of parks and adornment of streets and home grounds.

The 52d Institute, or "Ladies' Day,"* was held in Plummer Hall, Salem, on March 25, 1887. The forenoon subject being "Impressions of Farm and Peasant Life in Austria and Germany," by Mrs. E. V. Gage, of Bradford, and conveyed information of interest and value and showed that most of the farm work of those countries was done by women, and from her impressions and that of others, who spoke afterwards, all agreed that our country and New England especially, are far ahead of the old countries of Europe in the intelligence, comfort, advantages and mode of living, of her farming population.

In the afternoon, Mrs. Maria H. Bray, of Gloucester, opened the meeting, on "Flowers." Her essay contained much of the sentimental in relation to them, as well as information in regard to the commercial uses of many of them. She was followed by others who gave practical

information in regard to the cultivation of various kinds of flowers, wild as well as cultivated.

With this, closed a very successful season of Institutes, each attended by from 100 to 400 persons, and of such value that to those who attended they were days well spent.

Those who attended them were in most cases provided near at hand with dinners together, by ladies on charitable thoughts intent, adding much to the sociability of the occasions, and relieving our minds of where to look for something to eat. To them and the Farmers' Clubs, or other interested persons, the Society is indebted for the conveniences provided for holding them in the various places where they have been held.

DAVID W. LOW, *Secretary.*

*In this connection I cannot resist republishing the fact that ladies were first put upon committees in this Society in 1856, and one of the ladies of the "Flower" Committee of that year made the fact known in their report with these lines:

At the first Cattle Show of which we read,
 Man, sole Committee, over all presided,
 Till the Great Husbandman, who saw the need
 Of Woman's gentler counsel, thus decided:—
 "It is not good for man to be alone;"
 And straight a helpmeet formed to share his throne.

In this display, where Nature fresh and fair
 To Eden's bowers tempts back the roving will,
 The old precedent is brought to bear,
 And Eve's quick tact is blent with Adam's skill,
 To trace the hand of God in fruits and flowers,
 And scan the products of man's feeble powers.

If, in the judgment thus conjointly rendered,
 Error, like evil, craftily creeps in,
 That same old plea which father Adam tendered,
 Can now be urged to palliate the sin;
 And every blunder written, thought, or said,
 Be visited on luckless women's head.

ESSAY ON RECLAIMING ROCKY PASTURES.

BY CHAS. W. MANN, OF METHUEN.

We have in Essex County, many rough and rocky pieces of pasture and woodland that are within easy reach of markets, and when reclaimed would become very profitable fields for cultivation. Many of these relics of the wilderness are of small area, and are often so situated in the midst of smiling fields, or upon the borders of fine farms, as to be a much greater damage to the appearance and selling value of the property than what the income of the same land when cleared would seem to justify, but they are such an eyesore as perhaps to add two or three times the cost of reclaiming to the value of their surroundings, and yet, in many cases the owners are so appalled at the apparent magnitude of the work of making these "rough places plain," that they put it off from year to year, until they finally lose the little courage that they had at first, and settle down to the idea that the works of nature had better not be disturbed too much, especially when it calls for money and hard work to accomplish the object desired.

In many places that are within three miles of some lively village or growing city, the stone removed from these rough pieces of pasture land can be sold and teamed for the building of house cellars, bank walls, and other similar uses, while, if the stones are large and heavy, they may be used in the building of bridges and the laying of heavy foundations for large blocks or factories, and the price is generally from seventy-five cents a perch for the poorest quality, to \$1.50 for the large and heavy stone, of good shape, for building purposes, the average price in our county being probably from \$1 to \$1.25 a perch, for stone suitable for ordinary house cellars. A perch of stone is, exactly measured, $24\frac{3}{4}$ cubic feet, but is generally reckoned as 25 cubic feet, and will weigh, in squared granite, or large, solid stone, about two tons, while the ordinary stone as dug from the ground and laid up, will weigh about $1\frac{1}{2}$ tons to

the perch ; and of the latter, $1\frac{1}{4}$ to $1\frac{1}{2}$ perch will make a fair load for a common pair of farm horses, while, if the horses are very heavy and the road not too hard, a load of two perch will not be too much, and if the distance is but two miles from the field to the cellar, four trips will be a day's work ; if the distance be three miles, three trips will be sufficient, and to do this, the loading and unloading must be done quickly, and though the team need not be hurried in doing it, yet there will be no time for the driver to stop and tell stories.

There are two kinds of stone known as field stone, the round cobbles, such as are found in gravelly soil, and have no face, bed, or build to them, and are almost worthless, save for paving gutters and drives, or grading, filling trenches, and the like, and the square-faced, solid, good-shaped stone, such as are to be found in a heavy, clayey soil. It is of the latter that I have written, and, although in places where ledge stone is easily obtained, there will be encountered a strong prejudice against field stone, growing out of the idea that they are all like those first described, while stone from heavy soil will make as strong and substantial a wall as any ledge stone, and can often be split so as to make a good finish for exposed portions, or faced with granite for a finish, either way making the cost much less than by the use of ledge stone, which costs from \$2.25 to \$3 a perch ; and beside this strong reason for the use of our field stone, is another, that every perch of stone taken from the field helps to improve the property, and the scenery of the vicinity of its former location, as well as to add to the ease and profit of cultivation. while the use of ledge stone only encourages the digging of an unsightly hole in the ground.

The best team to use in the clearing of rocky places, is, undoubtedly, a pair of heavy cattle, either oxen or bulls ; they are slower, steadier, and stronger than an ordinary horse team, and there is less danger of loss by accident, overpulling, or straining ; yet, a heavy pair of horses,

weighing from 2400 pounds to 2800 pounds will do very good work, if not too high-lived to take to it kindly, and, perhaps the average farm horse is not given to that fault, but with a pair of light horses there is altogether too much jerking and jumping, twitching and backing, to be either pleasant or profitable for the men who work with them, unless it be a very light and easy job.

Strong chains are needed in this work, and can be obtained at lowest cost, at some ship supply store, or rigging loft in Boston, where heavy, short-linked, second-hand ship chains can be bought at very low prices, and cut up and fitted with hooks and rings as may be desired.

A very serviceable stone and bush hook can be made in a short time, at an expense of seven or eight dollars, by any handy blacksmith. Take a piece of bar-iron, four feet long, three inches wide, and one-half inch thick, bend one and one-half feet at one end into a long, sharp-pointed hook, not turned under too much, and work the other end down a little, and put on a four-inch, heavy, iron ring to hitch to. Then make two similar hooks, with about half the length of beam, put one of these on each side of the one first described, and bolt them all together with two one-half inch bolts, spreading the points five or six inches from the middle one, thus making a heavy, three-pronged hook. To complete it, put on a good stout pair of swivel plough handles, and support them with iron braces from the back of the centre beam.

The best team to use on this hook is a pair of heavy cattle. Horses will do good work with it, but are generally too quick for comfort, snapping and twitching about too much, few of them having the weight required for the slow, steady pulling needed in this kind of work. Rocks as large as the team can drag off can usually be taken out of the ground without digging around them; just shove the hook down behind the rock, or under a ragged corner of it, start the team gently, and up she comes. If the first hitch does not fetch, try again. I have tipped a rock weighing

7760 pounds out of its bed, on to a drag, with this hook, though it took three pair of cattle to do it. I afterwards loaded the rock on to a wagon, and teamed it to market with two horses, having it weighed so as to know just what we had done.

I once worked steadily for two hours with a pair of 2400 pound mares and a driver, and then stood and counted eighty stones, as large, and larger, than two men could roll, besides many smaller ones, and no digging around any of them, though they were all fast when we started in. It is quick, exciting, and hard work to hold the hook pulling out large stones, and I would not advise a man to work at it more than one or two hours a day, but in that time he could dig out enough to keep the team busy dragging them off all the rest of the day. Junipers, alders, huckleberry, and all such bushes can be turned bottom up with the utmost promptness and dispatch, and it would make you laugh to see it done, it seems so quick and easy, and you wonder why you never thought of such a thing yourself.

The best time for doing this work is when the ground is wet and soft, it can be done so much easier than in a dry time when the land is dry and hard. We generally have the most time for it in early spring, just as the frost gets out, or after harvest in the fall, when the weather is cool, and we have time to leave the regular work and make some improvement in our surroundings.

I have been at work at odd times for the past three years, on a pasture as rough and stony as most any in our county, save the ledges of the coast, though fortunately very few of the stone are larger than a team can handle without blasting. Some parts of the piece, and in fact a good share of it, yielded more than 300 perch of stone to the acre, and though I have a market for them I should hardly have attempted the job without the hook that I have described, for I believe it has saved more than \$100 worth of work in these three years, and is now as good as when made; the only repairing necessary being to sharpen the points occa-

sionally and renew the handles when some big stone happens to roll on to them and break them.

A good drag or stone boat is also very necessary in the work of reclaiming stony ground, and, after wearing out, and pulling to pieces a number of the common wooden ones, I made up my mind to have something better, and here are directions for making it: Take two pieces of oak 3×4 , and thirty inches long for end pieces, and two pieces of 2×3 , five feet long for sides; these are to be bolted to the bottom with flat-headed, one-half inch bolts, and the heads counter-sunk. For the bottom, go to the boiler shop, in the city, and get a piece of second-hand, 1-4 inch boiler plate, $2\frac{1}{2} \times 7$ feet; have a foot at each end turned up in the rollers; cut out a half round notch in the middle of each end, to allow an easy chance to hitch; punch all the needed bolt holes for the side and end pieces, and four more about an inch from the edge of the ends, to fasten on some small strips of wood, to prevent the sharp edge of the iron cutting the heels of the team; bolt a ring to the end piece at both ends to draw by, and you have a double ender that is but little heavier than wood, will run as easy, better in most places, and will last for years. I made such a drag two years ago, and have pulled, perhaps, 500 perch of stone on it, some of them weighing nearly or quite four tons each, and, instead of wearing it out, as it would a wooden one, it rather seemed to do it good; it got the bottom well polished.

If I were to use this drag on snow, or down hill work, I should put a pole to it, for no matter how heavily it is loaded it will slide round like a hen on ice, and there seems to be hardly any limit to what a team can pull on it; mine cost about \$8, and is one of the best investments I have ever made. Four to six good steel bars of varied sizes, will be required if doing a big job of clearing, and if many of the stone are larger than the teams can easily handle, an assortment of steel drills will be necessary, and blasting must be done; striking hammers will be needed, and a

heavy breaking hammer of sixteen pounds weight will be very useful, even on a small job, for many a shaky or brittle rock can be broken and handled much easier than while whole, and a few blows of the hammer may often save drilling. In undertaking any very extensive piece of reclaiming we shall have to call in the aid of dynamite, which seems to be the cheapest and most powerful explosive material that we can employ.

Dynamite is a mixture of nitro-glycerine with some more solid material to give body, and varies in strength from thirty-five to sixty-five per cent., according to the amount of nitro-glycerine used in the mixture. Five years ago, it cost from forty cents to sixty cents per pound, but can now be bought for twenty-four cents or less, for the thirty-five to forty per cent., which is the quality generally used, and these figures show it to be the cheapest explosive that the farmer can use. Caps cost one and one-half cents each; waterproof fuse one cent per foot, and common fuse about twenty-five cents a hundred feet. It is put up in one-half pound cartridges, from one inch to one and one-half inches in diameter, and eight or nine inches long. It is exploded by percussion, and will only burn if set on fire, making a very bright light. A heavy percussion cap is used for exploding the charge, and the cap is attached to a common fuse, care being taken to have the end of the fuse reach to the fulminate or white powder in the cap, so that the connection may be good. It can be exploded under water, and generally gives the best of satisfaction when so used, as water makes the best of tamping, only it is necessary to keep the water out of the cap, and to do this, put the cap on to the end of the fuse, open one end of the cartridge, make a hole with a small stick, insert the cap and fuse, and tie the paper lightly round the fuse; sometimes it may be well to smear the joint with wheel grease, hard soap, or something of the kind. One cap in a cartridge will explode as many cartridges as are placed near it, perhaps within a foot or two.

Dynamite is dangerous, but less so than gun-powder, for if a charge refuses to explode, on account of a poor cap or a slip of the fuse from the cap, it is easy to run down another fuse and cap, and so explode it; but to drill out an old charge of powder is very dangerous, and should seldom be undertaken. When used in a drill hole, it is not necessary to tamp it, as with powder, but just fill the hole with water, moist sand, or even dirt that is damp enough to pack and exclude the air.

For ordinary field rocks of one or two tons weight, a one-inch hole, from six to eight inches deep, under charge of one-quarter to one-half pound, will generally be all that is required to break it enough for easy removal, and if the rock is a little soft or shakey, or has a seam through it, a cartridge or two underneath will do the work without drilling, and if you have use for such stone without breaking, no matter how solid they are, they can be thrown out whole without drilling. Run a bar under the middle of the rock and close up to it so that there shall be no cushion of mud between it and the charge, put in one or more cartridges, according to the size of the rock, run in the fuse, fill in with dirt, unless it be under water, and fire it, taking care to put a good distance between yourself and the charge, as the mud and small stone will fly from one hundred to four hundred feet. Nine times out of ten the desired work will be well, quickly, and cheaply done.

Five or six years ago I was the only one in my vicinity who used dynamite, but now there are many who have found it useful in clearing mowing fields, or reclaiming rough pastures. At first I thought it necessary to drill almost every rock that I wished to remove, but I have since done a great deal of blasting with no drilling, thus saving both time and labor. One cartridge will throw out a small stump if placed under the centre and close to the wood, while larger ones will require more, though one cartridge at a time will often do better than two or three at once. I had one boulder that lay buried about level with the surface

of the ground, and mostly under water, which I removed very easily with three cartridges tied to a stick and pushed down beside it in a hole made with a bar; it was kicked out high and dry, more than a rod from its hole, although it weighed all of three tons. Another blast of six cartridges, or three pounds, threw out three tons or more of solid rock from one corner of a very large boulder, and scattered it in pieces of all sizes, for a distance of a hundred feet or more, and throwing one piece of a ton in weight sixty feet from its hole.

Dynamite is like many other things, "A good servant, but a poor master;" it is altogether too quick tempered to be allowed to have its own way, and if you have to keep it on hand, store it away from house or barn, for, though it may be perfectly safe, if it should explode from any cause, you could probably get no insurance, even if you were left to try for it, and do not leave the caps where the children can find them to play with, as they explode with the noise of a rifle, and often do severe damage.

One of my neighbor's little children got a cap one evening and a pair of scissors, and went under the table to investigate its composition, by trying to dig out the fulminate; the result was a loud explosion, an extinguished lamp, a badly frightened family, and a burnt hand. The man of the house now keeps his explosives in an overturned barrel beside the pasture wall, and doesn't allow his children to play in that vicinity.

If there is a good market for stone removed, and the land is more stony than stumpy, the sales will about pay for cost of clearing the land, and the improvement of the property will do very well for profit, and beside, there will be the constant pleasure of owning and daily viewing a smooth and productive field where once was a rough and almost valueless bit of pasture or scrub land; and again, the annual returns from the reclaimed lot will be very acceptable.

Let the members of our grand old Essex County Agri-

cultural Society take hold of this work of reclaiming the odd corners of our farms with renewed vigor, using our odd time and surplus money, if we are fortunate enough to have any, in making improvements in our own surroundings and adding to our own incomes, rather than to speculate in outside matters, that the farmer had far better let alone.

ESSAY ON ANNUALS AND THEIR CULTIVATION.—PART I.

BY M. B. FAXON, OF SAUGUS.

The success in the cultivation of any flower, fruit or vegetable is exactly in proportion to the care and labor bestowed upon the soil for the reception of the seed or plant. In the Fall, as soon as a few severe frosts have stripped my flower beds of their beauty, I clear the surface of the beds and thoroughly trench the soil to the depth of twelve inches; eighteen inches would be better, but my soil does not average over twelve inches, before a gravelly subsoil is reached. The ground having been thoroughly loosened, well decomposed barn-yard manure is applied at the rate of from twenty to twenty-five cords per acre, and turned under one spade deep. Nothing more is done until spring, when the ground is again trenched as before, and a small quantity of some good chemical fertilizer is spread broadcast, and the surface of the beds is then raked smooth and fine, and the preparation of the soil is complete. My largest flower bed is two hundred feet long by sixteen wide, and faces the south. At the back of the bed is a high board fence, which shelters the flowers from the north winds; at the ends and front of the bed is an open lath fence, with gates at convenient distances, and every twenty feet are division fences six feet high to break the force of east and west winds. This ample protection from wind renders this

bed the best on the place, and I look to it for my best flowers; and I wish to emphasize the desirableness of protection from wind for flower beds.

For the past five or six years I have devoted myself almost wholly to the cultivation of asters, sweet peas, pansies and nasturtiums, and tried to grow them to something like perfection; and I believe that there is a future for these flowers that will far exceed the expectations of their most enthusiastic cultivators. Strictly speaking, pansies are not annuals, but as they are largely grown as such let us consider them as annuals.

ASTERS.

It is well to make two plantings of asters—the first about the first of March and the second the first of April, in the greenhouse, hot-bed, or window, in shallow boxes, and as soon as the plants are well up, prick them out into thumb pots. From this time until they are set in the open ground where they are to remain, the greatest care is necessary to keep them from becoming spindling. “Keep the plants as cool as possible, and still keep them growing,” is my maxim, and if this is done, good stocky plants will be the result. About the first of May the plants should be set in the open ground in rows or beds, as the cultivator may prefer, but in either case they should be set at least two feet apart. If the weather is dry when they are set they must be watered until they become thoroughly established. Cultivate often, keeping the soil loose and free from weeds until the buds begin to set, when all cultivation must cease. When the plants are about two-thirds grown they should be tied up to stakes; otherwise if a heavy storm should come when they are in full bloom, the plants will be levelled to the ground, and the flowers covered with dirt and spoiled. A bed of asters is in its prime from eight to ten days, and a grander sight is seldom seen than during this time, especially before any of the flowers have been cut. Three

classes of asters practically include all those generally grown. These are, first Truffaut's Pæony-flowered Perfection; second, Victoria; and third Pompon. The Pæony-flowered and Victoria are large asters, the petals of the former incurving to the centre; those of the latter outcurving to the edge. Pompon asters have small flowers about the size of a half dollar. The different classes include the following colors: Pæony-flowered—snow-white, rose, rose and white, dark rose and white, light carmine and white, carmine, crimson, dark crimson and white, purple violet, and violet. Victoria,—white, white tinted with rose, rose and white, carmine rose, crimson and violet. Pompon,—white, white and carmine, rose, crimson, crimson and white, and violet. These include all the desirable colors of each class.

SWEET PEAS.

It may be a very broad statement to say, "That the Sweet Pea is the most desirable annual in cultivation," but I have never met anyone who wished to change the position in which the above statement places this most popular flower. Its delicate fragrance, beautiful form and variety of coloring, makes it a favorite with the florist, while its easy culture and long continuance of blooming, secures for it a place in every flower garden. Sweet Peas must be planted as early in the spring as the ground can be worked. The seed should be sown in drills and covered at least six inches deep. This may be done in two ways. Having prepared the ground and made the drills the desired depth, drop the seed and draw into the drill earth enough to cover the seed two inches deep. As soon as the plants appear through this covering draw in two inches more of earth, and so on until the drill is filled even with the surface of the ground, or the seed may be dropped and covered in the usual manner. The surface of the ground sometimes becomes hard just as the young plants are about to appear, especially after a

shower followed by a hot sun, and unless some means are taken to prevent this, many of the young plants will not break through the soil, and no more will be seen of them than if the seed had not germinated at all; and those annoying gaps will appear in the rows. A slight raking just as the plants are breaking ground will prevent this, and also kill any small weeds that may have been started. The only laborious task in the cultivation of sweet peas is bushing them, and bushed they must be almost as soon as they are well up. Birch brush, the same as is used for for tall growing eatable varieties, makes very good bushing. Wire hen netting makes excellent support, and is very neat. Whatever the vines are trained to must be firmly secured in position, as the vines when fully grown will surely be blown down unless strongly supported. It will be found an excellent plan to place the supports used in position before the peas are planted; then sow a row of seed on each side of the support, which when the vines are grown will be entirely hidden from view, and a beautiful wall of flowers will be the result. From the time that your peas begin to bloom, the flowers must be picked every day, if you would have them last until frost: for if allowed to remain, seed will begin to ripen and your peas to cease blooming. The following are standard varieties and should be in every collection:

Painted Lady. A beautiful rose and white.

Crown Princess of Prussia. A delicate light rose.

Scarlet Invincible. Bright scarlet crimson.

White. Pure white.

Purple. Dark purple.

Black Invincible. The darkest variety grown.

The following sorts are of recent introduction, and have not yet been sufficiently tested to warrant placing them among standard varieties, although some of them are very promising:

Princess Beatrice. Beautiful carmine rose, which it holds until frost; an early and continuous bloomer, with

extra large petals. If this variety continues as good during the next few seasons, it will doubtless take the place of the Crown Princess of Prussia, which does not hold its color as well.

Cardinal. A splendid, robust growing variety, producing a great profusion of bright, shining, crimson scarlet flowers, very distinct and handsome.

Indigo King. The standard of this charming variety is a dark maroon purple, with clear indigo blue wings.

Princess of Wales. A lovely variety, shaded and striped with mauve on a white ground in a most pleasing manner; the flowers are of great substance and perfect shape.

Vesuvius. A new large-flowered variety; very fragrant; upper petals brilliant rose, shading to a deeper hue, and spotted carmine: lower petals violet shaded lilac.

Bronze Prince. A magnificent variety with well-formed flowers; the standard is of a rich, shining, bronzy maroon, and the wings deep bright purple.

Lottie Eckford. This charming variety is in striking contrast to the preceding, the standard being white suffused with purple; the wings are also white with a pretty edging of blue.

Butterfly. Pure white ground, delicately laced with lavender blue.

The above embrace the most desirable of the newer varieties, although only a few of them. Five new candidates for favor have been added to the list the past season. They are:

Duchess of Edinburgh. Standard, light scarlet, flushed with crimson, slightly marbled, or splashed at the edge with creamy white; wings deep rose.

Imperial Blue. Wings bright blue, slightly shaded with mauve; the standard being rich purple crimson.

Isa Eckford. Beautiful creamy white, heavily suffused with rosy pink.

Orange Prince. The most distinct variety ever grown;

standard, bright orange pink, flushed with scarlet; wings bright rose veined with pink.

The Queen. A very beautiful and pleasing variety; the light rosy pink standard being in charming contrast to the wings which are light mauve.

Before leaving this subject I would like to call your attention to what seems to me to be the "key note" of successful sweet pea culture which in nine seasons out of ten will give success. It is short and easily remembered, "Plant early and plant deep."

THE PANSY.

As we are about to discuss the cultivation of the Pansy as an annual, the first question that presents itself to our mind is,—what strain of seed shall we plant? and this question brings up another—what are the properties of a perfect flower? Substance of petal is the most important point; however perfect may be the form, however beautiful the color, or large the flower; if it is weak and flimsy its beauty is destroyed. The petals must be thick and velvety, a condition which will enable the flowers to keep well after being gathered.

The second point is form. The petals must be so disposed as to form almost a perfect circle, yet I think the two upper petals should be a little longer than the others, so as to just break the circle. The margin must be smooth and the petals perfectly flat, not turning up at the edges, which defect spoils a great many flowers otherwise perfect. The next requirement which demands our attention relates to color; whatever the color it should be clear and pure, with the eye large and distinct. Lastly comes size; of course it is desirable to have good sized flowers, but size is the least important point of a good Pansy. I believe judges usually adopt the following scale of points; form, four points; substance, three; color, two; and size, one; if I were to attempt to improve this

scale, I should say, give to substance four points or perhaps even five, and let us have some good, heavy, velvety Pansies. Referring to my diary I find March 10th has been the average date for planting pansy seed, and May 20th for setting the plants in the open ground. The young plants are treated in the same manner as the asters, and are transplanted into beds as soon as the ground becomes dry and warm. The beds are prepared for the reception of these plants as previously described; except that thoroughly rotted cow manure is the only manure used; horse manure should be avoided. Set the plants two feet apart each way, and water thoroughly in dry weather. Almost as soon as the plants have become established in their new position, they will begin to bloom; and, unless they are closely watched and all the buds are pinched off as they form, the plants will exhaust themselves in producing a few very inferior flowers, and grow very spindlingly. From the day that the plants are transplanted into the open ground the beds should be examined every morning; every visible bud should be pinched off, and every long shoot shortened; the object in view being to obtain large stocky plants full of vitality. If this matter is attended to regularly it will only take a few minutes each day; but if neglected even for a day, and the day be a warm one, some of the plants will be sure to flower, which will weaken them and partly undo our previous work. If the plants are thus kept from flowering until cool weather and then allowed to bloom, the flowers will be of good substance and large size. I do not wish this to be taken as implying that I ever consider the size of the flowers in any different light than as mentioned in my scale of points; but this keeping back process will make large and at the same time heavy and velvety flowers. After the first of September the flowers of almost all other annuals begin to grow poor, and the first frost practically ends their flowering. But the Pansy seems rather to improve than otherwise by

any frost that we usually have in September; and it is from the first of that month until into October that a bed of pansies grown as described is in its prime; a time when flowers of all kinds are becoming scarce. Last Fall after every other flower in my garden had been spoiled by frost, my pansy bed remained for a month in full bloom and covered with the most beautiful flowers.

THE TROPÆOLUM.

Of this extensive genus,—including, with hardy annuals, also greenhouse and herbaceous perennials,—three of the annual varieties chiefly attract our attention; these are:—

Tropæolum major (Tall Nasturtium). A well known running species, much used for covering trellises and rustic work.

Tropæolum minor (Dwarf Nasturtium). A dwarf species, growing from one foot to fifteen inches in height, and one of the most useful flowers we have; for its compact growth and rich colored blossoms renders it an excellent bedding plant.

Tropæolum lobbianum.—A running species, which may be grown on a trellis, or as a dwarf if the ends of the vines are closely pinched off, otherwise it will cover unnecessary space. The flowers are smaller and more cup-shaped than those of the two preceding species, and are of very brilliant colors. As regards the culture of the *Tropæolum* I have hardly anything to say, it is so easily grown. All that seems necessary is to plant the seed in good rich soil, see that the plants have plenty of room in which to grow, and keep the soil thoroughly stirred.

(*To be continued.*)

ESSAY ON CRANBERRY CULTURE ON CAPE COD.

BY O. S. BUTLER, OF GEORGETOWN.

I have given my subject the above title from the fact that the information gained, and which I shall endeavor to communicate in regard to the cultivation of the cranberry, was derived from frequent visits to the cranberry bogs of the cape, the last visit being made in 1886, at which time I visited more than two hundred separate bogs, ranging in extent from one-third of an acre to one hundred and fifty acres. The largest one I saw was located in the town of Duxbury, Mass. This bog was owned and worked by a corporation, and when I was there they had a large force of men employed in enlarging their bogs.

It may be of interest to know that the cultivation of the cranberry on Cape Cod commenced nearly fifty years ago. The first that we know of its cultivation was in the town of Harwich, by a man by the name of Hiram Hall, and this same town of Harwich still bears the palm among the cape towns both in the extent and value of the cranberry culture and crop, and from the small beginnings of fifty years ago up to the present time, the business has made a rapid growth, and at present stands at the head of all other industries on the cape. I have it from the best authority that the sale of cranberries has brought more money on the cape during the last forty years than all other home industries combined. One beautiful feature in regard to this great increase of revenue is that it is distributed among all classes of the people. Almost every poor man that owns a little homestead has his cranberry bog, although it may be very small, and it is a business that can be carried on by women and children, after the bogs have been prepared, just as well as by men. I found many a poor woman that received an annual income from a small cranberry bog of from one hundred to three hundred dollars, with but very little expense for hired labor.

And what has been done on the cape can be done in Essex county. We have a large extent of meadow land that is nearly worthless now, that might be put under cultivation for the cranberry crop, and many of our old meadows give unmistakable evidence of their adaptation naturally for this crop, by constantly sending forth fine specimens of the natural vine and berry without the aid of cultivation.

But our farmers will ask, what kind of land is best adapted to the cultivation of the cranberry? We should answer by saying not the sandy shores of bays and gulfs or seas. Very many persons have supposed that the reason why the cape cranberries were so beautiful in form and color was because they were grown on the seashore among the salt sea sand. This theory is entirely erroneous. The experiment has often been tried to grow the cranberry among the sands of the seashore, not only on Cape Cod but in our own county, on the sandy beaches of Plum Island, but without success. Dr. Mumford, who tried the experiment on Plum Island, succeeded, after several years of careful study and labor and quite an expense, in raising six or seven perfect cranberries, and then abandoned the business altogether.

Others have supposed that the cranberry could be cultivated successfully upon high lands especially if these lands had moist, springy surfaces, but we do not know of a successful experiment on these lands. The nearest approximation to success that has come under my own observation is that of the late Gorham Brackett, of Ipswich, Mass.

The best lands adapted to the cultivation of the cranberry are the low swamp lands that abound not only on the cape but here in Essex county. Most of the cranberry bogs of the cape are made on the bottoms of the old cedar swamps where they can be easily flowed with water at all seasons of the year. We have seen several very fine cranberry bogs on lands that could not be flowed

with water, but occasionally there will be an entire failure of the crop either from insects or the late or early frosts, that might have been prevented by the flowage of water at the right time.

The methods of flowage are various. The natural flowage is the cheapest and best, if your bog is so situated that you can have your water under perfect control, so that you can let it on and off the bog at your discretion.

Artificial flowage is more expensive, but is more easily controlled. Very many of the smaller bogs on the cape are flowed from a reservoir constructed in the ground above the level of the bog, so that the water will flow on the bog from its own force when the gate is opened. These reservoirs are filled with water from wells dug for the purpose, the water being lifted by windmills, which are very common on the cape, more so than in any section of the country I have visited.

The advantages of flowing the bogs with water are many, the first of which is the protection given to the young berries from the late spring frosts, and the mature berries from the early frosts in the fall. A very shallow surface of water will protect the berries entirely from the frost, and not unfrequently a flowage of one night, or two at most, will save the entire crop, worth perhaps thousands of dollars.

Another advantage of flowing is the protection you can give to the berries from the ravages of the insects that prey upon them, sometimes destroying an entire crop after the fruit is fully grown. The principal one of these insects, and the one most destructive, is the miller or fly that deposits her eggs in the full grown berry by penetrating the surface of the berry, and leaving the eggs to germinate a small worm that in a few days' time consumes the centre of the fruit, leaving the surface round and fair and of a dark rich purple color, but renders the fruit entirely worthless, and the only remedy for this evil is found in flowing the bogs for one or two days when the miller

first makes her appearance, and then the danger is past for this insect makes but one visit a year.

Another question of importance is, what kind of plants shall we set, and what berries shall we grow for profit? There are two kinds of berries that are extensively grown on the cape. The bell berry is the best formed, the richest in color, and the finest in flavor, and will take the lead in any of the markets of the world, but it requires great care in its cultivation, and is not so prolific a bearer as some other kinds. The early black berry is an excellent variety. It does not grow so large as the bell berry, and is not so well formed, but is a sure grower and a prolific cropper, and I should think it was cultivated more largely than any other variety on the cape. There are other varieties that have obtained favorable notoriety in some sections.

The methods of preparing the lands are of very great importance.

The swamps and bogs are cleared of all trees and stumps so that the surface can be made as level and smooth as a floor. This is usually done in the winter when the swamps are partially frozen, and when labor is much cheaper than at other seasons of the year. Then this surface is covered over with sand to the depth of twelve or eighteen inches. The kind of sand used depends on the means of obtaining it. If convenient and easy of access, the shore sand is preferable. Coarse sand is preferable to fine. Good coarse sand is often found in the hills near the bogs, which renders the cost of transporting it much less than when it has to be brought from the distant seashore. When the bog is fully prepared, then the surface is marked off in rows from twelve to eighteen inches apart; the plants are then set in their places by the use of a sharp pointed stick, which is used to make the hole in the ground. The plants are then inserted and filled around with sand, and the work of planting is done. The plants are prepared for setting by

passing through an old style hay cutter with the knife moving up and down, cutting the plants into the desired length, say about four to six inches long. After the plants are set (which is usually done in the spring of the year) they need to be thoroughly cultivated, and kept entirely clear from all weeds and grass, until the vines entirely cover the ground, which takes ordinarily from two to three years. After that, there is nothing more to do but gather your crop, unless you wish to increase your crop or raise your bog to the highest standard of productiveness. If so, you will need to cover the vines with sand about one inch deep as often as once in every five or six years. This will give new life to the plants, and greatly increase their productiveness. But I have seen several bogs that had not been dressed or cultivated for more than twenty-five years, that gave very abundant crops, but these bogs had an underlayer of muck, more than ten feet deep and very rich.

The cost of preparing these bogs varies in different localities according to the price of labor. On Cape Cod the cost of preparing their bogs is about two hundred dollars an acre. This includes the clearing of swamps, the covering it with sand and the setting of the plants. I have visited bogs that cost three hundred dollars an acre where the sand was brought from a distance, but these bogs usually pay for their cost in from three to five years. The more cautious of our farmers will ask, "where could we sell the berries if everybody went into the business?" We answer, there is no danger of everybody going into the business at present, and then we should remember that the markets of the world are open to us. In many countries of the world the cranberry is entirely unknown. Ten years ago the cranberry was not known on the tables, even of the better classes, in the great city of London, as a table luxury, and then we are assured by the best medical authority, that the cranberry contains the best vegetable acid known to science, and as soon as some

enterprising American shall start the business of canning the cranberry in its crude natural state, a market will be opened up for this fruit in all the armies and navies of the world, and all the hospitals and asylums of the world will adopt their use. The demand for this fruit will increase with the supply, and when put up in a form to withstand the changes of climate and conditions, for an indefinite period of time, it can never become a drug in any market of the world, and where the average yield amounts to from two hundred to ten hundred dollars an acre, there must be a large margin of profit.

In closing, I would repeat what I said at the beginning, that Essex county is as well adapted to the cranberry culture as Barnstable county, and we have thousands of acres of meadow and swamp lands that are almost entirely useless, that might be converted into cranberry bogs, and under proper cultivation become the most profitable lands on our farms. The town of Topsfield has a hundred acres of this land, Middleton has more than that, and there is hardly a town in the county that has not more or less of this almost useless land.

We hope to see a more thorough investigation of this branch of agricultural industry in our own county, and would express the hope that the trustees of the Essex Agricultural Society may see their way clear to offer a large premium for the best cranberry bog that shall be made and cultivated during the next five years, said bog to consist of not less than one half acre.

REPORT OF THE COMMITTEE ON ESSAYS, REPORTS AND STATEMENTS.

The Committee to whom was assigned the duty of awarding premiums for Essays, Reports, and Statements, are glad to be able to say that the papers handed to them this year are unusually good, both as respects their contents and the

way in which the respective subjects are presented. The committee have no difficulty in awarding premiums for such essays as these, except the hesitation in discriminating between papers so acceptable to the Society, and deserving, each of them, more than the committee are authorized to award.

They have determined upon the following premiums :

For Essays :

First premium of \$15 to Charles W. Mann, of Methuen, for essay on " Reclaiming Rocky Pastures."

Second premium of \$10 to M. B. Faxon, of Saugus, for essay on " Annuals and their Cultivation." This essay is incomplete, and is to be concluded next year, the award being made with this understanding.

Third premium of \$8 to O. S. Butler, of Georgetown, for essay upon " Cranberry Culture on Cape Cod."

For Reports :

First premium of \$10 to C. C. Blunt, of Andover, for report on Cranberries.

Second premium of \$8 to Francis H. Appleton, of Peabody, for report upon Ornamental Trees.

Third premium of \$6 to J. J. H. Gregory, of Marblehead, for report upon Agricultural Implements.

The committee regret that they have not the means of awarding some compensation to Rufus Kimball, of Lynn, for his excellent report upon " Grain and Seed," and they would recommend that he be granted the sum of \$6, as a complimentary award.

In passing upon the merits of essays upon agricultural subjects the committee consider that the best papers are those which present the newest facts derived from personal experience and stated in a concise and perspicuous manner. They do not insist upon literary merit, but merely demand that the writer shall have something to say which is worth saying, and shall do it in an intelligible style. In this connection they call attention to Mr. Mann's essay upon methods of clearing up rocky pastures. This is a matter of

considerable importance in Essex County, and Mr. Mann seems to have used some simple and ingenious mechanical devices which are well worth knowing about. His remarks upon the uses of dynamite are especially interesting, as this is a new agent for this purpose, and according to Mr. Mann's statement is at once cheap and efficient.

The essay of Mr. Faxon upon the Cultivation of Annuals will interest farmers' wives and daughters, and contains specific information about the best methods of planting and growing, derived from a large and successful practice. The cultivation of flowers not only gratifies a taste for the beautiful but also for the useful, and of late years has become a source of profit to thousands of cultivators. Floriculture is an established industry.

Mr. Butler, in his essay on the cranberry, tells how this fruit is cultivated on Cape Cod, and urges that there are many localities in Essex county where it might be grown with equal advantage. The topic is recognized as one of general importance. We think it would be well for some one to gather information upon the point whether the cranberry can be profitably grown upon our Essex county meadows as generally as is supposed. In some instances when tried in localities apparently suitable it has failed, and it would be well to know what are the precise limitations to its easy culture.

The several reports are very good, and also most of those which the committee are unable to recognize for want of the necessary funds.

Mr. Blunt discusses very intelligently the cranberry question. Mr. Appleton deals with a subject of growing interest and importance, that of ornamental and shade trees, which he discusses with familiar knowledge. Mr. Gregory, whose large practical experience is so well known, contributes a great deal of useful information concerning agricultural implements. And so of other reports in this number of the Transactions. There are many that deserve commendation, and the committee believe that the present

volume will be considered one of the best that has been issued.

For the committee,

GILBERT L. STREETER, *Chairman*.

G. L. Streeter, Daniel E. Safford, Nathan M. Hawkes,
David W. Low,—*Committee*.

IN MEMORIAM.

Seldom, if ever, has the Essex Agricultural Society been called to mourn the loss of any member whose services have been so closely connected with its success, so much respected and beloved, as that of Charles P. Preston, of Danvers, who died Oct. 27, 1887. He was elected secretary for twenty-five successive years, and until his failing health compelled him to decline further service. The annual edition of the society's transactions, published under his careful supervision, has gained for him and the society an enviable reputation in the cause of Agriculture, second to no other in Massachusetts. He was a successful farmer, managing the farm of his father and grandfather before him, with much care, and keeping fully up with the progress of the age. His sound judgment and honesty of purpose was appreciated by the community, therefore, he was elected a member of the legislature, and of the board of County Commissioners; was appointed a trustee of the Danvers Asylum when it was first established by legislative act, and in his public positions contributed to the public welfare much that his experience and practical knowledge enabled him to render as but few could.

At a meeting of the Trustees of the Society, held at Salem, Nov. 14th, the following resolutions were unanimously adopted:

Resolved: That, by the recent death of Charles P. Preston, the Essex Agricultural Society has lost one of its best friends, he having faithfully and efficiently served as its secretary for twenty-five successive years, and was at all times an able supporter of its best interests. Always prompt and honest in the performance of his duties as an officer of this Society, and as a citizen. A born farmer, he has made the cause of Agriculture an aid to progress. As a genial, social companion he was loved and respected by all of his associates.

Resolved: That the Secretary furnish the family of the deceased with a copy of these resolutions, and that they be printed in the Transactions of the Society.

NATHAN W. HAZEN, of Andover, died March 19, 1887, aged 87 years. "He was born in Bridgeton, Maine. Admitted to the Massachusetts Bar in 1829, discontinued practice in 1865, and was its oldest member in years, at death. He served in the Massachusetts Senate in 1856, and for several years as President of the Merrimac Mutual Fire Insurance Company. He was a man of quiet benevolence, a loyal friend and a good neighbor." He served this Society on the "Committee on Essays and Farm Accounts," in 1852, he then being a member.

GEORGE GUTTERSON, of Andover, died April 16, 1887. "He was a very worthy citizen, and took a great interest in this Society, serving in 1878, when he first became a member, on the "Committee on Small Fruits." He was a very successful small fruit grower, and was authority on strawberry culture.

RICHARD P. WATERS, of Beverly, died May 19, 1887, aged almost 80 years. He was the first United States Consul at Zanzibar, Coast of Africa, and remained there more than ten years. He purchased Cherry Hill Farm, in Beverly, in 1846, when he became a member of this Society, and greatly interested in its work, active on its committees, and served as Trustee nine years, 1848-1856.

JOHN PICKETT, of Beverly, died Dec. 3, 1887, aged 80 years. He represented his town two years in the Legislature, and was a Selectman four years, and Assessor as long ago as 1838. He was actively engaged in business up to the day of his death. He joined the Society this year.

WARREN ORDWAY, of Bradford, aged 77 years, died May 10, 1887. He was born in West Newbury, May 19, 1810, and learned the trade of carriage maker, but pursued it a brief time. In 1836 he moved to Bradford, and entered into business in Haverhill, where, as a business man, he took high rank, and retired with success, in 1877. He was an officer in banks in that vicinity, and in 1860 represented the town of Bradford in the legislature, and has served the town on its school committee. When the Bradford Farmers' Club was organized he was its first president, and one of its most active supporters.

He was Trustee of this Society in 1856 and 1866, and from 1869 to 1872 inclusive, and was one of its Vice Presidents in 1875 and 1876. In agriculture he took a lively interest, which was a growing feeling with his advancing years, and as a citizen he was energetic, public-spirited, and progressive. In July, 1884, Mr. and Mrs. Ordway celebrated their 50th wedding ("golden") anniversary. His widow, with three of seven children, survive him.

JOHN C. PHILLIPS, of Boston, "died March 1, 1884 (his death not heretofore noticed). He was a graduate of Harvard College in 1858, and for many years an active merchant in New York. In 1878 he bought a large tract of land on the shores of Wenham Lake, and afterwards made it his summer home, planting many thousand trees, native and foreign. He was much interested in farming, and in a short time the barren pastures were made to yield good crops of grain. He took great pride in his stock, and several times sent cows and other animals to the county fair." He became a member in 1880.

GEORGE FAXON, of Danvers, died April 18, 1887, aged 48. He was engaged in the shoe business at different times in Danvers, Lynn and New York. At the time of death he was a travelling salesman of canned goods. He became a member in 1875.

JOSHUA SILVESTER, of Danvers, died July 29, 1887, aged 84 years, 21 days. Born in Wiscasset, Me., in 1803,

he moved with his parents to Andover, Mass., in 1806, and grew to manhood working at farming and shoe making until 25 years of age, when he became a shoe manufacturer and was connected with the shoe business until 1867, when he retired. He went to England several times and there became acquainted with George Peabody, Esq., and was afterwards named by him as a life trustee of the Peabody Institute. "The Danvers Mirror," after a long notice of his death, says, "Many have died richer, but none more thoroughly respected. No man will be more missed and none will be longer remembered. His monument is everywhere where the numberless trees which he was instrumental in setting out are growing yearly more and more beautiful. In them he has left a precious legacy to us and future generations which no money can buy. It was the great pleasure of his declining years to have seen the development of these noble trees from the bare sticks which he had placed in the ground." He joined the Society more than thirty years ago.

CHARLES P. PRESTON, of Danvers, whose death has been previously noticed at the head of this memorial, became a member in 1849, serving on committees afterwards. Elected trustee in 1856, and serving four years until elected Secretary, which position he filled for a quarter of a century.

JOHN ATKINSON, of Gloucester, died Feb. 21, 1887, aged 83 yrs., 9 mos., 8 days. He was a wheelwright by trade; of business integrity and exemplary character, possessing such a disposition as made him a favorite with all who knew him. He was a member of the Cape Ann Horticultural Society from its organization, and was interested in small fruit culture. He became a member of this society in 1872.

EPES W. MERCHANT, of Gloucester, died June 14, 1887, aged 83 years, 24 days. "In his early life he followed the fisheries, which he left on arriving of age to

engage in the fishing business with his father, and for many years the firm of Epes Merchant & Son was one of the best known establishments of the old town. Mr. Merchant was a director in the Gloucester National Bank for thirty-eight and one-half years and President from 1871 to time of death. He was connected with the Cape Ann Savings Bank for many years as Trustee, was one of the incorporators and President of Oak Grove Cemetery Association from 1855; director of the Gloucester Fishermen's and Seamen's Widows' and Orphans' Association; and served upon the Town Hall building committee in 1869, and a member of the Board of Aldermen in 1874. He also served as captain under the old militia law. He was a man of methodical habits, conservative views, of generous instincts and unimpeachable integrity." He became a member in 1872.

MOODY S. DOLE, of Georgetown, who died March 10, 1887, was twenty-five years ago an active member of this society and was noted for his skill as a ploughman, taking premiums for a number of years. He became a member in 1855.

SAMUEL HUNT, of Ipswich, died March 9, 1887, aged 73 years. He was an overseer in the Hosiery Mills in that town and joined this society about fifteen years ago.

NATHAN W. HARMON, of Lawrence, died Sept. 16, 1887, aged 74 years, 8 months. He served this Society in 1851 on Committee of Essays and Reports and as Trustee in 1852, '53 and '54. He became a member in 1849. He was always interested in the public schools of his city. Served one term as Senator in the General Court. Was Assistant Assessor of Internal Revenue, and for the last ten years of his life Judge of the Police Court in Lawrence.

HENRY A. BREED, perhaps the oldest member of the Essex Agricultural Society, was born in 1798 and died in 1887. He was engaged in many enterprises, including the great "Eastern Land Speculation," by which he lost

\$200,000, and in the building of stores, plank walks, wharves and canals in the early days of the California gold excitement, being one of the early operators in that State. He was one of the original members of the Mass. Horticultural Society, of which he was almost the sole survivor at the time of his decease. He was a man of remarkable health and vigor, and presided at the meeting of the Lynn members of the Society at the election of a Trustee in 1886."

EDWARD S. DAVIS, of Lynn, who died in Lynn during the past year, "was born in the same place June 22, 1808. He was long a member of the Essex Agricultural Society, joining it in 1836 and serving for many years, afterwards on its committees, and taking a lively interest in its proceedings. He was a member of the House of Representatives in 1839, President of the Common Council in 1852, '53, '56 and '57, and Mayor of the city in 1859 and 1860. During a long period he held important official positions in St. Stephens (Episcopal) church in Lynn, and did more than any other person in the establishment and maintenance of that organization. Mr. Davis was a gentleman universally respected for his sterling qualities."

JOHN NUTTING, of Marblehead, died Dec. 6, 1887, aged 63 years. He became a member in 1860. He was a graduate of the State Normal School at Bridgewater and for ten years was principal of the Story Grammar school in Marblehead, beginning about 1852, and was a kind and faithful teacher. In 1869, Mr. Nutting served as Secretary of Board of Selectmen, during illness of Town Clerk, and has filled other positions of trust. For thirty-five years he was a member of the North Street church choir. He had an illness lasting over eleven years, during which, motion, sight, hearing, speech, one after the other became impaired until life became a blank. He was a shoe manufacturer at the time he was stricken with disease.

WM. F. GOODRICH, of Newbury, died April 27, 1887, at the age of 54. He was both farmer and trader in early life. Twenty or more years ago he purchased the Moody Farm, so called, near the Byfield Factory. and there lived and died. He joined this Society in 1865.

ISAAC H. BOARDMAN, of Newburyport, died July 10, 1887, age 77 years, was one of her wealthiest and most honored citizens. Early fatherless, he was called to the active duties of life in his very boyhood to assist a widowed mother in the support of her family ; and once in the battle of this busy world, he has been unremitting in its duties, cares and labors, till the conflict is now ended. For forty years he was interested in the fisheries, especially the Labrador Cod fishery, sending the last one in 1880, having declined from seventy sail to that one. As the fisheries receded he became interested in freighting ships, chiefly cotton carriers, for which Newburyport was famous. Thus he passed from the smaller to the greater in his enterprises as he did in his personal influence, character and the esteem of his fellow men.

He was an officer of the town, and when a city served it in 1851 and 1852 in its councils ; in 1853 as an aldermen, and in 1863 as Mayor, declining re-election. He served in the Massachusetts House of Representatives in 1842, 1844 and 1852, and in the Senate in 1855, and held important offices in prominent financial and charitable institutions and was very patriotic in his feelings toward his town, his state and his country.

CHARLES DOLE, of Rowley, who became a member in 1871, died during the past year.

VOLNEY C. STOWE died in Salem, Oct. 26, 1887, from heart disease, at the age of 74 years. He was well known in Salem from his long connection with the bakery business, and the service rendered as a member of the city government. Mr. Stowe was a member of the Common Council in 1848, '54, '55, '57, '70, '71 and '72, and of the Board of Aldermen in '75 and '76. He was also an overseer of the Poor and in the Fire Department.

He was an active, useful and efficient citizen. Of late years he has been retired and lived quietly at his home on Essex street. He received a premium from this society as long ago as 1851 for Milch Cow.

T. O. W. HOUGHTON, of Saugus, died Feb. 15, 1887, aged 52 years. He was employed for many years in a snuff factory. He was interested in the keeping of a herd of Milch Cows for a milk dairy. He served one year as a Trustee of this society.

BEN : PERLEY POORE, of West Newbury. Born in 1820, died May 29, 1887. He joined our society in 1848. Delivered its annual address in 1856, and in 1858 was one of its trustees.

He was always an active industrious worker for the best interests of this society, and always took a lively interest in its agricultural, literary and social success, as his frequent and successful exhibits on his farm (at Indian Hill which his ancestor bought in 1650 by lawful purchase from "Great Tom Indian") and at our Cattle Shows and Fairs, and his valuable essays, statements and reports published in our transactions, and his cheery face and voice, in his witty, entertaining and instructive speeches at many of our annual dinners, can all testify.

Major Poore was of patriotic and military ancestry, and with such blood tingling in his veins, no wonder that from boyhood to age he was full of military ardor ; his martial and scholarly elements alternated in him, or blended harmoniously in patriotic literary labor, when his telegrams were as effective as bullets on the battlefield. His pen was certainly mightier than the sword. His services also to his country, state and county, in literary works, have been invaluable.

His pet grove of forest trees gained from the Massachusetts society for the Promotion of Agriculture a premium of \$1000, which had been offered for the best growth of forest trees within ten years from the time of planting. It consists of twenty acres of oak, chestnut, hickory, locust, fir, and pine. Every tree was planted with his own hand.

With exception of Mr. Preston, no member has rendered such valuable service to this society as Major Poore or will be missed more at our annual gatherings.

S. BROCKLEBANK,* of Rumney, N. H., your committee was informed, died during the past year. He appeared on the list of members in Georgetown in 1855.

WILSON FLAGG, of Cambridge, another non-resident member, the committee were informed was dead.

It will be seen that the larger part of the members who have gone from us the past year have been men far advanced in life, and have held important positions which they filled with honor and credit.

This Society tenders to the relatives and friends of its deceased members their sympathy with them in our mutual loss.

Benjamin P. Ware, David W. Low—*Committee.*

DR. GILBERT L. STREETER, TREAS., IN ACCT WITH THE ESSEX AGL SOCIETY. CR.

1886.

Oct. 1. To balance of previous account,	\$601 96	By amount of Premiums and Gratuities awarded by the Trustees,	\$1737 25
To Bank Dividends for October,	381 55		510 89
To State Bounty received,	600 00	Bills paid for Printing and Advertising,	25 00
To State Tax on Bank Stocks refunded,	5 72	Amount paid to Salem Athenaeum,	47 15
To Cash received for new members,	138 00	Expenses of meetings of Farmers' Institutes,	45 50
To Cash received on account of Treadwell Farm,	650 00	Repairs of Tent and expressage,	181 77
To Bank Dividends for April,	386 05	The Secretary's account,	53 00
To amount of unclaimed premiums,	108 25	The Treasurer's account,	41 95
		Loss on Exhibition in Newburyport, paid E. P. Richardson,	229 02
	<u>\$2871 53</u>	Balance,	<u>\$2871 53</u>

Funds belonging to the Society, October, 1887.

10 shares in National Hide and Leather Bank, Boston,	\$1101 87	Amount brought forward,	\$13,532 07
3 shares in National Revere Bank, Boston,	377 62	Amount reported last year,	13,905 01
18 shares in First National Bank, Salem,	1914 66		
18 shares in Salem National Bank, Salem,	2000 00	Loss,	<u>\$372 94</u>
42 shares in Asiatic National Bank, Salem,	1281 25		G. L. STREETER, Treasurer.
12 shares in Mercantile National Bank, Salem,	1226 50	Salem, Nov. 15. 1887.	
22 shares in Merchants' National Bank, Salem,	1189 50		
5 shares in First National Bank, Danvers,	375 00		
8 shares in National Exchange Bank, Salem,	800 00		SALEM, Dec. 27, 1887.
16 shares in Warren National Bank, Peabody,	1595 40	The above account has been examined this day, and found properly vouched and correctly cast and the funds on hand correctly reported.	
15 shares in South Danvers Bank, Peabody,	1441 25		JOS. H. PHIPPS, Auditor.
Cash on hand,	229 02		
	<u>\$13,532 07</u>	Estimated market value of above stocks, Oct., 1887,	\$16,238 06
Total,			

List of Premiums Awarded in 1887.

FAT CATTLE.

Henry Garduer, Peabody, for oxen, first premium,	\$10 00
B. H. Farnum, North Andover, for oxen, second premium,	8 00
Wm. A. Russell, Lawrence, for fat cow, first premium,	8 00

BULLS.

John Swinerton, Danvers, for Ayrshire bull, first premium,	10 00
D. A. Massey, Danvers, for Ayrshire bull, second premium,	5 00
Isaac C. Wyman, Salem, for Jersey bull, first premium,	10 00
John J. Gould, Ipswich, for Jersey bull calf, first premium,	2 00
Wm. A. Russell, Lawrence, for Holstein bull, first premium,	10 00
Wm. A. Russell, Lawrence, for yearling Holstein bull, first premium,	5 00
Wm. A. Russell, Lawrence, for Holstein bull calf, first premium,	2 00

MILCH COWS.

Wm. A. Russell, Lawrence, for best Milch cow, first premium,	15 00
Wm. A. Russell, Lawrence, for Milch cow, first premium,	10 00
Wm. A. Russell, Lawrence, for Milch cow, second premium,	4 00
Wm. A. Russell, Lawrence, for Milch cow, first premium,	10 00
Wm. A. Russell, Lawrence, for Milch cow, second premium,	4 00

HERD OF MILCH COWS.

Wm. A. Russell, Lawrence, for Herd of Milch cows, first premium,	18 00
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HEIFERS—FIRST CLASS.

Wm. A. Russell, Lawrence, for Holstein Milch heifer, first premium,	10 00
Wm. A. Russell, Lawrence, for Holstein Milch heifer, second premium,	4 00
Wm. A. Russell, Lawrence, for Holstein heifer, first premium,	4 00
Wm. A. Russell, Lawrence, for Holstein heifer, sec- ond premium,	3 00
Wm. A. Russell, Lawrence, for Holstein yearling, first premium,	4 00
Wm. A. Russell, Lawrence, for Holstein calf, first premium,	4 00
Wm. A. Russell, Lawrence, for Holstein calf, second premium,	3 00
D. A. Massey, Danvers, for Ayrshire heifer, first pre- mium,	10 00
D. A. Massey, Danvers, for Ayrshire calf, first pre- mium,	4 00
D. A. Massey, Danvers, for Ayrshire calf, second pre- mium,	3 00
W. S. Dickson, Salem, for Jersey calf, first premium,	4 00

HEIFERS—SECOND CLASS.

James F. Codey, Peabody, for Milch Grade Jersey, first premium,	10 00
Timothy O'Keefe, Peabody, for Milch Grade Jersey and Ayrshire, second premium,	4 00
John Barker, North Andover, for 2 year old Grade Holsteins, first premium,	4 00
J. A. Jones, Lynn, for 2 year old Jersey and Ayr- shire, second premium,	3 00
Daniel G. Tenney, Newbury, for one year old Grade Jersey, first premium,	4 00
City Farm, Salem, for one year old Grade Holstein, second premium,	3 00
Jenkin M. Emerson, Middleton, for heifer calf, first premium,	4 00
Stephen Blaney, Peabody, for twin calf, second pre- mium,	3 00

WORKING OXEN AND STEERS.

Lyman Wilkins, Middleton, for working oxen, first premium,	12 00
George P. Wilkins, Middleton, for working oxen, second premium,	10 00
Wm. P. Christopher, Middleton, for working oxen, third premium,	8 00
B. H. Farnum, North Andover, for working steers,	10 00

TOWN TEAMS.

Middleton town team, first premium,	20 00
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STEERS.

B. W. Farnum, North Andover, for steer calves, first premium,	4 00
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STALLIONS—FIRST CLASS.

H. H. Hale, Bradford, for 4 year old Percheron stallion, first premium,	10 00
John Parkhurst, Boxford, for 3 year old Grade Percheron stallion, first premium,	8 00

STALLIONS—SECOND CLASS.

John P. Conant, Wenham, for 4 year old stallion for driving horses, first premium,	10 00
John Flye, Saugus, for 8 year old stallion, second premium,	6 00
John Looney, Salem, for 4 year old stallion, gratuity,	8 00

BROOD MARES.

Abbott & Reynolds, Salem, for mare and foal, first premium,	10 00
Michael Looney, Salem, for mare and foal, second premium,	6 00
Edwin Bates, Lynn, for mare and foal, third premium,	4 00

GENTLEMEN'S DRIVING HORSES.

H. H. Hale, Bradford, for black mare, first premium,	10 00
Dr. W. A. Gorton, Danvers, for bay mare, second premium,	6 00
D. J. Tenney, Newbury, for chestnut gelding,	4 00

FARM HORSES.

F. O. Kimball, Danvers, farm horse, first premium,	10 00
M. H. Poor, West Newbury, farm horse, second premium,	8 00
B. H. Farnum, No. Andover, farm horse, third premium,	4 00

PAIRS OF FARM HORSES.

A. F. Lee, Beverly, first premium,	12 00
Peter Holt, Jr., North Andover, second premium,	8 00
C. N. Maguire, Newburyport, third premium,	4 00

DRAFT COLTS—FIRST CLASS.

H. H. Hale, Bradford, first premium,	10 00
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COLTS FOR DRAFT—SECOND CLASS.

James Kinnear, Ipswich, 2 year old colt, first premium,	10 00
James J. Abbott, Andover, 2 year old colt, second premium,	6 00

COLTS FOR GENERAL PURPOSES—FIRST CLASS.

Eben S. Keyes, Rowley, for 4 year old colt, first premium,	10 00
O. A. Blackinton, Rowley, for 4 year old colt, second premium,	6 00
Daniel G. Tenney, Newbury, for 4 year old colt, third premium,	4 00
L. S. Morrison, Danvers, for 3 year old colt, first premium,	8 00
Wm. A. Russell, Lawrence, for 3 year old colt, second premium,	5 00

COLTS FOR GENERAL PURPOSES—SECOND CLASS.

H. H. Hale, Bradford, for two year old colt, first premium,	6 00
Edwin Bates, Lynn, for two year old colt, second premium,	4 00
Charles Sanders, Salem, for yearling stallion, first premium,	6 00
D. G. Tenney, Newbury, for yearling colt, second premium,	4 00

SWINE—FIRST CLASS.

Elizabeth Saunders, W. Peabody, for breeding sow, second premium,	5 00
Robert G. Buxton, Peabody, for Chester White breeding sow, second premium,	5 00
Samuel P. Buxton, Peabody, for Yorkshire breeding sow,	5 00

SWINE—SECOND CLASS.

Munroe Brothers, Lynnfield, for Yorkshire boar, first premium,	8 00
Robert G. Buxton, Peabody, for Yorkshire sow, first premium,	8 00
Robert G. Buxton, Peabody, for Yorkshire breeding sow, second premium,	5 00

SHEEP.

R. S. Brown, Peabody, for Shropshire buck,	8 00
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PLOUGHING WITH DOUBLE TEAM.

B. H. Farnum, North Andover, first premium,	12 00
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PLOUGHING WITH SINGLE TEAM.

Washington Winslow, Hamilton, with one yoke oxen, first premium,	10 00
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PLOUGHING WITH HORSES.

Moses H. Poor, West Newbury, first premium,	10 00
W. M. Bent, Danvers, second premium,	7 00
Edwin A. Durkee, Peabody, third premium,	5 00

PLOUGHING WITH SWIVEL PLOUGH.

Solomon W. Weston, Middleton, with one pair oxen, first premium,	12 00
Wilkins & Christopher, Middleton, with one pair oxen, second premium,	10 00
Jonas Rollins, Danvers, with one pair horses, first premium,	10 00
James C. Poor, North Andover, with one pair horses, second premium,	6 00

PLOWING WITH SULKY PLOUGH.

Francis O. Kimball, Danvers, with National Reversible plough, first premium,	10 00
J. E. Page, Salem, with Cassidy plough, second premium,	8 00

IMPROVING WET MEADOW AND SWAMP LANDS.

Luther P. Tidd, Georgetown, first premium,	15 00
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IMPROVING PASTURE AND WASTE LANDS.

Charles W. Mann, Methuen, second premium,	10 00
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UNDERDRAINING LAND.

Charles W. Mann, Methuen, first premium,	15 00
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GRAIN CROPS.

R. Frank Dodge, Wenham, corn crop, first premium,	10 00
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ROOT CROPS.

Robert Frank Dodge, Wenham, potato crop, first premium,	10 00
John H. George, Methuen, onion crop, first premium,	10 00
Charles W. Mann, Methuen, cabbage crop, first premium,	10 00
David Warren, Swampscott, squash crop, first premium,	10 00
James P. King, Peabody, ruta бага turnip crop, first premium,	10 00

FOREST TREES.

George L. Hawkes, Lynnfield, ornamental trees, first premium,	10 00
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CRANBERRIES.

James P. Butterfield, Andover, cultivating cranberries, first premium,	15 00
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STRAWBERRIES AND OTHER SMALL FRUITS.

George J. Peirce, West Newbury, strawberry crop, first premium,	10 00
George J. Peirce, West Newbury, raspberry crop, first premium,	10 00

NEW MEMBERS.

John Meacom, Beverly, most new members, premium,	6 00
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ESSAYS AND REPORTS.

Charles W. Mann, Methuen, essay on "Renovating Pastures," first premium,	15 00
M. B. Faxon, Saugus, essay, "Annuals and their Cultivation," second premium,	10 00
O. S. Butler, Georgetown, essay, "Cranberry Culture on Cape Cod," third premium,	8 00
Charles C. Blunt, Andover, report on cranberries, first premium,	10 00
Francis H. Appleton, Peabody, report on ornamental trees, second premium.	8 00
J. J. H. Gregory, Marblehead, report on agricultural implements, third premium,	6 00

MASSACHUSETTS AGRICULTURAL COLLEGE SCHOLARSHIP.

George E. Newman, Newbury, last yearly payment of 1884 award,	25 00
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OTHER AWARDS.

Awarded by Committee on Poultry,	44 00
" " " " Agricultural Implements,	27 00
" " " " Carriages,	30 00
" " " " Dairy,	24 00
" " " " Bread, Honey, etc.,	27 50
" " " " Pears,*	85 00
" " " " Apples,	76 50
" " " " Peaches, Grapes, etc.,†	65 50
" " " " Flowers,	43 25
" " " " Vegetables,‡	158 00
" " " " Grain and Seed,	31 00
" " " " Counterpanes and Afghans,	31 00
" " " " Carpets and Rugs,	27 50
" " " " Articles manuf. from Leather,	27 00
" " " " Manufact's and Gen'l Mdse.,	2 50
" " " " Fancy Work and Art Work,	49 25
" " " " Children's Work,	13 50

\$1629 50

CORRECTIONS.—*\$1 Gratuity to John T. Pickering, Salem, for Duch-
 ess Pears, and \$1 Gratuity to P. W. Murphy, Salem, for Louise Bon
 Pears, were omitted on Committee's report. †\$4, first premium, to
 A. J. Hubbard, Peabody, for basket of Assorted Fruit, omitted on
 Committee's report, and \$1 Gratuity to Mrs. G. P. Osborne, Peabody,
 instead of 50 cents as printed on page 60. ‡\$3, first premium, to
 Philip Bushby, Peabody, for purple top flat turnip, omitted on page
 65.

RECAPITULATION.

FARMS.

Awarded for Ploughing,	\$100 00
“ “ Reclaiming Swamp Land,	15 00
“ “ Improving Pasture Land,	10 00
“ “ Underdraining Land,	15 00
“ “ Ornamental Trees,	10 00
“ “ Cranberries,	15 00
	<hr/> \$165 00

FARM STOCK.

Awarded for Fat Cattle,	\$26 00
“ “ Bulls,	44 00
“ “ Milch Cows,	61 00
“ “ Heifers,	63 00
“ “ Heifer Calves,	25 00
“ “ Working Oxen and Steers,	40 00
“ “ Town Team of Oxen,	20 00
“ “ Steers,	4 00
“ “ Horses,	128 00
“ “ Colts,	79 00
“ “ Swine,	36 00
“ “ Sheep,	8 00
“ “ Poultry,	44 00
	<hr/> \$578 00

FARM PRODUCTS.

Awarded for Grain Crops,	\$10 00
“ “ Root Crops,	50 00
“ “ Fruit Crops,	20 00
“ “ Fruits,	227 00
“ “ Dairy,	24 00
“ “ Bread, Honey, etc.,	27 50
“ “ Flowers,	43 25
“ “ Vegetables,	158 00
“ “ Grain and Seed,	31 00
	<hr/> \$590 75

MISCELLANEOUS.

Awarded for Agricultural Implements,	\$27 00
“ “ “ Essays and Reports,	57 00
“ “ “ College Scholarship,	25 00
“ “ obtaining new members,	6 00
“ “ Domestic Manufactures,	150 75
“ “ Carriages,	30 00
	<hr/> \$295 75

Total amount awarded in 1887,	\$1629 50
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Awarded among the towns and cities in the county as follows, viz.: Amesbury, \$24.50; Andover, \$32.00; Beverly, \$27.00; Boxford, \$21.00; Bradford, \$39.00; Danvers, \$169.25; Essex, \$22.00; Georgetown, \$26.00; Groveland, \$9.00; Hamilton, \$23.00; Haverhill, \$10.50; Ipswich, \$14.00; Lynn, \$49.00; Lynnfield, \$21.00; Lawrence, \$123.00; Manchester, \$3.50; Marblehead, \$36.00; Methuen, \$83.50; Middleton, \$89.75; Newbury, \$93.00; Newburyport, \$6.50; North Andover, \$68.00; Peabody, \$350.75; Rowley, \$38.50; Salem, \$109.75; Salisbury, \$2.00; Saugus, \$18.50; Swampscott, \$25.50; Topsfield, \$3.00; Wenham, \$34.50; West Newbury, \$56.50. Thirty-one in number, to 367 different individuals. All the towns and cities in the county received awards except Merrimac, Nahant, Rockport and Gloucester.

CORRECTION.—Page 17, Swine, First Class, should be \$15 instead of \$18. Page 18, Total award on Grounds, \$735 instead of \$738. Exhibits in hall, Dairy \$24 instead of \$22. Bread, Honey and Preserves, \$27.50 instead of \$27.00, and Pears \$85.00 instead of \$83.50, and Total in Exhibition Hall \$661.50 instead of \$657.50. Grand Total award on Fair Grounds and in Exhibition Hall, \$1396.50.

FINANCIAL RESULTS OF CATTLE SHOW AND FAIR AT PEABODY IN 1887.

Total receipts (including \$130 in donations),	\$1,772 86
Total expenses (exclusive of awards),	1,215 86
Net Receipts,	\$557 00

NOTE. The *net* receipts is all that will appear in Treasurer's report for 1888. The *net* results of any Fair is all that is accounted for by the Treasurer.

OFFICERS OF THE SOCIETY FOR 1887-8.

PRESIDENT,

BENJAMIN P. WARE, of Marblehead.

VICE PRESIDENTS,

GEORGE B. LORING, of Salem.

JAMES J. H. GREGORY, of Marblehead.

THOS. C. THURLOW, of West Newbury.

JAMES P. KING, of Peabody.

SECRETARY,

DAVID W. LOW, of Gloucester.

TREASURER,

GILBERT L. STREETER, of Salem.

HONORARY TRUSTEE,

JOSEPH HOW, of Methuen.

TRUSTEES,

Charles C. Blunt, Andover. John Baker, Manchester.

B. F. Huntington, Amesbury. Charles W. Mann, Methuen.

John Meacom, Beverly. James D. Pike, Merrimac.

Benj. S. Barnes, Boxford. David Stiles, Middleton.

William Hilton, Bradford. Wm. R. Johnson, Newburypt.

Charles H. Gould, Danvers. Wm. Little, Newbury.

Aaron Low, Essex. James C. Poor, No. Andover.

Sherman Nelson, Georgetown. Francis H. Appleton, Peabody.

Alonzo F. Harvey, Gloucester. Andrew Lane, Rockport.

N. Longfellow, Groveland. Thomas P. Hale, Rowley.

Geo. E. F. Dane, Hamilton. Henry A. Hale, Salem.
 Richard Webster, Haverhill. Samuel Hawkes, Saugus.
 Alden Story, Ipswich. John Q. Evans, Salisbury.
 Asa M. Bodwell, Lawrence. David Warren, Swampscott.
 John L. Shorey, Lynn. Baxter P. Pike, Topsfield.
 John M. Danforth, Lynnfield. Zachariah Cole, Wenham.
 Reuben Alley, Marblehead. E. G. Nason, W. Newbury.

54—NEW MEMBERS—1887.

Samuel H. Bailey, Andover. Geo. P. Wilkins, Middleton.
 Geo. W. Buchan, Andover. D. T. Rowe, Newburyport.
 James P. Butterfield, Andover. Chas. S. Bartlett, Newburypt.
 Albert G. Bennett, Beverly. Wm. F. Wiley, Peabody.
 John T. Elliot, Beverly. Charles E. Hoag, Peabody.
 Wm. B. Foster, Beverly. Cyrus T. Batchelder, Peabody.
 John W. Lovett, Beverly. Alonzo Raddin, Peabody.
 Charles Pickett, Beverly. Orville B. Chadwick, Peabody.
 John Pickett, Beverly. Nicholas M. Quint, Peabody.
 Jasper F. Pope, Beverly. Edward P. Barrett, Peabody.
 Jesse G. Trask, Beverly. Simon P. Buxton, Peabody.
 Peter Clark, Beverly. Andrew J. Hayes, Peabody.
 Mrs. J. C. Phillips, Beverly. Amos Merrill, Peabody.
 John D. Kingsbury, Bradford. R. S. Brown, Peabody.
 George S. Perry, Danvers. James F. Codey, Peabody.
 William P. Perkins, Danvers. William E. Osgood, Peabody.
 Francis O. Kimball, Danvers. Horace P. Whipple, Peabody.
 L. S. Morrison, Danvers. Eben S. Keyes, Rowley.
 David E. Perley, Georgetown. Daniel S. Gott, Rockport.
 Luther P. Tidd, Georgetown. Solomon Smith, Rockport.
 Ira D. Rogers, Lynn. Hiram Littlefield, Salisbury.
 Harry W. Monroe, Lynnfield. Elizabeth Saunders, Salem.
 Wilbur J. Monroe, Lynnfield. Isaac C. Wyman, Salem.
 Geo. M. Roundy, Lynnfield. Everett K. Day, Wenham.
 John Baker, Manchester. John P. Conant, Wenham.
 Wm. M. Rogers, Methuen. Henry J. Pierce, W. Newbury.
 Solomon W. Weston, Middl'n. John C. Talton, W. Newbury.

CHANGES OF MEMBERS.

Beverly—Alphonso Mason to Topsfield.

Danvers—John A. Blake to Haverhill.

Cornelius Gaffney to South Boston.

Walter F. Martin to Dover, N. H.

E. Swazey to Beverly.

Georgetown—Henry P. Noyes to Andover.

John H. Lovering to Marlborough, Mass.

Milton G. Tenney to Boston.

Hamilton—G. W. Winslow to Lynn.

Haverhill—Herbert E. Wales to Bradford.

Methuen—D. H. Patterson to Lawrence.

Newbury—Otis Mann to Springfield, Mass.

Rowley—D. L. Haggerty to Ipswich.

Washington, Mo.—T. W. Quimby to Haverhill.

Changes by Death, see "In Memoriam," page 157.

CORRECTIONS OF 1886 LIST OF MEMBERS.

Haverhill—Frank B. Barnes should be B. Frank.

Merrimac—A. C. Hill should not be there.

Methuen—George A. Butters omitted 1884 and 1886 lists.

Jonathan Morse died several years ago. Trustee did not report it.

Newbury—Edward Illsley should be Edwin Illsley.

Rowley—Nath'l M. Dummer should be Nathl. N.

Harrison Tenney should be John H.

Rumney, N. H.—S. Brocklebank dead.

Stockton, Cal.—Joseph S. Hale should have been Lugonia, San Bernadino county, Cal.

Portsmouth, O.—D. Oscar Nelson omitted 1884 and 1886 lists.

North Weymouth, Mass—Frank H. Palmer omitted 1884 and 1886 lists.

Cotton Wood, Idaho county, Idaho Ter.—Charles Lane Palmer omitted 1884 and 1886 lists.

THE EXECUTIVE OFFICERS OF THE SOCIETY FROM ITS ORGANIZATION, WITH YEAR WHEN FIRST CHOSEN, ARE

PRESIDENTS.

- 1818. Timothy Pickering, Salem.
- 1828. Frederick Howes, Salem.
- 1831. Ebenezer Mosely, Newburyport.
- 1836. James H. Duncan, Haverhill.
- 1839. Joseph Kittredge, Andover.
- 1841. Leverett Saltonstall, Salem.
- 1845. John W. Proctor, Danvers.
- 1852. Moses Newell, West Newbury.
- 1856. Richard S. Fay, Lynn.
- 1858. Daniel Adams, Newbury.
- 1860. Allen W. Dodge, Hamilton.
- 1863. Joseph How, Methuen.
- 1865. William Sutton, South Danvers.
- 1875. Benjamin P. Ware, Marblehead.

SECRETARIES.

- 1818. David Cummins, Salem.
- 1820. Frederick Howes, Salem.
- 1821. John W. Proctor, Danvers.
- 1842. Daniel P. King, Danvers.
- 1844. Allen W. Dodge, Hamilton.
- 1860. Charles P. Preston, Danvers.
- 1885. David W. Low, Gloucester.

TREASURERS.

- 1818. Ichabod Tucker, Salem.
- 1819. Daniel A. White, Salem.
- 1823. Benjamin R. Nichols, Salem.
- 1824. Benjamin Merrill, Salem.
- 1828. Andrew Nichols, Danvers.
- 1841. { William Sutton, Salem.
- 1856. { William Sutton, South Danvers.
- 1865. E. H. Payson, Salem.
- 1881. Gilbert L. Streeter, Salem.

1888.

PREMIUM LIST OF
Essex Agricultural Society,

FOR THE

Sixty-Eighth Annual Cattle Show and Fair,

To be held September 25th and 26th, 1888, in Peabody.

Duties of Trustees.

The Trustee of each town is instructed to see the several members of Committees in his town previous to the Show, and urge upon them the importance of attending to their duties. Also impress upon exhibitors from localities near to the Exhibition, the importance of entering their exhibits the afternoon and evening of Monday, in fairness to those from a distance, who are obliged to come Tuesday.

To be prompt at the meeting of the Society for filling vacancies in committees on the first day of the Exhibition.

Duties of Committees.

Committees on live stock and articles exhibited on the Fair Grounds should appear at the Secretary's office on the grounds, at one o'clock, punctually, on the first day of the Exhibition, and there organize, take the books of entry, and proceed at once to business. Committees in Hall should take the books of entry from the Superintendent as soon after the entries close as the exhibits are arranged for judging.

Full reports of Committees, on the blanks furnished by the Secretary, to be signed by all the members acting on the same, are required of each committee.

Three members of any committee consisting of more than the number are authorized to act.

The Diploma of the Society being considered the highest premium that can be awarded, no committee is authorized to award it, except for animals and articles *of special merit*, deserving of endorsement and recommendation by the Society.

No committee is authorized to award gratuities, except the committees on agricultural implements, carriages, bread, honey, and canned fruits, domestic manufactures, fruits, vegetables in Hall, and flowers; or any premium, unless the rules of the Society have been strictly complied with. Neither shall they award premiums or gratuities in excess of the amount appropriated.

No gratuity is to be awarded of less than fifty cents.

The several committees are requested to affix premium cards, and also on animals, blue, white, and red printed premium ribbons, (which may be had of the Secretary or assistant on the grounds and at the hall), for the several animals or articles, designating the grade of premium awarded each, and the name of the person to whom awarded, and special care should be taken that the cards issued correspond with the awards in their report to the Society.

No claimant for a premium can be a member of the committee upon the subject on which he makes his claim.

The reports of award of premiums on ploughing and on animals and articles exhibited at the Show, will be delivered to the Secretary and announced on Wednesday.

The Society offers liberal premiums for the best reports of committees; and the chairmen of the several committees are requested to present to the Secretary a full report explanatory of the opinions of the committee on the matter referred to them, within two weeks after the awards are made at the Show, for publication in the Transactions.*

Reports on farms, crops, etc., to be presented previous to the meeting of the Trustees in November.

Any member of a committee who cannot serve on the same, is requested to give notice to the Secretary, before the Show, so that the vacancy may be filled.

Each member of the several committees will receive a ticket of admission to the hall of exhibition, on application to the Secretary.

*Chairmen of committees will please notice this request.

General Rules.

Competitors are requested to carefully read the rules and premium list, before making entries.

All claims (entries) for premiums to be awarded at the Exhibition must be entered with the Secretary of the Society, or his agent, on or before 11 o'clock, A. M., of the first day thereof.

All claims (entries) for premiums (on Fair Grounds), must be handed or forwarded to the Secretary or his agent, in writing, previous to the day of the Fair, if possible.

Any person *not a member of the Society*, awarded seven dollars and upwards, shall receive a certificate of membership, for which three dollars of his award will be taken to increase the funds of the Society.

Diplomas awarded will be delivered and premiums paid, on application, either by the person to whom the premium or gratuity is awarded, or an agent duly authorized, by the Treasurer, at First National Bank, Salem.

In all cases the reports of award of premiums and gratuities made by the several committees and adopted by the Society shall be final. Committees should see that the premium cards issued correspond with the premiums and gratuities awarded in their reports.

All premiums and gratuities awarded, the payment of which is not demanded of the Treasurer on or before the first day of September next succeeding the Exhibition, will be considered as given to increase the funds of the Society.

No person shall be entitled to receive a premium, unless he complies with the conditions on which the premiums are offered, and by proper entry as required, gives notice of his intention to compete for the same; and committees are instructed to award no premium unless the animal or article offered is worthy.

No animal or object that is entered in one class, with one committee shall be entered in another class, except town teams, fat cattle, working oxen, working steers, and farm horses, which may be entered for ploughing, and milch cows, which may be entered with a herd.

In regard to all the subjects for which premiums are offered, it is to be distinctly understood that the Trustees reserve to themselves the right of judging the quality of the animal or article offered; and that no premiums will be awarded unless the objects of them are of a decidedly superior quality.

Pure Bred Animals, defined by the State Board of Agriculture.

The proof that an animal is so bred should be a record of the animal or its ancestors, as recorded in some herd book, recognized by leading breeders, and the public generally as complete and authentic.

Standards adopted:—American Jersey C. C. Register and American Jersey Herd Book, Ayrshire Record and Holstein Herd Book.

Premiums to be Awarded at the Show.

The Committees will take notice that no premium will be awarded unless the animals or objects are of a decidedly superior quality.

DIPLOMAS may be awarded for ANIMALS OR ARTICLES of special merit, in all departments of the Fair.

CATTLE AND OTHER FARM STOCK.

TO BE ENTERED IN THE NAME OF THEIR REAL OWNER.

All animals, to be eligible to a premium, shall have been raised by the owner within the County, or owned by the exhibitor within the County, for four months previous to the date of the Exhibition, except Working Oxen, and Working Steers.

All animals, whether teams for ploughing, or animals entered for premium or exhibition, will be fed during the Exhibition, and longer when they are of necessity prevented from leaving, at the ex-

FAT CATTLE.

Fat Cattle, fattened within the County, regard being had to manner of feeding and the expense thereof, all of which shall be stated by the exhibitor in writing and returned to the Secretary, with committee's report.

For Pairs of Fat Cattle, premiums, each,	\$8, \$6, \$3
For Fat Cows, premiums, each,	\$7, \$5, \$3

BULLS.

*Ayrshire, Jersey, Short Horn, Devon, Holstein, or of any other recognized breed, for each breed.

Two years old and upwards, premiums,	\$8, \$4
Under two years, premiums, for each breed,	\$4, \$3
Bull Calves under one year old, premium for each breed,	\$2

BULLS OF ANY AGE OR BREED.

*For the best Bull of any age or breed, with five of his stock not less than one year old, quality and condition to be taken into account, and especially the adaptability of the animal to the agriculture of the County, premium, \$10

*NOTE.—Competitors are required to give a written statement of pedigree, and committees are requested to be particular in this respect, and return them to the Secretary with report.

MILCH COWS.

For the best Milch Cow of any age or breed, with satisfactory record in quarts or pounds of her daily yield of milk for one or more years, premium, \$15

For Milch Cows, either of Foreign, Native or Grade, not less than four nor more than ten years old, with satisfactory evidence as to quantity and quality of milk, either by weight or measure, during the evening and morning of the first and last ten days of any month, premiums, \$10, \$4

Milch Cows, Ayrshire, Jersey, Devon, Short Horn, Holstein, or any other recognized breed, four years old and upwards, premiums, for each breed, \$10, \$4

For Native or Grade Cows, four years old and upwards, premiums, \$10, \$4

For the Cows that make the most butter in any single week from June 1st to September 15th, premiums, \$10, \$4

NOTE.—A written statement will be required of the age and breed of all Milch Cows entered, and time they dropped their last calf, and when they will next calve, the kind, quality and quantity of their food during the season, and the manner of their feeding, which statement is to be returned to the Secretary with Committee's report.

HERDS OF MILCH COWS.

For herds of Milch Cows, not less than five in number, to be exhibited at the Show, and a correct statement of manner of keeping and yield for one year preceding the Show, premiums, \$18, \$12

For the greatest produce of milk on any farm, in proportion to the number of cows producing it, not less than four, from April 1, 1887, to April 1, 1888, statement to be made of the exchanges made, manner and expense of food, use made of milk, and such other facts as will illustrate the entire management, special regard being had to the mode in which the account is kept,
premium, Diploma, and \$15

NOTE.—The above-mentioned statement is to be returned to the Secretary, with Committee's report for 1888. The Committee can accept statements dating from January 1st, preceding Show.

HEIFERS.

FIRST CLASS.—Ayrshire, Jersey, Short Horn, Devon, Holstein, or any other recognized breed, under four years old, in milk, premiums, for each breed, \$8, \$5

Two year olds of each breed that have never calved, premiums, \$4, \$3

One year olds of each breed, premiums, \$4, \$3

Heifer Calves, under one year, premiums, for each breed, \$4, \$3

SECOND CLASS.—Native or Grade Milch, under four years old, premiums, \$8, \$5

Two year olds, that have never calved, premiums, \$4, \$3

One year olds and less than two, premiums, \$4, \$3

Heifer Calves, Native or Grade, under one year old, premiums, \$4, \$3

WORKING OXEN AND STEERS.

Stags excluded. For pairs of Working Oxen under eight and not less than five years old, taking into view their size, power, quality, and training, premiums, \$12, \$10, \$8

For pairs of Working Steers four years old, to be entered in the name of the owner, premiums, \$10, \$6

NOTE.—The Committee are required to consider the quality and shape of the cattle as well as their working capacity. The training of working oxen and steers will be tested by trial on a cart or wagon containing a load weighing two tons for oxen, and 3000 pounds for steers. At the time of entry a certificate of the weight of the cattle must be filed with the Secretary.

TOWN TEAMS.

For Town Teams of Oxen, ten yoke or more in a team, premiums, \$20, \$12

For Town Teams of Oxen, eight or nine yoke in a team, premiums, \$15, \$8

For Town Teams of Horses, ten or more pairs in a team, premiums, \$20, \$12

For Town Teams of Horses, eight or nine pairs in a team, premiums, \$15, \$8

STEERS.

For pairs of three year old Steers, broken to the yoke, premiums, \$8, \$6

For pairs of two year old Steers, premiums, \$6, \$5

For pairs of yearling Steers, premiums, \$5, \$4

For pairs of Steer Calves, premiums, \$4, \$2

STALLIONS.

*All Stallions entered in either class must have been owned by the exhibitor four months previous to the exhibition.

FIRST CLASS. For Stallions for Farm and Draft purposes, four years old and upwards, diploma or premiums, \$10, \$6, \$4

For Stallions for Farm and Draft purposes, three years old, premiums, \$8, \$5

For best Stallion of any age, and five colts of his stock not less than one year old, quality and condition to be taken into account, premium, \$15

SECOND CLASS. For Stallions for Driving purposes, four years old and upwards, premiums, \$10, \$6, \$4

For best Stallion of any age and five colts of his stock, not less than one year old, quality and condition to be taken into account, premium, \$15

BROOD MARES.

*For Brood Mares, with their foal not more than eight months old by their side, premiums, \$10, \$6, \$4

*NOTE.—No stallion or brood mare will be entitled to a premium unless free from all apparent defects capable of being transmitted.

FAMILY HORSES.

For Family Horses, premiums, \$10, \$6, \$4

NOTE.—No horse will receive a premium unless free from all unsoundness.

GENTLEMEN'S DRIVING HORSES.

For Driving Horses, premiums, \$10, \$6, \$4

FARM HORSES.

For Farm Horses, premiums, \$10, \$6, \$4

NOTE.—No horse will be allowed except those actually used on farms, whether the owner has a farm or not, and in no case will competitors be allowed to take more than a specified load, 2000 pounds. No obstruction shall be placed either before or behind the wheels in trials of Draft horses of either class. If this rule is not complied with the premium shall be withheld.

PAIRS OF FARM HORSES.

For pairs of Farm Horses (see above note), premiums, \$12, \$8, \$4

COLTS FOR DRAFT PURPOSES.

FIRST CLASS. For Mare or Gelding four year old colts, premiums, \$8, \$5, \$3

For Mare or Gelding three year old Colts, premiums, \$6, \$3

SECOND CLASS. For two year old Stallion, Gelding, or Mare Colts, premiums, \$2, \$5, \$3

For yearling Stallion, Gelding or Mare Colts, premiums, \$5, \$3

COLTS FOR GENERAL PURPOSES.

FIRST CLASS. For Mare or Gelding four year old Colts, premiums, \$8, \$5, \$3

For Mare or Gelding three year old Colts, premiums, \$5, \$3

SECOND CLASS. For two year old Stallion, Gelding or Mare Colts, premiums, \$5, \$3

For yearling Stallion, Gelding or Mare Colts, premiums, \$5, \$3

SWINE.

FIRST CLASS. Large breeds, viz.: Cheshire, Berkshire, Chester County Whites, Poland China, Large Yorkshire, and any other breed or grade weighing more than 300 pounds at maturity.

For Boars, premiums, \$8, \$5

For Breeding Sows, premiums, \$8, \$5

For Litters of Weaned Pigs, premiums, \$8, \$5

NOTE.—Litters of Weaned Pigs must be not less than four in number, between two and four months old.

SECOND CLASS. Small breeds, such as Suffolk, Essex, Small Yorkshire, China, and any other breed or grade weighing less than 300 pounds at maturity, same premiums as in First Class.

SHEEP.

For flocks not less than ten in number, premiums, \$10, \$6

For best Buck, premium, \$8

For best lot of Lambs, not less than four in number, between four and twelve months old, premium, \$4

POULTRY.

For pairs of Light Brahmas, Dark Brahmas, Buff Cochins, Partridge Cochins, Black Cochins, White Cochins, Plymouth Rocks, Dominiques, White Leghorns, Brown Leghorns, Dominique Leghorns, Black Spanish, Hamburgs, Polish, Games, Dorking, Bantams, Black, White, and Mottled Javas, Wyandottes, White Wyandottes, Andalusian, Erminet, Langshangs, and Frizzle, and other recognized varieties, each variety, premiums, \$2, \$1

For pairs of Chickens of above varieties, premiums, \$2, \$1

For the best breeding pen of each variety—Diploma of the Society.

Pairs can be exhibited in "breeding pens," by marking the competing female (with a ribbon or colored string), which, with the male will form the pair.

Premiums shall be awarded on a score of not less than 176 points for first premium and 166 points for second premium.

For lots of Turkeys, and Aylesbury, Rouen, Cayuga, Pekin, White and Colored Muscovy, and Brazilian Ducks, and Toulouse, Emden, Brown China, and African Geese, premiums, \$2, \$1

For the coop of 10 or more Fowls exhibited, whether thoroughbreds crossed or mixed, with an account for one year, showing cost of keeping, production and profit, premium, \$5

For the best pair of *dressed* Fowls, Chickens, Ducks, and Geese, premium for each, \$2

For the best 12 Eggs from Asiatic, American, Game, French and Spanish classes (Hamburgs, Polish, Dorkings to compete in the Spanish class) exhibited, premium for each class, \$1

Any exhibitor interfering with the Judges in the discharge of their duties or interfering with, or handling any specimen on exhibition, other than his own, shall forfeit all claim he may have in the premium list.

All breeds exhibited separately and to be judged by the rules of the "American Standard of Excellence."

COLLECTIONS OF LIVE STOCK.

For the best collection of Live Stock from any city or town in the county, premium, \$20

NOTE.—The exhibitors from each city or town, competing for this new premium, must authorize some one to make entry with the Secretary, before the time fixed for closing entries.

PLOUGHING.

GENERAL NOTE ON PLOUGHING.—Stags are excluded. Teams must be entered in the names of their owners, and only double ox-teams to have drivers. A team consisting of one pair of oxen and a horse will be considered a double team. The owners of separate teams may unite the same and be allowed to compete for premiums. The ploughmen and drivers must have been residents of the County at least three months before the exhibition. Those who intend to be competitors must give notice to the Secretary on or before Saturday previous to the show. The lands will be staked, but each ploughman will be required to strike out his own land in the presence of the "Committee on Striking out Grounds for Ploughing," after half-past nine o'clock on the morning of the trial. Ploughmen with land-side ploughs are to back furrow three furrows on each side of the stakes set, the last furrow to be of the depth required in the class. Ploughmen with swivel ploughs to turn the outside of their furrows to the stakes on one side, and to finish one foot from the stake on the other. Committees to note and report the kind of plough used.

PLOUGHING WITH DOUBLE TEAMS.—One-sixth of an acre, at least eight inches deep, premiums, \$12, \$10, \$9, \$8

PLOUGHING WITH SINGLE TEAMS.—One-sixth of an acre, at least six inches deep, premiums, \$10, \$9, \$5

PLOUGHING WITH HORSES.—With any form of Plough, except Swivel, one-sixth of an acre, at least six inches deep, premiums, \$10, \$7, \$5

PLOUGHING WITH THREE HORSES.—One-sixth of an acre, eight inches deep without driver, premium, \$10

Same with four horses with driver, premium, \$10

PLOUGHING WITH SWIVEL PLOUGH.—One-sixth of an acre, either with double or single ox-team, double teams at least eight inches deep, single teams six inches, premiums, \$12, \$10, \$8

Same with Horse teams, consisting of two horses, ploughing at least six inches deep, premiums, \$10, \$6

PLOUGHING—SULKY PLOUGH.—For the best performance, taking into account ease of draft, amount and quality of work, premiums, \$10, \$8

HARROWS.—For the best Harrow exhibited and its merits shown by actual test upon the ploughed ground, premium, \$10

NOTE.—Entry must be made with the Secretary before the day of the trial with description of Harrow.

AGRICULTURAL IMPLEMENTS.

For the best collection of Implements and Machines (no article offered in *collection* will be entitled to a separate premium),
Diploma and \$10

Best Market Wagon, premium,	\$5
Best Farm Wagon for one or two horses, premium,	\$3
Best Horse Cart, premium,	\$5
Best Hay Straw, or Corn Cutter, premium,	\$1.50
Best Ox Yoke, complete, premium,	\$1.50
Best Fruit Evaporator, with sample of work, premium,	\$5
Best set of Horse Shoes, including those for over-reaching, interfering, and stumbling horses, premium,	\$5
For implements not specified above the Committee may at their discretion award	\$40

No premium or gratuity will be awarded for any Mower, Horse Rake, Tedder, or other Machine or Implement, the merit of which can be known only by actual trial in the field; but manufacturers are invited to offer the same for exhibition and inspection.

CARRIAGES.

For Carriages, built in the County, and exhibited by the manufacturer, diploma, and thirty dollars in gratuities, may be awarded by the Committee.

In Exhibition Hall.

Committees on articles exhibited in the hall should be specially careful that the premium cards issued correspond with the names and sums in their reports to the Society.

Committees and Exhibitors will be governed by instructions under heading of "Duties of Committees," "General Rules," "Premiums to be awarded at the Show," see first pages, and under "Fruit" and "Domestic Manufactures."

DAIRY.

For specimens of Butter made on any farm within the County the present year, samples not less than five pounds to be exhibited, with a full account of the process of making and management of the Butter, premiums, \$8, \$6, \$4

For specimens of New Milk Cheese, made on any farm in the County, the present year, samples of not less than fifty pounds to be exhibited, with statement in writing of the method of making and preserving the same, premiums, \$8, \$6, \$4

NOTE.—Each lot presented for premium and the statement accompanying it, must be numbered, but not marked so as to indicate the claimant; any public or known mark must be completely concealed; nor must the competitors be present at the examination.

To the person who shall furnish to the Society satisfactory evidence of the greatest amount of Butter made from any quantity of milk, being the whole produce of any single cow, for the first week

of June, July, August and September next, stating the whole amount of Butter produced in each week, and also the time when the cow dropped her last calf, and her feed and management all to be taken into account in making the award, premiums,

Diploma and \$10, \$5

NOTE.—The object in offering this last premium is to elicit inquiry as to the value and quality of milk for the production of butter. As far as practicable it is desirable that the race and pedigree of the cow should be given.

BREAD, HONEY AND CANNED FRUIT.

For White Bread made of wheat flour raised by yeast, premiums, \$3, \$2, \$1

For yeast bread made from Graham flour, premiums, \$2, \$1

For yeast bread made from other grains, or other grains mixed with wheat, premiums, \$1.50, \$1

Special Premiums offered by N. N. Dummer, Glen Mills, Rowley. For the Graham Bread made from "Glen Mills Improved Graham" and raised by yeast, premiums, \$5, \$2.50, \$1

All bread, entered for premiums, to be in loaves weighing not less than one pound each, and to be not less than 24 hours old, with a full written statement over the signature and address of the maker, stating the kind of flour used, quantity of each ingredient, how mixed and length of time kneaded and raised and how long baked, *which statements on all premium bread are to be sent to the Secretary with report of the Committee for publication.*

For first and second best display of Bees, Hives and Apiarian Implements, to be accompanied with a description of the bees, hives, etc., number of hives in use and amount of surplus honey taken from them during the season, premiums, \$5, \$3

First and second best Honey, ten pounds in comb and one pound of same extracted, made in the County, with statement signed of kind of bees and hive and time of year when honey was made, premiums, \$3, \$2

For first and second best collection of Pickles. Preserved Fruits and Jellies, made from products of the County, *when premiums are awarded, the method of making to be sent to the Secretary by the Committee for publication*, premiums, \$3, \$2

For the first and second best five pounds of Dried Apples, grown and dried within the County, with statement of process used and amount of labor and time required in preparing and drying, *such statement on premium fruit to be given to the Secretary for publication*, premiums, \$3, \$2

In addition to the above, are placed in the hands of the Committee for gratuities on other articles entered in this department, products of this County deemed worthy, \$5

Fruit.

All fruit must be entered in the name of the grower before 11 o'clock on the first day of the exhibition, and each exhibitor must certify to the same on the Entry Book, or lists of the varieties of each class of fruit to be filled when entry is made. (Committees are not authorized to make awards to those who do not comply with this rule.)

Tables will be labelled in a *conspicuous manner* by the hall committee, *before the entry of Exhibitors*, with the names of fruit, for which premiums are offered, all others of same class of fruit to be labelled miscellaneous. Exhibitors must place their several varieties of each class of fruit where indicated by such labels, or be considered by the committee as not competing for premium.

Plates of collections of fruit, when premiums are offered therefor, must be entered and placed by the exhibitor on the table assigned for the exhibit of that class of fruit.

To entitle exhibitors to receive premiums and gratuities awarded, they are required (when requested by the committee) to give information in regard to the culture of their fruit.

PEARS.

For best twelve specimens of the following varieties, which are recommended for cultivation in Essex County: Bartlett, Belle Lucrative, Bosc, Anjou, Angouleme, Dana's Hovey, Lawrence, Louise Bonne, Maria Louise, Onondaga, Paradise d'Automne, Seckle, Sheldon, Unbaniste, Vicar, Doyenne de Cornica, Howell, Hardy and Clairegeau, each, \$3

Doyenne d'Ete, Gifford and Clapp's Favorite (ripening early) are recommended for cultivation, but no premium is offered.

For each dish of twelve best specimens of any other varieties, deemed worthy by the committee, \$1.50

For best collection of Pears, premium, \$6

In addition to the above, are placed at the disposal of the committee, to be awarded in gratuities of not less than \$1 each, \$20

APPLES.

For best twelve specimens of the following varieties, which are recommended for cultivation in Essex County: Baldwin, Danvers Sweet, Tompkins County King, Granite Beauty, Red Russet, McCarty, Tolman's Sweet, Bailey's Sweet, Drap d'Or, Hubbardston, Hurlburt, Porter, Pickman's Pippin, Roxbury Russet, Rhode Island Greening, Sweet Baldwin, Gravenstein, Hunt's Russet, Smith's Cider, premium for each, \$3

Red Astrachan, William's Favorite, Tetofsky and Sweet Bough are recommended for cultivation, but no premium is offered (ripening early).

For best twelve specimens of any other varieties deemed worthy by the committee, premium for each variety, \$1.50

For best collection of Apples, \$6

For best twenty-four specimens of any variety of Crab Apple deemed worthy by the committee, \$1.50

In addition, are placed at the disposal of the committee, to be awarded in gratuities of not less than \$1 each, \$20

PEACHES, GRAPES AND ASSORTED FRUITS.

For best nine specimens of Freestone White Flesh, Yellow Flesh, Essex County Seedling, each variety, \$2

For best collection of Peaches, premium, \$3

For best four bunches of Concord, Worden's Seedling, Brighton,

Hartford Prolific, Delaware, Martha, Moore's Early, Niagara, each variety, \$3

For Cold House Grapes, produced with not over one month's artificial heat, premiums, \$6, \$4

For best collection of ten varieties, not less than ten pounds in all, premium, \$7

For best specimens of four bunches of other varieties deemed worthy by the committee, premium, \$1.50

For baskets of Assorted Fruit, premiums, \$4, \$3

In addition, are placed at the disposal of the committee, to be awarded in gratuities of not less than 50 cents each, \$25

FLOWERS.

For displays of Foliage Plants in pots, at least ten specimens, premiums, \$3, \$2

For best pair of Parlor Bouquets of choice flowers, premium, \$3

For best pair of Hand Bouquets of choice flowers, premium, \$3

For displays of Cut Flowers, premiums, \$3, \$2

For best four Ferns in pots, premium, \$1

For best four Gloxinias in pots, premium, \$1

For best four Coleus in pots, premium, \$1

For best specimen of any species of Begonia in pot, premium, \$1

For best grown Pot Plant of any species, not from a greenhouse, premium, \$1

For best Bouquet of Garden Flowers, premium, \$1

For best arranged Basket of Garden Flowers, premium, \$1

For best twelve garden Dahlias, six varieties, premium, \$1

For best twelve Bouquet Dahlias, six varieties, premium, \$1

For best twelve Single Dahlias, raised from seed by exhibitor, premium, \$1

For best twenty-four Asters, six varieties, premium, \$1

For best twelve Carnation Pinks, four varieties, premium, \$1

For best twelve spikes of Gladiolus, four varieties, premium, \$1

For best twenty-four Petunias, six varieties, premium, \$1

For best twenty-four Verbenas, six varieties, premium, \$1

For best twenty-four Double Zinnias, four varieties, premium, \$1

For best twenty-four French and African Marigolds, six varieties, premium, \$1

For best twelve Calendulas or Pot Marigolds, two varieties, premium, \$1

For best twelve Japan Lilies, two varieties, premium, \$1

For best twelve trusses of Geraniums, four varieties, premium, \$1

For best twelve trusses of Garden Phlox, four varieties, premium, \$1

For best collection of Drummond's Phlox, six varieties, premium, \$1

For Mourning Bride, four varieties, premium, \$1

For Nasturtiums, four varieties, premium, \$1

For Pansies, six varieties, premium, \$1

For Everlastings, six varieties, premium, \$1

For Garden Annuals, six specimens of at least ten varieties, premium, \$1

For Roses, three varieties, premium, \$1

For best Floral Design of choice flowers, premium, \$2

For collections of Native Plants, to be marked with the correct botanical and common names, and neatly displayed in separate bottles, premiums, \$5, \$3

For best arrangement of Native Flowers and Autumn Leaves, premium, \$2

In gratuities to contributors in this department, as the articles may seem to merit, will be awarded, \$20

Special Premium, offered by M. B. Faxon of Saugus. For the best display of Asters, filling 25 of the Society's bottles, \$5

1. Every plant or flower entered for premium (except native flowers) must be grown by the exhibitor.

2. No premium shall be awarded unless the specimens exhibited are of average excellence and worthy of such premium.

3. No specimen entered for one premium shall be admitted in competition for another different premium.

VEGETABLES.

Rules for Fruit apply to Vegetables.

Beets—For best twelve specimens, Eclipse, Dewing, and Edmands, premium, each, \$3

Carrots—For best twelve, short top, long Orange and Danvers Intermediate, premium, each, \$3

For best twelve, Short Horn Orange Carrots, premium, \$3

Mangold Wurtzels—For best six specimens, premium, \$3

Flat Turnips—Twelve specimens. For best Purple Top and White Flat, premium, each, \$3

Ruta Bagas—Twelve specimens. For best Yellow and White, premium, each, \$3

Parsnips—For best twelve specimens, premium, \$3

Onions—One peck. For best Danvers, Yellow Flat and Red, premium, each, \$3

Potatoes—One peck. For best Early Rose, Beauty of Hebron, Clark's No. 1, Pearl of Savoy, Early Maine, premium, each, \$3

Cabbages—For best three specimens Savoy, Fottler's Drumhead, Stone Mason Drumhead, Red Cabbage, each variety, premium, \$3

For next best, each variety, premium, \$2

Cauliflowers—For best three specimens, premium, \$3

For next best, premium, \$2

Celery—For best four roots, premium, \$2

Sweet Corn—For twelve ears ripest and best Early, premium, \$3

For best twelve ears in milk. Late, premium, \$3

Squashes—For best three specimens Marrow, American Turban, Hubbard, Marblehead, Essex Hybrid, Bay State, each variety, premium, \$3

Melons—For best three specimens Nutmeg, Musk, Cassaba, each, premium, \$2

For best two specimens Watermelons, premium, \$2

Tomatoes—For best twelve specimens Round, Flat, Spherical, Essex Hybrid, or any other variety, each variety, premium, \$3

For exhibition of greatest variety, premium, \$3

Cranberries—For pecks of cultivated, premiums, \$3, \$2, \$1

For collections of vegetables, premiums, \$8, \$6, \$4, \$2

Placed at the disposal of this committee for whatever appears meritorious, \$30

☞ No competitor for premium to exhibit more or less number of specimens of any vegetables than the premiums are offered for.

Collections of Vegetables, where premiums are offered for a number of varieties, must be entered and placed by themselves on the tables assigned for collections. No collection shall receive but one premium. Specimens of any variety in such collections are not to compete with specimens of the same variety placed elsewhere. Exhibitors of such collections, however, are not prevented from exhibiting *additional* specimens of any variety, with and in competition with like variety. All vegetables must be entered in the name of the grower of them.

Size of Vegetables.—Turnips Beets to be from 3 to 5 inches in diameter; Onions, 2 1-2 to 4 inches in largest diameter; Potatoes to be of good size for family use; Squashes to be pure and well ripened—Turban, Marrow, Hubbard, Marblehead, each to weigh 8 to 16 lbs.

GRAIN AND SEED.

For best peck of Shelled Corn, Wheat, Oats, Barley, Rye and Buckwheat, each, premiums, \$1

For 25 ears of Field Corn, premiums, \$5, \$3, \$2

For 25 ears of Pop Corn, premiums, \$3, \$2

For collections of Field and Garden Seeds, premiums, \$8, \$6, \$4, \$2

All grain or seed must have been grown by the exhibitor in the County to receive premium.

Domestic Manufactures.

Contributors must deposit their articles at the Hall before 11 o'clock on the first day of the Exhibition. Articles not thus deposited will not be entitled to a premium. Gratuities will be awarded for articles of special merit for which no premium is offered; but no premium or gratuity will be awarded for any article manufactured out of the County, or previous to the last Exhibition of the Society.

COUNTERPANES AND AFGHANS.

For Wrought Counterpanes having regard to the quality and expense of the material, premiums, \$4, \$2

Gratuities will be awarded for articles belonging to this department, the whole amount of gratuities not to exceed \$25

CARPETINGS AND RUGS.

For Carpets, having regard to the quality and expense of the material, premiums, \$4, \$2

For Wrought Hearth Rug, having regard both to the quality of the work and expense of the materials, premiums, \$3, \$2

Gratuities will be awarded for articles belonging to this department, the whole amount not to exceed \$25

ARTICLES MANUFACTURED FROM LEATHER.

- For best pair hand made and machine made Men's Boots, Women's do., Children's do., each, \$2
 Best Team, Carriage and Express Harness, each, \$5
 \$10 are placed at the disposal of this committee, to be awarded gratuities.
 For the best exhibitions of Boots, and of Shoes, manufactured in the County, each, premium, Diploma of Society.

MANUFACTURES AND GENERAL MERCHANDISE.

- For displays of Bonnets, premiums, \$4, \$2
 For Horn Combs, not less than one dozen, premium, \$3
 At the disposal of the committee in this department, to be awarded in gratuities not exceeding \$3 in any one gratuity, \$20
 FANCY WORK AND WORKS OF ART, and other articles of Domestic Manufacture not included in the above.
 At the disposal of the committee in this department, to be awarded in gratuities not exceeding \$3 in any one gratuity, \$50
 WORK BY CHILDREN UNDER TWELVE YEARS OF AGE. For specimens of work performed by children under 12 years of age, exhibiting industry and ingenuity, premiums, \$3, \$2
 At disposal of committee to be awarded in gratuities, \$10

List of Premiums to be Awarded by the Trustees in November.

FARMS.

Competitors for these premiums must give notice of their intention to the Secretary on or before June 15th, and the farms entered for premium will be viewed by the committee twice during the year. Crops growing on farms that are entered for premiums, cannot be entered with another committee for separate premiums—except specimens exhibited at the Fair. Any person desirous of having his farm inspected, without entering it for premium, may make application to the Secretary, and it will be viewed and reported upon by the committee.

Any person entering his farm for premium, may apply to the Chairman of the Committee on Farms, for the appointment of a sub-committee of not less than five in number, to visit his farm and report upon the same.

For the best conducted and most improved farm, taking into view the entire management and cultivation, including lands, buildings, fences, orchards, crops, stock, and all other appendages, with statements in detail, relating thereto, premium, \$30

IMPROVING WET MEADOW AND SWAMP LANDS.

For best conducted experiments relating to wet meadow or swamp lands, on not less than one acre, the course of manage-

ment, and the produce, etc., for a period of two years at least, to be detailed, with a statement of all the incidental expenses, premiums, \$15, \$10

NOTE.—The Committee (when appointed) is instructed to ascertain how many, if any, reclaimed swamps in this County have been abandoned or have returned to natural grasses. Persons knowing of such are requested to notify the Secretary or Committee.

IMPROVING PASTURE AND WASTE LANDS.

For best conducted experiments in renovating and improving pasture land, other than by ploughing, so as to add to their value for pasturage, with a statement of the same, premiums, \$15, \$10

For best conducted experiments in renovating and improving waste lands so as to add to their agricultural value, with statement of the same, premiums, \$15, \$10

No premium to be awarded to any person for a repetition of an experiment in meadow, swamp or pasture lands, for which he has already received a premium.

UNDER-DRAINING LAND.

For best conducted experiments in under-draining land, regard being had to the variety of soil, sub-soil, and other local circumstances, premiums, \$15, \$10

MANURES.

For most exact and satisfactory experiments, in the preparation and application of manures, whether animal, vegetable or mineral, premiums, \$15, \$10

COMPARATIVE VALUE OF CROPS AS FOOD FOR CATTLE.

For most satisfactory experiment upon a stock of cattle, not less than four in number, in ascertaining the relative value of different kinds of fodder used in feeding neat stock for milk and other purposes, with a statement in detail of the quantity and value of the same, as compared with English hay, premium, \$25

FATTENING CATTLE AND SWINE.

For most satisfactory experiments in fattening Cattle or Swine, with a statement in detail of the process and result, premiums, \$10, \$5

GRAIN AND OTHER CROPS.

Claimants on Grain and Root Crops will be required to state the size of the piece of land, when they enter, and conform to the following rules: Entries of Grain Crops to be made on or before September 10th; Root Crops on or before October 10th; giving ample time for the crops to be examined by the committee before harvesting. Statement, to be made in conformity with the following form, must be forwarded to the Committee previous to November 1st.

All calculations and figures given in reports of, and statements of Crops are to be made on the *basis of an acre*, results, in all cases, to be given at the rate per acre.

In pursuance of authority delegated to the Board of Agriculture by Chap. 24 of Acts of 1862, Agricultural Societies receiving the bounty of the State are required to make use of the following form, and be governed by its conditions in the mode of ascertaining the amount of crops entered for premium.

ESSEX AGRICULTURAL SOCIETY.—Statement concerning a crop of——, raised by Mr.——, in the town of——, ——, 1887.

What was the crop of 1886? What manure was used and how much? What was the crop of 1887? What manure was used and how much? What is the nature of the soil? When, and how many times ploughed, and how deep? What other preparation for the seed? Cost of ploughing and other preparation? Amount of manure, in loads of thirty bushels, and how applied? Value of manure upon the ground? (What amount of Commercial Fertilizer used? How used? Value of same when applied?) When and how planted? The amount and kind of seed? Cost of seed and planting? How cultivated, and how many times? Cost of cultivation, including weeding and thinning? Time and manner of harvesting? Cost of harvesting, including the storing and husking or threshing? Amount of crop, etc. Signed by ——, Competitor.

The committee, to whom is entrusted the award of the premiums on field crops, may award them according to their judgment, but for the purpose of furnishing accurate statistics for the benefit of agriculture, shall select certain of the crops, and require the owners thereof to measure the land and weigh the crops accurately, giving to the committee a certificate of the same, and give all possible information thereon over their own signatures, and return the same to the Secretary of the Society, to be published in the annual transactions.

In ascertaining the amount of crop, any vessel may be used and the weight of its contents once, multiplied by the number of times it is filled by the crop.

In measuring the land, or weighing crops, any competent person may be employed, whether a sworn surveyor or not, and must give certificate.

The certificates shall state the weight of all crops only in a merchantable state.

In ascertaining the amount of a hay crop entered for premium, the measurement of the hay in the barn may be employed.

RULES OF MEASURE PRACTICED AND ADOPTED BY THE STATE BOARD OF AGRICULTURE.

Wheat, Potatoes, Sugar Beets, Ruta Bagas, Mangold Wurtzel,	
White Beans and Peas,	60 lbs. to bush.
Corn, Rye,	56 " "
Oats,	32 " "
Barley, Buckwheat,	48 " "
Cracked Corn, Corn and Rye, and other meal, except Oats,	
	50 lbs. to bush.
Parsnips, Carrots,	55 " "
Onions,	52 " "

1. For the best conducted experiments of Rye, not less than twenty bushels to the acre, fifty-six pounds to the bushel, on not less than one acre, premiums, \$10, \$5
2. For best conducted experiments of Wheat, not less than thirty bushels to the acre, sixty pounds to the bushel, on not less than one acre, premiums, \$10, \$5
3. For best conducted experiments of Oats, not less than fifty bushels to the acre, thirty-two pounds to the bushel, on not less than one acre, premiums, \$10, \$5
4. For best conducted experiments of Barley, not less than forty bushels to the acre, forty-eight pounds to the bushel, on not less than one acre, premiums, \$10, \$5
5. For best conducted experiments of Indian Corn, not less than one acre, premiums, \$10, \$5
6. For largest quantity and best quality of English Hay, on not less than one acre, regard being had to the mode and cost of cultivation, premiums, \$10, \$5
7. For best yield of Field Beans, on not less than half acre, and not less than twenty-five bushels per acre, premiums, \$10, \$5

ROOT CROPS.

1. For best conducted experiments in raising Carrots, fifty-five pounds to the bushel, premiums, \$10, \$5
2. For best conducted experiments in raising Parsnips, fifty-five pounds to the bushel, premiums, \$10, \$5
3. For best conducted experiments in raising Ruta Bagas, sixty pounds to the bushel, premiums, \$10, \$5
4. For best conducted experiments in raising Mangold Wurtzels, sixty pounds to the bushel, premiums, \$10, \$5
5. For best conducted experiment in raising Sugar Beets, sixty pounds to the bushel, premiums, \$10, \$5
6. For best conducted experiments in raising Onions, fifty-two pounds to the bushel, premiums, \$10, \$5
7. For best conducted experiments in raising Potatoes, sixty pounds to the bushel, premiums, \$10, \$5
8. For best conducted experiments in raising Cabbages, premiums, \$10, \$5
9. For best conducted experiments in raising Squashes, premiums, \$10, \$5
10. For best conducted experiments in raising Summer English Turnips for the market, premiums, \$10, \$5

Raised on not less than half an acre, and the quantity of crop to be ascertained by weight, so far as practicable, the crops to be free from dirt, without tops, and in a merchantable condition at the time of measurement.

Claimants for premiums on Grain or Root Crops must forward statement to chairman of committee before Nov. 1st.

FOREST TREES.

1. For best plantation of either of the following species of forest trees, viz.:—White Oak, Yellow Oak, Locust, Birch, White Ash, Maple, Walnut, or White Pine, not less than three years old, and not less than 1000 trees, premium, \$20

2. For best do., of not less than 600 trees, premium, \$10
3. For best lot of ornamental trees, ten or more set on any street, road or farm, and cared for five years, premium, \$10

CRANBERRIES.

For best conducted experiment in the cultivation of the Cranberry, at least two summers, on not less than twenty rods of land, with written statement of the quantity and quality of land, expense of planting, weeding and culture, and amount of crops produced. Premium to be paid in 1888 or 1889, \$15

For best experiment do., on not less than ten rods of land, premium, \$10

For best do., on not less than five rods of land, premium, \$10

STRAWBERRIES AND OTHER SMALL FRUITS.

For best crop of Strawberries, on not less than twenty rods of land, expense of planting, culture, crop, etc., stated in writing, premium, \$10

For best crop Currants, Raspberries and Blackberries, with statement as above, premiums, each, \$10

NEW WINTER APPLES.

For a new variety of Winter Apple, originated in this County, equal or superior to the Baldwin, premium, \$100

For a new variety of like character originating elsewhere, *provided* it has been cultivated in the County sufficiently to prove it equal or superior to the Baldwin for general purposes, premium, \$20

For a successful experiment in destroying the codling moth and other worms destructive to the apple, premium, \$25

NOTE.—Persons wishing to compete for above must notify Secretary, and furnish scions when called for under his direction, to be tested by the Society.

SEEDLING POTATOES AND EXPERIMENTS.

For best Seedling Potato, originating in Essex County, to equal in yield, earliness and quality, the Early Rose, and to surpass it in one or more of these particulars, premium paid after three years trial, \$25

In testing the value of a seedling Potato, the committee are instructed to take the sworn testimony of the cultivator with regard to the yield, after having inspected the crop.

For the most satisfactory experiment to extend through five consecutive years, to settle the following facts relative to raising potatoes:—premium, \$50

1st. Will whole, medium sized Potatoes, yield better results than pieces cut to two eyes?

2d. What will be the result of continuously planting small-sized potatoes of the same strain a series of years?

3d. Difference between hilling and flat cultivation.

4th. Effect, if any, of cutting off seed ends before planting.

- 5th. Effects of deep and shallow planting.
 6th. Raising from sprouts alone from same strain.
 7th. Can potatoes having dwarf vines be planted nearer than others?
 8th. Best distance apart for seed in the drill.
 9th. To show the effect of covering the top with earth at several times after they had come up.

To be raised on not less than a half-acre of land, uniform in character, and all to receive the same kind and quality of manure and cultivation, and to be inspected by the committee at the time of gathering the crops.

NEW MEMBERS.

For the person who obtains the largest number of new members for the Society from any Town or City before the first day of November next, \$6

NOTE.—Names of new members, with name of person procuring them, can be sent as fast as obtained, to the Secretary of the Society, who will make a record of them.

Persons paying three dollars will receive a "Certificate of Membership," which is for life. No fines or assessments are ever imposed and members are entitled to vote in all its transactions, with free use of the Library and a copy of the publication of the Society each year.

ESSAYS AND FARM ACCOUNTS.

The Essays must be transmitted to the Secretary by the 1st of November, with sealed envelopes containing the names of their authors, respectively, which shall not be opened by the committee, nor shall the names be known to the committee until they shall have decided upon the merits of the Essay.

For original Essays on any subject connected with Agriculture, in a form worthy of publication, premiums, \$15, \$10, \$8

For best statement of Actual Farm Accounts, drawn from the experience of the claimant, in a form worthy of publication, premium, \$10

For Reports of Committees, who report upon subjects for which premiums are offered by the Society, premiums, \$10, \$8, \$6

For Statements of Exhibitors, premiums, \$8, \$4

COMMITTEES.

Committees for Judges, and Arrangements for the next Cattle Show and Fair, are chosen at the Trustees' Meeting in June next.

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*Died at Haverhill July 14, 1887, William Jeffers, age 68, and Sept. 21, 1887, Timothy J. Goodrich, age 87. Notice of these deaths was received from the Trustee at Haverhill too late to be given elsewhere, and more in detail.

TRANSACTIONS

FOR THE YEAR 1888,

OF THE

ESSEX AGRICULTURAL SOCIETY,

(ORGANIZED, 1818.)

FOR THE

COUNTY OF ESSEX,

IN MASSACHUSETTS,

AND ITS

Sixty-sixth Annual Address,

BY

HON. HORATIO G. HERRICK,

OF LAWRENCE.

WITH PREMIUM LIST FOR 1889.

PUBLISHED BY ORDER OF THE SOCIETY.

SALEM, MASS.:

SALEM OBSERVER BOOK AND JOB PRINT,

1888.



ADDRESS.

Mr. President and Members of the Essex County Agricultural Society:—

Although with many misgivings as to my ability to interest or instruct, it is nevertheless with a pardonable pride, as it seems to me, that I stand here to-day, selected by the Trustees of this now venerable society, to address you: and am thus honored with a place in the long line of men of our own county—all of them—who have preceded me in this duty for now seventy successive years, with only an occasional exception in its earlier days. They were, and are, many of them, illustrious and distinguished in the various walks of life, not only in agricultural pursuits, but in all the professions, in literature and science. Some of them have been of national, and more than national fame: others have quietly and unobtrusively pursued their farmer's life among us, following their own ploughs, cultivating their own acres, raising their own crops, but interesting and instructing in their addresses no less than those of wider fame and broader culture.

By no means the least of the many benefits conferred by this society has been the pleasant association of many good men, old and young, during the many years of its existence, from all parts of the county: and the forming of new, and the renewal of old acquaintanceships and friendships,—at the annual meeting of members, at the more general meeting of the people in the exhi-

bition hall, at the ploughing match and among the stock pens, at meetings of trustees and committees, and, in later years, at the Farmers' Institutes.

Without any boasting, there is no other such county agricultural society in the Commonwealth. In most of the other counties there are several, aside from the town societies. The people do not there as here, all come together at the annual Fair of one.

Middlesex has three; Worcester, five; and several others, two. We have but one. The original and the present Essex Society covers the whole county, and, in our itinerating habit we go into all parts of it.

An observation of many years leads me to believe that there is no county in the Commonwealth where the acquaintance of the people with each other is so general,—where so many people know so many other people, as in this. While our territorial compactness, and the unusual facilities of transportation and travel between one town and another, may have much to do with this, it is yet, I think, attributable largely, if not chiefly, to this society—to the men who have sustained it, and to the method of conducting its fairs and its other business, bringing together, year after year, large numbers of the best of our people. And when I say no two days in the year are more enjoyable or anticipated with greater pleasure than these of our annual fair, I am quite sure I express the feeling of many of you, as well as my own. Nowhere are there heartier or more cordial greetings, nowhere can be found a happier or better company of men and women.

While it may not have been the original purpose of this society, as it is not now its definite or specific aim, to improve the social, moral or intellectual condition of the people, yet such unquestionably has been the result.

The men who, seventy years ago, in Cyrus Cummings' tavern in Topsfield, organized it, were wise, far seeing, public-spirited, patriotic men; and, while they may have "built better than they knew," they could not have failed to consider and to anticipate that the work they were doing had other aspects of usefulness and a broader significance than simply the improvement of agriculture in the county, important as that was. And those on whom, year by year, and generation by generation, their mantle has fallen, and who have with such prudence, wisdom and high regard for public honor and private virtue, managed its affairs, or have been largely influential in all its work, in its unvarying success and long continued usefulness, have been their worthy successors and representatives.

As Dr. Loring said, so wisely and so truly, in his semi-centennial address in 1868—"The history of our society is identified with almost every active movement for the advancement of Essex County for the last fifty years. In the early days of its existence the leading statesmen, lawyers and educators and farmers of our county came up to its support as to a common cause, believing in agriculture as the foundation of the best social and civil organization, and inspired with that love of the land which always characterizes a brave and loyal people. Within this circle all religious and political controversies have been stilled; all social rivalries and distinctions have been forgotten."

The specific purpose and object of this society undoubtedly is, as its name implies, and as all its history goes to show the promotion and advancement of agriculture, and its closely allied pursuits of horticulture, floriculture and arboriculture, right here in our own county of Essex,

among our own people, and, without being justly chargeable with selfishness, first of all for our own benefit. But we, for ourselves, and representing the farmers of the county, are interested not only in agriculture but in the good order and well being of society, in establishing and maintaining good homes, the best citizenship and the best social life.

You are here, we are all here, as men and citizens, proud of our citizenship, appreciating its privileges and its blessings, desirous and determined to transmit them to our children and our children's children, impressed, I trust, with a sense of the high duties and responsibilities it imposes, and recognizing always the constant claims of society and the state upon us.

The best farmer, in the largest and best sense of the word, is the best citizen; that is to say, the better the farmer the better the citizen.

He is honest—honest with himself, honest with his ground. He is not always taking from it and never returning; he gives back a fair share of what he takes from it; he does not expect "to eat his cake and have it too." If he takes away potash, or nitrogen, or phosphoric acid, he will put some back in one way or another—either returning it in kind or growing a crop that does not call for it, and allowing the forces of nature and her resources, in earth or air, time and opportunity to make restoration. He does not believe that plants of any kind will grow with nothing to feed on. Why will a man waste his time, labor and money scratching over ten acres when he hasn't manure enough for but five? and when the five will give him a better immediate return, and in each successive year also, than the ten, with half the labor? Any man, you will say, is a fool to buy ten shares

of stock that will pay only 3 per cent., when he can buy five that will pay 6 for half the money.

He is honest with his soil, and will not expect a "good stand of grass" from a peck where he ought to have sowed a bushel, nor will he cheat himself by mixing a little old onion seed, left over from last year, with his new, rather than waste it by throwing it away, as he ought to.

He is honest with his stock, and will not think he can cheat his cattle and horses out of good feed and full rations and yet get good work out of them every day in the year, and twenty quarts of milk from his cows. In fine, he will not expect to get something from nothing.

He is honest with his neighbors. He will be more than what hard-faced men call honest. He will be accommodating and neighborly; he will not persist in keeping a breachy cow or ox to the great damage and constant annoyance of his neighbor; he will wring the neck of every fowl he has, rather than that they should scratch up his neighbor's garden, and eat his tomatoes and corn; will be the Good Samaritan always, rather than Priest or Levite. Finally, he will be "honest in the sight of all men."

He seeks to have the best home, and when I say home, I mean *a home*, not one of the highest style in furniture, in ornaments, and decorations and table appointments, not the foolish apeing of fashion and wealth—but a home of comfort, of peace, of good breeding, good manners, of love and hospitality.

The best farmer is what St. Paul said a Bishop ought to be—and I don't know why a farmer shouldn't be as good a man as a Bishop—"blameless, the husband of one wife, vigilant, sober, of good behaviour, given to hospital-

ity, not given to wine, no striker, not *greedy* of filthy lucre: but patient, not a brawler, not covetous: one that ruleth well his own house, having his children in subjection with all gravity."

He is intelligent; he reads: he thinks: and if sometimes he reads less he thinks and observes the more. He is intelligent enough to investigate—if not with the accuracy and thoroughness of the scientific man, yet with the sound, common sense of the practical man—new theories and new suggestions connected with farm and garden, and to accept and use every new discovery of science, so far as applicable or useful in his calling. He does not trouble himself much, perhaps, with philosophical speculations, and Darwin and Herbert Spencer may not be as familiar to him as Professor Gressman's reports from the experiment station at the Agricultural College, the Reports of the State Board, the Massachusetts Ploughman and the New England Farmer. He may not give much attention to the various theories of evolution, but he does believe in heredity, that "blood will tell," and in "the survival of the fittest:" and if the fittest will not survive without help he will make it survive. He believes in making the fittest calf and colt, the fittest plant and vegetable and fruit survive, and with almost Spartan indifference and coolness he will get rid of all inferior and defective animals and plants and fruits.

He believes in agriculture as a science and as an art. With the science he does not claim to be familiar, but he will not presume to rail against scientific deductions and teachings—against the facts of science—but will test them by his own good sense, by careful observation and experience, and by a practical, actual application. He believes in availing himself, as far as possible, of every

aid within his reach. He sees with his own eyes what great advancement has been made in farming, and recognizes the important part science has had in effecting it, and especially, it ought to be said here, does he acknowledge the obligation every farmer, in this Commonwealth at least, is under to Professor Göessman, of the Agricultural College, for his investigations and experiments, and to the Board of Control of the experiment station, and to the State Board of Agriculture for publishing them.

And not to them only, but to the College itself, is the agriculture of the Commonwealth greatly indebted. By it a great stimulus has been given to agricultural pursuits and agricultural and its related studies, among our young men particularly: nor is the number limited by any means, to its students and graduates. It has largely tended to place, indeed it has placed, the farmer and the business of farming abreast with what have been called the learned professions, with every occupation that calls for intelligent and educated men. It has showed to the people that good farming makes a draft on brains, as well as on muscle, and that the draft is quite as likely to be honored as in mercantile, professional, mechanical, or scientific life. It has showed to young men, or has greatly helped to show them, that the field for gratifying a high and honorable ambition is as promising here in agriculture as elsewhere, and that the way is as open and inviting to him as elsewhere, to an honorable position in society and to the honors that come in civil life, to a place among the educated and influential men of his town or his state. And to this, the farmer—the young farmer—has a right, and it is his duty to expect to be called.

I think it will be agreed that there has been, in the last fifteen years, a large increase in the number of intelligent,

well educated young farmers in our county and in the Commonwealth, and as they grow older, and as the number increases, as I doubt not it will, they will surely come to be recognized, as they ought to be, as important forces and factors in all that goes to make the best society, the noblest state, in education, in legislation, in morals.

Of course I do not mean to say that all the students and graduates of the college have become farmers; but a large proportion of them have, or have entered upon pursuits closely connected with agriculture. Those who have not, have gone out with a high respect—much different from what they would have had but for their connection with the college—for the farmer's life and pursuits; and ready, as they grow into influential positions in life, to identify themselves with their interests and to recognize their rights in society and in the state.

There have been thirty-eight young men connected with the college from this county, since its establishment. Of this number nineteen have graduated; others have taken a partial course; four are now in college: ten are engaged in farming pursuits.

The best farmer does not cling to, nor discard, old ways and appliances because they are old; nor sneer at a thing because it is new, nor lose his head and run wild over every new invention, or new seed, or new fertilizer. He carries on his farm, not for the poetry or romance of the thing—as a mere sentiment—but as a profession, a business, from which to get a living and something more; but he is not therefore insensible to the charms of nature—neither his ears or his eyes are closed to her beauties or to her voices.

Have you ever stood by a potter's wheel and seen what will come out of a lump of clay? If not, go over to

Beverly and stand by the potter's wheel there, as he takes a piece of soft, shapeless clay and places it on his wheel, and watch the process, how, under the magic touch of his hand and fingers and the correctness of his eye, and the genius within him, it will begin to grow out of its uncomeliness and to take on new and changing forms until, ere you know it, it has become a marvel, almost the perfection, of beauty. Our best farmer—hard and prosaic as some superficial, blatant prater about the beauties of nature may think him to be, sees a process constantly going on of which the potter's work is only a semblance, a suggestion. He sees, and is not forever talking about it either, forms of beauty springing up and developing at his very feet and all about him, filling his eyes—the work of the Divine Potter. He is not the stolid, stupid wight many a man who ought to know better, or who puts on a patronizing air for what he thinks he can make out of it, takes him to be. He says, or if he does not say, he feels, with Bryant,

“ My heart is awed within me when I think
Of the great miracle that still goes on,
In silence, round me—the perpetual work
Of thy creation, finished, yet renewed
Forever.”

He may not go into rhapsodies over bleating flocks, and lowing herds and the breath of kine, but he does know a good cow when he sees her, and can see every line of beauty in her too—in her head and her horns, in her neck and body, milk veins and udder, especially if she fills a ten-quart pail night and morning. He knows some things about cows better even than a former Judge of one of our higher courts. The Judge was holding a court in one of the western counties (say Berkshire), and after the adjournment for the day, taking a walk, he met

another Judge whose home was in the same town. Said the latter, as they met, "Well Judge, what have you been trying in your court to-day?" "We have been all day trying a case about a farrow cow." "By the way, Judge," said he, "what is a farrow cow?" "A farrow cow, Judge!" said the other, noted for his humor, with a twinkle in his eye, "don't you know what a farrow cow is? A farrow cow is a heifer that never had a calf," and on that theory I suppose that case was tried through.

Robert Burns consoled himself over his defeat in a stooking match, saying, "Weel! but *I* made a *sang* while I was stooking." Even our best farmer may not be able to do that, nor to make as sweet a song as did Burns when he turns up a mouse's nest with his plough, but he will walk in the furrow and work in the harvest field, with a more hopeful and thankful heart, and go to bed sober.

The best farmer will recognize, always, the wisdom and goodness of an All-wise Providence, and will see in the returning seasons, in the heavens above him and in the earth beneath his feet, in the gently falling dew, in the snow and the rain, in the heat of summer and the cold of winter, in the fiercest rays of a summer sun and in the drizzly, foggy dog days, in the quiet beauty of the Indian summer and the harvest moon, and no less in the melancholy days of chill November,—

"The saddest of the year,—
Of wailing winds, and naked woods
And meadows brown and sere,"

the same Divine Father, who, it is said, "left not himself without witness, in that He did good, and gave us rain from heaven and fruitful seasons, filling our hearts with food and gladness:" and "without whose notice not even a sparrow falleth to the ground."

With more trials, vexations and annoyances, and more frequent temptations to complain of his lot, and more unexpected losses—here and there—than a man in almost any other calling, he will still, remembering the great compensations of his life, possess his soul in patience, and learn from daily experience and observation how best to provide against avoidable accidents; at least, will make it sure they do not come from his own carelessness and neglect. Pursuing the even tenor of his way, paying his taxes without grumbling, going to town meetings and sometimes having something to say, and to church; sending his children to school, and, perhaps, one to college. he is not carried off his feet, nor disturbed by all he reads and hears about great fortunes made in a day, or, if not quite so rapidly, yet at the expense of honor and honesty, of health and the enjoyments of home: nor by great booms in real estate somewhere in the South or West. He will not sell his farm for half what it is worth and go to Florida or Southern California, in the expectation of more money and less labor in the orange groves of the former state and the marvellous growths of trees and fruits and vegetables of the latter.

He hears the call to “fresh fields and pastures new,” and he longs for them, but he believes in having them at home—making them with his own hands, by his own labor and skill, by good cultivation, with good manure and enough of it. He is not deluded by the cry of a virgin soil of unexampled fertility in far off western fields, when he can restore the fertility of the old and bring back the more than blushing beauty, the vitality and productive capacity of the earlier and youthful life.

One of the orators of this society, years ago, said in his address, “the first and great motive to be urged upon

the owner of the farm house, is, to secure thereto the attachment of his children."

Indorsing this eminently true sentiment, I would enlarge it, and add to it, by saying, that *among* our first duties at least, is to secure the attachment of our children, and strengthen our own, not only to their and our own farms and farm houses—our own homes—but to the good old county itself, to all that has made it what it has been and is. And what it *has been*—in the origin, habits and character of its people—has made it what it *is*. This is especially true as to the agricultural portion of the people, for upon the character of a people depends very largely the character of its agriculture. Out of the character and habits of the farmers of this county for more than two centuries has grown their character of to-day.

On this occasion, in this ancient town, in this presence, before an almost exclusively Essex county audience, I cannot believe it to be out of place to say, that we cannot too often recall the circumstances of the immigration of our ancestors to the shores of Massachusetts Bay, to the harbor of Naumkeag. Nor can we too thoroughly study their character, their motives, their lives: or become too familiar with the story of their heroic sufferings, their patient endurance, their exposures to all the dangers and perils of a new country and an inhospitable climate, subsisting, as it is said, on "clams, ground nuts and acorns:" with their sacrifices of the comforts and luxuries of their homes of ease and plenty left forever behind them; the sundering of family ties and all the dear relationships of home.

It can never be in vain that we look back upon the men from whom we have sprung, and trace through the intermediate years the steps they, and the generations follow-

ing, have trod in the paths of social life, of trade and commerce and agriculture, in all the untried walks and ways of men who laid the foundations and built this fair fabric of government. It can never be in vain that we bring before us the long, illustrious procession of honored names of the Colony, the Province, and the Revolution, and of later years. It is a strong, natural propensity to do so, if they be of our kindred, but it is no less a solemn duty to acknowledge the obligation we are under to them, whether of our kindred or not. Their honor, their devotion to a sense of duty, their achievements, their lives—all are our common heritage. Nor can we preserve what they wrought for themselves and for us, without a careful and an appreciative study and comprehension of what they were and what they did.

Nowhere as in this ancient county of Essex, can we walk about as in their very footsteps, and stand as it were in their very presence. The very ground on which we tread, in many parts of this county seems almost resonant with the echoes of their footsteps, and the air filled with the voices of the sturdy men and brave women, the picture of whose lives and character two centuries have not dimmed, to him who looks upon it with loving eyes.

Here in Essex, the best farmer—as he is the best citizen always—believes in Essex county, in her history, her traditions, the character of her people from the first until now: nor does witchcraft or the persecution of Quakers and heretics shake his faith. He believes in the seed originally planted here more than two hundred and fifty years ago, and in the vitality and product of it, as it has appeared and grown generation after generation until now. He believes in Conant and Endicott, and Brad-

street and Saltonstall and Nathaniel Ward of Ipswich and his "Body of Laws," and their compeers and successors, names equally worthy, but too long a list to call here,—in their independence, their courage, their endurance, their faith and piety—that the high qualities which distinguished them have been perpetuated in their descendants, and that we owe them a debt of gratitude it were hard to pay. And as they, with all our early ancestors, came across the sea for freedom of conscience, and to escape the intolerable exactions of church and state, to hardship, to privation, and to an unbroken wilderness, the best citizen, whether farmer or not, remembering their immigration and our descent, and the many thousands who have since come to us from every land, Englishmen, Irishmen, Germans and Scandinavians, and who have become a part of our best citizenship in every sphere of life, welcomes those who still come to us, provided they are of the kind who wish to become, and will make good citizens, honest, law-abiding, ready to do any honest work: but he has no welcome nor open arms for, but the strongest possible protest against, paupers, criminals, and anarebists.

He believes that no other county in the Commonwealth has a Merrimac river running its entire length on one side—once making its way unvexed to the sea, but now, subject to the brain and hand of man, turning hundreds of wheels and driving innumerable spindles, supporting, or the smiling witness to the multiform industries, and the homes of its beautiful, busy and thriving towns and cities: and, on the other, a sea coast like that from Nahant to the extreme point of Cape Ann.

That nowhere else in this Commonwealth, as in our own county—with an area of less than five hundred

square miles, being territorially one of the smaller counties, while it is the third in the aggregate, and second in the density, of population, can be found so many cities and large and populous towns, as well distributed over the county, the people of which are chiefly engaged in manufactures, where all are consumers and few producers of the farmers' products, furnishing a market almost at his door for every product of farm and garden, and a steam railroad to every town in the county save Nahant and West Newbury, and to the latter, a horse railroad.

Consider for a moment, and as you consider, imagine you have a map of the county before you. There are Lynn with 50,000 inhabitants; Salem with 30,000; Gloucester with nearly or quite 25,000; Newburyport with 15,000; Haverhill with about 25,000; Lawrence with 40,000, together with the large towns of Marblehead, Peabody, Beverly, Danvers, Amesbury and the Andovers. And then add to the permanent population, the large and constantly increasing number of summer residents, almost literally covering our marvellously beautiful sea-shore, for three or four months of the year, giving employment to hundreds of mechanics and laborers, and ready to eat and pay for about everything the farmers of that part of the county can raise. And consider further, that of the three hundred and fifty towns in the Commonwealth more than half of the towns of Essex are within the first one hundred in population—that in the manufacture of boots and shoes, leather, carriages, clothing (including hats), and flax, hemp and jute goods, in fisheries and quarrying, and ship building, the county of Essex takes the lead of every other, except, in some few instances, Suffolk.

Think again of the mills and machine shops of Law-

rence, Methuen, the Andovers and Amesbury: the tanneries of Peabody and Salem; the shoe factories of Lynn and Haverhill, and many of the smaller towns; the carriage manufacturing of Amesbury and Merrimac: the fisheries of Gloucester and the quarrying of Rockport, with the great variety of smaller industries in almost every town; and then ask yourselves if the farmer's opportunities and advantages in Essex county are equalled by those of any other.

But "does farming pay?" is the question often asked, and properly. Without stopping to ask what the questioner means by "pay," or to discuss what is a fair equivalent for a man's labor of brain, or hand, or both, save to answer *no*, if he means a great fortune, as that word goes nowadays, I have only time to say this, in closing this address.

Confessedly agriculture is *the* great business of this country. It leads every other, almost all others put together. It is the foundation of all material national prosperity and success. However many failures there are in it, however many who are poor, who live from hand to mouth (and all statistics, confirmed by any careful observation and investigation, will show there are less than in any other occupation), can it be possible that a business which has more invested in it, and the products of which are greater than in any other, that carries every other on its back and the back not broken yet, but rather growing stiffer and stronger every day, can fail to be reasonably remunerative at least, to him who conducts it wisely? The truth is, some it pays, and some it does not; like every other business, it depends on the man.

To the farmer his farm is the principal part of his capital. If he allows a large part of it to lie idle, neg-

lected and unimproved, he cannot expect any return from it, but rather, with its inevitable depreciation, with taxes, cost of fences, etc., that not only it, but himself, will grow poorer. And herein is a fair illustration of what demagogues ring the charges on, that "the rich grow richer and the poor poorer." It is as true now as when the words were first uttered, and will be forever true—"To him that hath shall be given, and from him that hath not shall be taken away even that he hath."

It may possibly do sometimes, under some circumstances, to allow ground to lie fallow—it may do for the purpose of experiment, by scientific men—a man may do so who has so much land that he does not know what to do with it, but as a practice it don't do at all. The old prophets who cried so vigorously to their countrymen to break up the fallow ground of their hearts, evidently knew what fallow ground was, and that fallow ground and hard hearts are alike unproductive of any good thing and will surely bring the possessor to grief.

To the farmer who complies with all reasonable requirements and conditions of success in his occupation equally with the manufacturer, the merchant, the mechanic, the lawyer or the doctor in his; who lays his plans for more than one season: who thinks the ground is equal to and the season long enough for more than one crop, often for several: who believes that he, as well as the sagacious merchant or capitalist, can turn his capital over often; who takes advantage of the teachings of science, of his own and other people's observation and experience: who has learned how to draw up the moisture from below the surface and to bring it down from above: who believes the time has gone by in a farmer's business when brain is divorced from hand,—to him the ground will respond,

and respond generously, to every reasonable demand. He will then conclude, after all, as I doubt not most of us have concluded, that the actual productive capabilities of a single acre of land have not yet been fully ascertained.

SIXTY-EIGHTH

Annual Cattle Show and Fair.

The Cattle Show and Fair of this Society opened under very favorable circumstances on Sept. 25th, at Peabody, with good weather, a good show and good attendance, giving promise of a great success, which changed before the dawn of the 26th to bad weather, *very bad*, with a miserable show (on the grounds), and no attendance except from necessity, and curiosity for effects.

The exhibits on the Show Grounds exceeded by 126 the number of the previous year. In the Exhibition Halls the entries were seven more than the previous year; the show of fruit was less in quantity although of average quality. The exhibit of Domestic Manufactures was larger and better as a whole than the year previous. For particulars of Hall Exhibits reference may be had to the report of Superintendent of Hall, preceding reports of Hall Committees.

On the morning of the second day, the violent gale blew down the "Poultry Tent," damaging it badly, although with very little damage to its contents. Some of the coops were broken, and their inmates, when captured, were put into the first coops handy, causing a mixture of breeds and ownerships that took days to straighten. The Poultry Judge, who was at work in the tent with a few lookers on, had to jump and run, at the warning rip of the tent, and narrowly escaped injury: the Superintendent of the Grounds barely escaping a heavy blow on the head from a slatting stake as the tent went down.

In a short time the "Implement Tent," also containing the exhibit of Carriages, went down without damage to its contents other than by water. At 10 A. M. not a tent remained standing upon the grounds. Most of the stock had

been provided for under cover, but the storm was so severe and having done so much damage, it was decided to allow the stock to be taken away, and indefinitely postpone the plowing match and trial of harrows.

A fine evening following the storm brought out a fair attendance at the hall, and it having been decided to keep the hall exhibit open another day, the attendance on the third day saved the Society from financial loss, the total receipts meeting the expenses of the Fair with a small balance left.

On Wednesday, the second day of the Fair, notwithstanding the storm and without the formality of the usual procession, the members and others, with a good sprinkling of ladies, went to the Peabody Institute and listened to an excellent address from Hon. Horatio G. Herrick of Lawrence, as all who listened to it and all who have read the preceding pages will testify. The audience joined in singing "America," after the opening prayer by Rev. Mr. Sprague, of Peabody, and with "Old Hundred" before the benediction, and they were sung with fervency and zeal.

After the address steps were taken to the Rink, where the Annual Dinner was well served and appreciated, after which President Ware was "caned" very handsomely by Dr. William Cogswell of Bradford, in behalf of the members of the Society, who desired to present him with some testimonial of their esteem and appreciation of his long, faithful service and interest in the Society's welfare. The speeches which followed from Hon. William R. Sessions, Secretary of the State Board of Agriculture, Hon. George B. Loring, Gen. William Cogswell, M. C., Hon. H. G. Herrick, Hon. Asa T. Newhall, and others, were the best of after-dinner speeches,—witty, patriotic, enthusiastic and instructive,—and those who were kept away by the storm will never know what they lost, which those present did. Letters of regret at their inability to be present from Gen. B. F. Butler, and members of Congress from Essex County Districts, were read. A resolution was passed extending the Society's thanks to the Boston & Maine Railroad, the

Town Officers of Peabody, the Chief Marshal and his aids, and others who had rendered efficient aid in arranging and managing the Annual Exhibition. Those present, also by vote, expressed themselves in favor of the Trustees having the Fair held another year in Peabody.

The Entries in the several departments of the Fair for the two years in Peabody, 1887 and 1888, are tabulated for comparison, as follows:—

STOCK, IMPLEMENTS, ETC., ON FREE SHOW GROUNDS.

Class.	Entries in 1888.	From Dif- ferent places in 1888.	Entries in 1887.	From Dif- ferent places in 1887.
Fat Cattle.	4	4	4	4
Bulls,	10	5	10	4
Milch Cows,	9	3	10	4
Herd of Milch Cows,	1	1	1	1
Heifers, First Class,	6	2	7	3
Heifer Calves, First Class,	4	3	5	3
Heifers, Second Class,	18	6	17	5
Heifer Calves, Sec. Class,	5	3	3	2
Working Oxen & Steers,	10	4	8	3
Town Teams,	3 { 10 prs. Horses } 19 prs. Oxen. }	3	1 { 11 Yoke } Oxen. }	1
Steers,	2	1	1	1
Stallions, First Class,	4	4	3	3
Stallions, Second Class,	4	3	2	2
Brood Mares,	10	5	10	6
Family Horses,	8	6	1	1
Gents' Driving Horses,	7	6	6	5
Farm Horses,	10	7	9	7
Pairs of Farm Horses,	8	6	11	8
Colts for Draft Purposes,	2	2	4	3
Colts for Gen'l Purposes,	16	7	16	10
Swine, First Class,	14	5	3	1
Swine, Second Class,	5	3	3	2
Sheep,	5	3	4	1
Poultry,	123	11	71	10
Harrows for trial,	3*	2	0	0
Agricultural Implements,	63	4	15	6
New exhibit.				

Carriages,	10	2	12	3
Ploughing,	17	9	18	10
Total on Free Show	—	—	—	—
Grounds,	381	26	255	24

EXHIBITS IN HALL.

Class.	Entries in 1888.	From Dif- ferent Towns and Cities in 1888.	Entries in 1887.	From Dif- ferent Towns and Cities in 1887.
Dairy,	8	6	8	8
Bread, Honey and				
Preserves.	96	12	61	11
Pears,	236	18	275	20
Apples,	246	23	320	25
Peaches, Grapes and				
Assorted Fruits.	86	6	121	15
Flowers,	84	11	70	11
Vegetables.	399	22	299	26
Grain and Seed,	18	10	35	17
Counterpanes and				
Afghans,	105	10	74	6
Carpetings and Rugs.	51	10	95	7
Articles manufactured				
from Leather,	13	5	32	4
Manufactures and				
General Mdse.,	29	7	26	7
Fancy Work and Works				
of Art,	257	17	229	9
Work of Children				
under 12 years,	45	9	21	5
	—	—	—	—
	1673	31	1666	33

Grand Total, 2054 entries from 32, out of 35 towns and cities in Essex County, against 1921 entries from 33 towns and cities last year. Merrimac, Methuen and Nahant did not have exhibits this year. The entries were from Amesbury, 26; Andover, 11; Beverly, 36; Boxford, 27;

Bradford, 22; Danvers, 244; Essex, 82; Georgetown, 4½; Gloucester, 1; Groveland, 11; Hamilton, 5; Haverhill, 32; Ipswich, 13; Lawrence, 12; Lynn, 103; Lynnfield, 22; Manchester, 1; Marblehead, 110; Middleton, 37; Newbury, 62; Newburyport, 11; North Andover, 17; Peabody, 831; Rockport, 1; Rowley, 24; Salem, 180; Salisbury, 2; Saugus, 19; Swampscott, 17; Topsfield, 20; Wenham, 9; West Newbury, 34; Out of the County, 26; Unknown, 2.

REPORTS OF COMMITTEES.

FAT CATTLE.

The Committee on Fat Cattle have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- \$8. First premium, to Daniel Carlton, North Andover, for 1 pair of oxen, weight 3360 lbs.
- \$6. Second premium, to B. P. Richardson, Middleton, for 1 pair of oxen, weight 3705 lbs.
- \$7. First premium, to Wm. A. Russell, Lawrence, for Holstein Fresian fat cow, 3 years old, weight 1425 lbs.
- \$5. Second premium, to Francis O. Kimball, Danvers, for 1 fat cow, "Topsy," weight 1200 lbs.; breed. Hereford. Has given milk one year. Comes in again in January.

J. N. Rolfe, Wm. H. Smith, S. Swett—*Committee*.

STATEMENT OF DANIEL CARLTON.

To the Committee on Fat Cattle :

GENTLEMEN.—The fat cattle I offer for premium are 5

years old, and weighed Sept. 15, on Andover scales, 3360 lbs. They have been worked, more or less, nearly every day during the summer, having hauled 75 tons of hay, a large portion from meadows, besides doing other farm work. When not at work they were given the run of a brush pasture near the barn, and were stabled every night, and given two quarts of Indian meal each, with hay or corn fodder. When doing heavy work in the spring their grain ration was increased by giving them two quarts each of cotton seed meal mixed with an equal quantity of shorts in addition to the Indian meal.

Yours respectfully,

DANIEL CARLTON.

No. Andover, Sept. 25, 1888.

STATEMENT OF B. P. RICHARDSON.

SEPT. 24th.

To the Committee on Fat Cattle:

The cattle which I enter for premium are seven years old and weigh to-day 3705 pounds. I bought them a little more than a year ago. At that time they were very thin in flesh and weighed only 2500 pounds. While I have owned them they have done all the heavy teaming on my farm. I have fed them on English and meadow hay and about four quarts of meal each per day, until within about a month, when I have fed sweet corn fodder instead.

Yours,

B. P. RICHARDSON.

STATEMENT OF WM. A. RUSSELL.

To the Committee on Fat Cattle:

I enter for your consideration one three-year-old imported, Registered, Holstein Fresian heifer, weight 1425 lbs.

This heifer is barren and has never been in heat. Her

feed the past summer has been pasture and 4 qts. of meal per day.

Respectfully submitted,

WM. A. RUSSELL,

By Jas. C. Poor, *Manager*.

BULLS.

The Committee on Bulls, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$8. First premium, to Heirs of C. S. Bradley, West Newbury, for Short Horn Bull, "Edmond 7th," 6 years old. Registered in A. S. H. B., Vol. 28, Page 131. Bred by C. S. Bradley, West Newbury, Mass. Sire, "Edmond 3d," 62,647 ; Dam, "Flora" (Vol. 15, Page 556) by "Young Prince John," 18,825.
- \$4. First premium, to Heirs of C. S. Bradley, West Newbury, for Short Horn Bull, under 2 years
*Farm, No. 14, calved, Nov. 24, 1886. Bred by C. S. Bradley, West Newbury, Mass. Sire, "Glenwood 3d," 62,887 ; Dam, "Starbrow E.," (Vol. 28, Page 438) by "Lord Dunmore," 39,664.
- \$2. First premium, to Heirs of C. S. Bradley, West Newbury, for Short Horn Calf. Numbered at Farm 35, calved, Oct. 4, 1887. Bred by C. S. Bradley, West Newbury. Sire, "Dunmore 5th," 45,987 ; Dam, "Rena of Crane Neck," (Vol. 21) by "Lowland Comet," 42,198.
- \$4. Second premium, to Joshua W. Nichols, Danvers, for Jersey Bull "Dirego," 2 years old.
- \$4. First premium, to William A. Russell, Lawrence, for Holstein Yearling bull, "Ned Bellows," calved, May 15, 1887. Sire, "Sir Bellows of Meadowbraak." Dam, "Forester," No. 7475, H. H. B.

* Number at Farm.

§2. First premium, to William A. Russell, Lawrence, for Holstein Bull Calf, "Daniel Alexander," calved, Oct. 12, 1887. Sire, "Lavinia 2d Bismark," No. 2128, H. F. H. B. Dam, "Jacoba Alexanda," 4437.

§4. Second premium, to W. C. Cahill, Danvers, for Ayrshire Bull, "Mars Jr.," No. 4073, over 2 years old.

George B. Blodgett, John A. Hoyt, John Parkhurst, Horace C. Ware—*Committee*.

MILCH COWS.

The Committee on Milch Cows have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

§15. First premium, to Wm. A. Russell, Lawrence, for best milch cow of any age or breed, Holstein Fresian cow, "Lady Lyons."

§10. First premium, to Wm. A. Russell, Lawrence, for best milch cow, foreign, native, or grade, Holstein Fresian cow, "Belle Fairfax."

§4. Second premium, to Wm. A. Russell, Lawrence, for milch cow, foreign, native or grade, Holstein Fresian cow, "Madam Wit."

§10. First premium, for milch cow, 4 years old or over, Holstein Fresian cow, "Nitallia."

§4. Second premium, to Wm. A. Russell, Lawrence, for milch cow, 4 years old and over, Holstein Fresian cow, "Lady Bess."

§10. First premium, to Heirs of Hon. C. S. Bradley, West Newbury, for short horn milch cow, "Earl's Dot 4th." Roan, calved April 5, 1881. Registered in Vol. 21 of A. S. H. B., bred by C. S. Bradley, West Newbury. Sire, "2d Earl of Autumn," No. 38,675 : Dam, "Earl's Dot" (Vol. 3, Page 562) by "Earl of Autumn," No. 38,675.

Wm. B. Carlton, George A. Dow, John Barker—*Committee*.

STATEMENT OF RUSSELL COWS.

To Committee on Milch Cows:

I enter for best milch cow, of any age or breed, Holstein-Fresian cow, "Lady Lyons," No. 6805, H. H. B., 7 years old. Imported in 1884. Milk record from July 1, 1886, to July 1, 1887, 12,815 pounds. Milk record from Aug. 1 1887, to July 1, 1888, 14,313 pounds. Dropped last calf, Aug. 7, 1888. 10 days' milk in Sept., 633½ pounds.

For best milch cows, either foreign, native, or grade, Holstein-Fresian cows.

"Madam Wit," No. 7476, H. H. B., 6 years old. "Belle Fairfax," No. 1117, H. H. B., 7 years old. "Madam Wit" dropped last calf, Dec. 16th, 1887. Milk record from Dec. 18 to Aug. 1, 11544 pounds. Due to calve Dec. 17. "Belle Fairfax" dropped last calf, Sept. 18, 1887. Milk record from Sept. 18, 1887, to Sept. 25, 1888, 14,840 pounds. Due to calve Dec. 17.

For Holstein-Fresian cows 4 years old and upwards.

"Lady Bess," No. 1051, H. H. B., 9 years old. "Nitalia," No. 7028, H. H. B., 6 years old. "Lady Bess" dropped last calf, April 23, 1888. Due to calve April 19, 1889. "Nitalia" dropped last calf, March 21, 1888. Due to calve April 1, 1889. "Lady Bess" milk record from May 1, to Sept. 25, 1888, 6349 pounds. She gave milk all of the season before, not going dry at all. "Nitalia" milk record from April 1, to Sept. 25, 1888, 7362 pounds.

For Feed, and manner of feeding, see statement of Herd of Milch Cows.

Respectfully submitted,

WM. A. RUSSELL.

By J. C. POOR, *Manager.*

HERD OF MILCH COWS.

The Committee on Herds of Milch Cows have attended

to their duty, and respectfully report to the Secretary that they have made the following awards :

\$18. First premium, to Wm. A. Russell, Lawrence, for herd of milch cows, Holstein Friesians.

Osman Babson—*for Committee.*

STATEMENT OF RUSSELL HERD.

To the Committee on Herds of Milch Cows :

I enter for herd of milch cows, Holstein-Friesian cows, "Lady Lyons," No. 6805, H. H. B. "Madam Wit," No. 7476, H. H. B. "Belle Fairfax," No. 1117, H. H. B. "Lady Bess," No. 1051, H. H. B. "Nitallia," No. 7028, H. H. B.

"Lady Lyons" dropped last calf, Aug. 7, 1888. "Madam Wit" dropped last calf, Dec. 16, 1887. "Belle Fairfax" dropped last calf, Sept. 18, 1887. "Lady Bess" dropped last calf, Apr. 23, 1888. "Nitallia" dropped last calf, Mar. 21, 1888.

"Lady Lyons" milk record from Sept. 1, 1887, to June 15, 1888, 12525 lbs. She was dried off and turned out to pasture June 29, and was not taken to the barn until after calving, and from Aug. 11 to Sept. 1 she gave 1080 lbs. of milk; 10 days in Sept. 633½ lbs. "Lady Bess" milk record from Sept. 1, 1887, to Sept. 1, 1888, is 11564½ lbs. She didn't go dry at all, milked the season through without going dry. "Madam Wit" milk record from Dec. 18 to Sept. 1, 12444 lbs.; for Sept. 1887, 287 lbs. She was dry from Sept. 20 to date of calving, Dec. 16. In the month of Jan. she gave 2107 lbs. "Belle Fairfax" milk record from Sept. 18, 1887, to Sept. 25, 1888, 14840 lbs. "Nitallia's" milk record from Sept. 1, 1887, to Sept. 1, 1888, 10914½ lbs. She was dry from Feb. 10 to date of calving, Mar. 21.

Care and Feed of Herd of Milch Cows.

The winter feed of these cows was from 8 to 12 qts. bran, four qts. corn meal, and one qt. linseed oil meal.

About one-half of this quantity of grain was fed in the morning directly after milking, mixed with ensilage. The balance was fed *dry* at 2.30 P. M. After eating the grain they were fed with good hay, with oat, barley or corn fodder mixed with it, and watered in barn twice a day; carded and brushed off once a day.

Two-years-old heifers in milk were fed in same way, but not given so much grain as the cows.

In summer the cows were turned to pasture, which is small for the number kept (about forty head), and have been fed two qts. meal morning and night, with hay, corn or other fodder twice a day, and those giving large flow of milk were milked and fed three times a day.

Respectfully submitted,

WM. A. RUSSELL,

BY JAS. C. POOR, *Manager*.

HEIFERS, FIRST CLASS.

The Committee on Heifers, first class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- \$4. First premium to heirs of C. S. Bradley, West Newbury, for short horn breed, heifer, No. 20, 2 year old, never calved.
- \$3. Second premium to heirs of C. S. Bradley, West Newbury, for short horn heifer, No. 17, 2 years old, never calved.
- \$4. First premium to heirs of C. S. Bradley, West Newbury, for short horn heifer, No. 29, 1 year old.
- \$3. Second premium to heirs of C. S. Bradley, West Newbury, for short horn heifer, No. 26, 1 year old.
- \$4. First premium to heirs of C. S. Bradley, West Newbury, for short horn heifer calf, No. 39.
- \$3. Second premium to heirs of C. S. Bradley, West Newbury, for short horn heifer calf, No. 40.

- §4. First premium to William A. Russell, Lawrence, for Holstein heifer, "Gerrits Emily," No. 4465, H. F. H. B., 3 years old, in milk.
- §3. Second premium to William A. Russell, Lawrence, for Holstein heifer, "Jacoba Alexandra," No. 4437, H. F. H. B., 3 years old, in milk.
- §4. First premium to James C. Poor, North Andover, for Holstein heifer calf, "Erema P." Calved May 13, 1888, Sire, "Casualty," No. 4355, H. F. H. B. Dam, "Erema 6th," No. 9227, H. F. H. B.

H. A. Haywood, T. N. Cook. G. W. Sargent, Andrew Lane, Jr.—*Committee*.

STATEMENT OF SHORT HORN HEIFERS, BRED BY C. S. BRADLEY,
CRANE NECK HILL FARM, WEST NEWBURY.

SHORT HORN STOCK.

No. 20, heifer, calved March 31, 1886. Sire, "Edmond 7th," 62648. Dam "Starbrow D." (Vol. 28, Page 438), by Lord Dunmore, 39664.

No. 17, heifer, deep red. Calved March 16, 1885. Sire, "Edmond 7th," 62648. Dam, "Imperial Rose 9th" (Vol. 28, Page 438), by "Lord Dunmore."

No. 29, heifer, head, neck and shoulders red, large star in forehead. Calved May 5, 1887. Sire, "Edmond 7th," 62648. Dam, "Imperial Rose 8th" (Vol. 23), by "Oxford Gwyne."

No. 26, heifer, head and neck red with white marks. Calved Dec. 1, 1886. Sire, "Edmond 7th," 62648. Dam, "Little Buttercup 2d" (Vol. 23), by "Glenwood," 39103.

No. 39, heifer, light roan head and neck. Calved Nov., 25, 1887. Sire, "Rawley 2d." Dam, "Imperial Rose 9th" (Vol. 28, Page 438), by "Lord Dunmore."

No. 40, heifer, dark red. Calved Feb. 26, 1888. Sire, "Rawley 2d." Dam, "Starbrow E." (Vol. 28, Page 438), by "Lord Dunmore."

HEIFERS, SECOND CLASS.

The Committee on Heifers, second class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- §8. First premium to James F. Cody, Peabody, for Grade Jersey and Dutch, 3 years, 3 mos. old, under 4 yrs. in milk.
- §5. Second premium to Wm. A. Jacobs, Danversport, for native 3 year old.
- §4. First premium to Francis O. Kimball, Danvers, for Grade Holstein, 2 years old, not calved.
- §4. First premium to Wm. Perkins, 2d, Peabody, for Grade 1 year old, Jersey and Holstein.
- §3. Second premium to Ira F. Trask, Hamilton, for Jersey and Native, twin yearling.
- §4. First premium to Peter Shchan, Peabody, for 5 mos. calf, Holstein and Ayrshire.
- §3. Second premium to Arthur E. Fuller, Danvers, for 4 mos. calf, native.

John Haseltine, N. P. Perkins, B. Frank Barnes—*Committee*.

WORKING OXEN AND STEERS.

The Committee on Working Oxen and Steers have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- §12. First premium to Lyman S. Wilkins, Middleton, for working oxen, 5 years old, weight 2530 lbs.
- §10. Second premium, to B. H. Farnum, North Andover, for working oxen, 4 years old, weight 2765 lbs.
- §8. Third premium, to James C. Poor, North Andover, for working oxen, 5 years old, weight 3260 lbs.
- §10. First premium, to Samuel Thayer, Andover, for working steers, 4 years old, weight 2425 lbs.

\$6. Second premium, to Jacob L. Farnum, North Andover, for working steers, 4 years old, weight 28615 lbs.

Abel Stickney, J. A. Lamson, B. S. Barnes, J. P. Little
— *Committee*.

SUPPLEMENTARY REPORT ON WORKING OXEN AND STEERS.

The Committee on Working Oxen and Steers were pleased to see so much interest manifested, and so many ready to enter their teams to compete for the premiums offered by the Society. There were on the ground eight pairs of oxen, and two pairs of steers that were ready to start when the committee were ready to watch their movements, and we thought that a good number for these days of "no-oxen."

The place which the Committee on Drafting had selected for this trial was not satisfactory to our Committee, and by their consent the place was changed to a comparatively new street not much used, where the work of the road was not wide, and the road-bed soft, which gave the teams a good chance to show the mettle they were made of. In going up the hill it required strength, in making the turn "good training," and on the return, when called upon to back the load, if it went back the Committee called them good "backers." The weight of the oxen on the grounds ranged from 2530 to 3260 pounds per pair. The Committee were all "ox men," and entered into this trial with pleasure, and watched the movement of every pair closely, and were unanimous in all their awards.

Most of the teams on trial did good work and the Committee would say that they were good "workers." We would say that the oxen owned by Mr. Lyman Wilkins of Middleton, which did particularly good work, oxen whose weight was only 2530 pounds, the smallest oxen on the road: this pair moved the load of two tons up this hill without any great effort, turned handsome, and on the return backed the load up hill with more ease than any of the larger oxen which went over the road. These oxen were

well matched and good shape, but small, making the proverb true, "precious things are done up in small bundles," and the Committee felt it their duty to award the first premium to Mr. Wilkins, yet thinking that the Committee on "Collection of Live Stock" would have taken but little notice of this pair among the many much more noble looking oxen.

At request and in behalf of the Committee,

ABEL STICKNEY, *Chairman.*

STATEMENT OF JAMES C. POOR.

To the Committee on Working Oxen :

I enter for your consideration one pair of oxen, 5 years old, weight 3350 lbs. They are grade Holstein. May 1 they weighed 3000 lbs. Have been worked almost every day since, and fed 6 qts. meal and good hay.

Respectfully submitted.

JAS. C. POOR.

TOWN TEAMS.

The Committee on Town Teams have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$20. First premium, to Town of Lynnfield, for town team of 10 pairs of horses.
- \$20. First premium, to Town of Topsfield, for town team of 11 pairs of oxen.
- \$15. First premium, to Town of Middleton, for town team of 8 yoke of oxen.

James P. King, O. L. Carlton, Leverett Herrick—*Committee.*

STEERS.

The Committee on Steers have attended to their duty,

and respectfully report to the Secretary that they have made the following awards :

- \$5. First premium, to Benj. W. Farnum, No. Andover, for Yearling Steers.
- \$2. Second premium, to Benj. W. Farnum, No. Andover, for Steer Calves, 4 months old.

In consequence of the storm, the Committee were unable to keep an appointment, to meet and examine the stock on Wednesday morning, and were prevented by other duties and by the delay of the entry book in the Secretary's office, from making the awards on Tuesday. I however, examined the Steers, and am of opinion that they should receive the above named premiums, both because of merit, and as an encouragement to the young man who raised them. The boy who likes a steer team, will be likely to stay on the farm if he takes a premium now and then at our shows. It is a saying in their part of the county, "Where the Farnums are you will find good oxen." Our young friend is following in his father's steps in this respect. We hope to see the yearlings take the ribbons at the future exhibitions of the Society.

CHARLES J. PEABODY,

Chairman of Committee.

STALLIONS, FIRST CLASS.

The Committee on Stallions for Farm and Draft Purposes have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$10. First premium, to Harry H. Hale, Bradford, for 5 years old, "Major Dome." Imported 1885. No. 4345.
- \$5. Second premium, to L. G. Burnham, Essex, for 4½ years old, "Prince Jr.," weight, 1635 pounds.
- \$4. Third premium, to John Parkhurst, Boxford, for 4 years old, "Romeo," weight, about 1300 pounds.

\$8. First premium, to James Kinnear, Ipswich, for 3 years old, "Wallace," weight, about 1100 pounds.

GEO. B. LORING, *Chairman*.

There were four entries in this class; three of four years and upwards, and one of three years old.

Two of these stallions, "Major Dome" and "Prince Jr.," were from imported stock and are valuable horses. "Major Dome" is a black horse, purchased by Col. Hale of Mr. Dunham of Illinois, one of the largest and most successful importers and breeders of his class of horses in the country. This horse combines all those qualities which give the Percherons their value. His sire was fully up to their best standard and his proportions are in admirable conformity with his weight. His gait is light and easy for a horse of his size, and the quality of his bone and muscle cannot be surpassed. "Prince Jr.," born in Lebanon County, Pennsylvania, is also a Percheron of pure blood and great value, nearly equal in his points to "Major Dome." The grade Percherons "Wallace" and "Romeo," are fine specimens of their class.

M. C. Andrews, S. M. Titcomb, S. D. Hood—*Committee*.

STATEMENT OF L. G. BURNHAM.

Description of Percheron Norman Stallion "Prince Jr.," Iron Roan, $4\frac{1}{2}$ years old, $16\frac{1}{2}$ hands high, weight 1635 pounds, silver mane and tail, remarkably handsome, well proportioned horse with great muscular development and power. Bred in Lebanon County, Pa. Sire, "Young Prince," Grand Sire, "Old Prince Imperial," Dam, a Percheron Norman mare of great beauty, Dam's sire "Pleasant Valley Bill."

STALLIONS, SECOND CLASS.

The Committee on Stallions, Second Class (for Driving Purposes), have attended to their duty, and respect-

fully report to the Secretary that they have made the following awards:

- §10. First premium, to C. H. Walker, Georgetown, for Stallion, "Fred Knox," 3 years old.
- §6. Second premium, to Alfred C. Hill, East Saugus, for Stallion, "Alex Patchen," 11 years old.
- §5. Second premium, to John Looney, Salem, for Stallion, "Independence," 3 years old, "Wedgewood" stock; color black.

O. S. Butler. Chas. H. Gould. Edward Harrington—
Committee.

STATEMENT OF ALFRED C. HILL.

Pedigree of Stallion "Alex Patchen," color, Seal Brown, age, 11 years, weight, 1030 pounds, by "Rex Patchen," 2.30: he by "Godfrey's Patchen," sire of Hopeful, 2.14½: he by "George M. Patchen." Dam, "Patty" by "Paddy," a Black Hawk Stallion taken to Maine from Vermont. Second dam by "Othello," he by Morgan "Eclipse," sired by Morgan "Cesar." His second dam was out of a thorough bred mare.

BROOD MARES.

The Committee on Brood Mares have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- §10. First premium, to John Swinerton, Danvers, for bay brood mare and foal, "Nellie Hawes," sired by "Nonpareil," weight 925 lbs. Foaled Apr. 14, 1888.
- §6. Second premium, to O. N. Fernald, Danvers, for bay brood mare and foal, 6 years old, sired by "Hector."
- §4. Third premium, to S. F. Newman, Newbury, for 7 years old brood mare, weight 1100 lbs. Foal 5 mos.: weight 470 lbs.

Asa T. Newhall, David Warren, Nathan R. Morse—
Committee.

FAMILY HORSES.

The Committee on Family Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$10. First premium, to M. C. Andrews, Andover, for family horse "Princess," "Almont" breed, brown mare, 7 years old, weight 1060 lbs.
- \$6. Second premium, to James A. Croscup, of Lynn, for family horse "Fanny," "Morgan" breed, roan mare, 6 years old, weight 1050 lbs.
- \$4. Third premium, to Edwin Bates, Lynn, for family horse, "Nellie Eaton," chestnut mare, 12 years old, weight 1100 lbs.

*The Committee would recommend a gratuity for family ponies "Becky" and "Gypsy," exhibited by Charles H. Chase, Haverhill.

Samuel W. Hopkinson, Andrew Lane, Sidney F. Newman, David Stiles—*Committee*.

NOTE.—The Trustees did not suspend the rules to award as recommended.

GENTS' DRIVING HORSES.

The Committee on Gents' Driving Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$10. First premium, to M. C. Andrews, Andover, for dark bay mare "Cyclone," 7 years old, weight 1075 lbs.
- \$6. Second premium, to J. Henry Nason, West Boxford, for iron gray Hambletonian gelding, "Doctor," 4½ years old, weight 975 lbs.
- \$4. Third premium, to M. Looney, Salem, for chestnut mare, "Kitty Fearnought," 6 years old, weight 1000 lbs.

E. A. Emerson, *Chairman*, T. R. Leach, A. B. Woodis—*Committee*.

FARM HORSES.

The Committee on Farm Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- §10. First premium, to J. H. Perkins, Lynnfield Centre, for dark bay mare "Maud," 9 years old, weight 1200 lbs.
- §6. Francis O. Kimball, Danvers Centre, for dark brown gelding, 9 years old, weight 1165 lbs.
- §4. Third premium, to Fred'k Symonds, North Andover, for 9 years old, weight 1060 lbs.

The Committee have found it a very difficult matter, with but three premiums to offer, to select from the twelve horses entered—each doing so well. To those most deserving, we have decided upon the above awards.

Yours respectfully,

E. S. PARKER.

For the Committee.

PAIRS OF FARM HORSES.

The Committee on Pairs of Farm Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- §12. First premium, to Col. H. H. Hale, Bradford, for farm horses, pair of black mares, "Vivian" and "Vianda," 5 years old, weight 3560 lbs.
- §8. Second premium, to Amos Pratt, Danvers, for "Topsy" and "Bill," black mare 7 years old, and gray gelding 9 years old, weight 2500 lbs.
- §4. Third premium, to T. E. Cox, Jr., Lynnfield Centre, for pair 7 and 8 years old, weight 2500 lbs.

Chas M. Lunt, Albert Kimball, Moses H. Poore. John H. Perkins—*Committee.*

COLTS FOR DRAFT PURPOSES. FIRST CLASS.

No entries.

COLTS FOR DRAFT PURPOSES, SECOND CLASS.

The Committee on Colts for Draft Purposes, Second Class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- \$8. First premium, to H. H. Hale, Bradford, for black colt, "Beatrice," 13 months old, weight 843 pounds. We consider this colt, an extra colt in all points.
- \$5. Second premium, to James J. H. Gregory, Middleton, for black mare colt, "Fannie," 18 months old, weight 750 pounds. Very good for all purposes.

E. G. Berry, N. S. Harris, G. F. Averill—*Committee*.

COLTS FOR GENERAL PURPOSES, FIRST CLASS.

The Committee on Colts for General Purposes, First Class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- \$8. First premium, to Harry H. Hale, Bradford, Hambletonian, black mare, "Silver Sea," 4 years old, weight 1100 pounds.
- \$5. Second premium, to L. L. Morrison, Danvers, for sorrel gelding, 4 years old, Knox breed, weight 1000 pounds.
- \$6. First premium, to Edwin Bates, Lynn, for "Eaton Wilkes," 3 years old, color chestnut, weight 1100 pounds.
- \$3. Second premium, to Harry H. Hale, Bradford, for black gelding "Dennis," 3 years old, Morrill breed, weight 925 pounds.

D. A. Pettengill, C. N. Maguire, John Mudge—*Committee*.

COLTS FOR GENERAL PURPOSES, SECOND CLASS.

The Committee on Colts for General Purposes, Second

Class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- §5. First premium, to Edwin Bates, Lynn, for yearling colt, " Daisy," weight 850 pounds.
- §3. Second premium, to Herbert Jepson, Lynn, for bay mare yearling colt, " May Wilkes," sired by " Geo. Wilkes."
- §5. First premium, to Charles Saunders, Salem, for bay gelding, " Jennie O.," 2 years old, sired by " Smugler," weight 820 pounds.
- §3. Second premium, to Daniel G. Tenney, Newbury, for bay mare, " Spright," 2 years old, sired by " Red-path," weight 785 pounds.

*Your Committee would recommend a gratuity to M. Looney of Salem, for his yearling colt, " Fearnought," Wedgewood, 1 year old.

Alonzo B. Fellows, Wesley Pettengill, Wm. A. Brown, George M. Roundy—*Committee*.

^cThe Trustees did not suspend the rules, to make award, as recommended.

SWINE. FIRST CLASS.

The Committee on Swine, First Class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- §5. Second premium, to John Mahoney, Rowley, for Berkshire boar " Rowley."
- §8. First premium, to John Mahoney, Rowley, for Berkshire sow " Margaret."
- §5. Second premium, to John Mahoney, Rowley, for Berkshire sow " Hannah."
- §8. First premium, to Robert G. Buxton, Peabody, for Yorkshire boar.
- §5. Second premium, to Danvers Hospital, Danvers, for Yorkshire boar.
- §8. First premium, to Simon P. Buxton, Peabody, for Yorkshire sow.

\$5. Second premium, to Danvers Hospital, Danvers, for Yorkshire sow.

\$8. First premium, to Simon P. Buxton, Peabody, for litter of weaned pigs.

Daniel D. Adams, George Buchan, E. K. Lee, Geo. B. Blodgett—*Committee*.

SWINE, SECOND CLASS.

The Committee on Swine, Second Class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

\$8. First premium, to Arthur C. Buxton, Peabody, for sow and ten pigs.

\$5. Second premium, to Simon P. Buxton, Peabody, for sow and ten pigs.

\$8. First premium, to H. H. Hale, Bradford, for 5 Yorkshire weaned pigs.

\$5. Second premium, to R. G. Buxton, Peabody, for 4 Yorkshire weaned pigs.

John Swinerton, Edward E. Herrick—*Committee*.

The committee did not consider the boar entered by Monroe brothers, fit for service and consequently did not award any prize to the same.

SHEEP.

The Committee on Sheep have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

\$10. First premium, to H. H. Hale, Bradford, for flock sheep.

\$4. First premium, to H. H. Hale, Bradford, for lambs.

\$8. First premium, to S. S. Pratt, Danvers, for Cotswold buck.

Geo. W. Adams, John L. Shorey, Horace C. Ware—*Committee*.

POULTRY.

The Committee on Poultry have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

JUDGED BY WM. F. BACON.

- \$2.00. First premium, to Wm. P. Perkins, Danvers, for pair Pekin Bantam Game fowls.
 Diploma, to Wm. P. Perkins, Danvers, for pen of Pekin Bantam Game fowls.
- 2.00. First premium, to Wm. P. Perkins, Danvers, for pair Game Duckwing Bantam fowls.
 Diploma, to Wm. P. Perkins, Danvers, for pen Game Duckwing Bantam fowls.
- 2.00. First premium, to Wm. P. Perkins, Danvers, for pair Red Pile Bantam fowls.
- 2.00. First premium, to Wm. P. Perkins, Danvers, for pair Black Japanese Bantam fowls.
- 2.00 First premium, to Wm. P. Perkins, Danvers, for pair Erminette chicks.
- 2.00. First premium, to Wm. P. Perkins, Danvers, for pair Aylesbury ducks.
- 1.00. Second premium, to Wm. P. Perkins, Danvers, for pair Aylesbury ducks.
- 2.00. First premium, to Wm. P. Perkins, Danvers, for pair Rouen ducks.
- 2.00. First premium, to Wm. P. Perkins, Danvers, for pair Cayuga ducks.
- 2.00. First premium, to Wm. P. Perkins, Danvers, for pair Pekin ducks.
- 1.00. Second premium, to Wm. P. Perkins, Danvers, for pair Pekin ducks.
- 2.00. First premium, to Wm. P. Perkins, Danvers, for pair White Muscovy ducks.
- 2.00. First premium, to Wm. P. Perkins, Danvers, for pair Brazillian ducks.
- 1.00. Second premium, to Wm. P. Perkins, Danvers, for pair Brazillian chicks.

- 2.00. First premium, to Wm. P. Perkins, Danvers, for pair Toulouse geese fowls.
- 1.00. Second premium, to Wm. P. Perkins, Danvers, for pair Toulouse geese fowls.
- 2.00 First premium, to Wm. P. Perkins, Danvers, for pair Emden geese fowls.
- 2.00. First premium, to Wm. P. Perkins, Danvers, for pair African geese fowls.
- 2.00. First premium, to Wm. P. Perkins, Danvers, for pair Brown China geese.
- 1.00. Second premium, to Wm. P. Perkins, Danvers, for pair Brown China geese.
- 1.00. Second premium, to Louis H. Elliot, Danvers, for pair Silver Spangled Hamburgs.
- 1.00. Second premium, to Louis H. Elliot, Danvers, for pair Golden Seabright Bantams.
- Diploma, to Francis O. Kimball, Danvers, for pen turkeys.
- Diploma, to Frank H. Wood, Haverhill, for B. B. R. Game Bantam chicks.
- 2.00. First premium, to Frank H. Wood, Haverhill, for pair B. B. R. Game Bantam chicks.
- 2.00. First premium, to Sam. Rogers, West Newbury, for pair White Wyandotte chicks.
- Diploma, to L. W. Copp, Saugus, for pen Black Leghorn chicks.
- 2.00. First premium, to L. W. Copp, Saugus, for pair Black Leghorn chicks.
- 2.00. First premium, to L. W. Copp, Saugus, for pair Black Leghorn fowls.
- 2.00. First premium, to H. A. Harrington, Peabody, for pair Plymouth Rock chicks.
- 1.00. Second premium, to H. A. Harrington, Peabody, for pair Plymouth Rock fowls.
- Diploma, to C. M. Poor, Peabody, for pen Dark Brahma chicks.
- 2.00. First premium, to C. M. Poor, Peabody, for pair Dark Brahma chicks.
- 2.00. First premium, to C. M. Poor, Peabody, for pair Dark Brahma fowls.

- 1.00. Second premium, to O. D. Woodman, Newbury, for pair B. B. Red Game chicks.
- 2.00. First premium, to O. D. Woodman, Newbury, for pair Buff Cochin chicks.
- 1.00. Second premium, to O. D. Woodman, Newbury, for pair Buff Cochin chicks.
- 2.00. First premium, to Wm. E. Sheen, West Peabody, for pair Brown Leghorn fowls.
- 2.00. First premium, to Reuben W. Ropes, Salem, for pair S. Comb White Leghorn fowls.
- 2.00. First premium, to Reuben W. Ropes, Salem, for pair S. Comb White Leghorn chicks.
- Diploma, to Reuben W. Ropes, Salem, for pen S. Comb White Leghorn fowls.
- Diploma, for special merit, to E. R. Perkins, Salem, for pair Prolific fowls.
- 1.00. Second premium, to Martin J. Kane, Lynn, for pair Black Leghorn chicks.
- Diploma, to Martin J. Kane, Lynn, for pen White Leghorn chicks.
- Diploma, for special merit, to Fred. H. Wiley, Peabody, for Light Brahmas.
- Diploma, for special merit, to Joseph H. Pearson, Newbury, for pair English Red chicks.
- 1.00. First premium, to Geo. Buchan, Andover, for 12 Black Minorca eggs.
- 2.00. First premium, to Geo. D. Walton, Peabody, for 2 pairs Dressed ducks.
- 2.00. First premium to Geo. D. Walton, Peabody, for 2 pairs Dressed fowls.

JUDGED BY C. L. BECKET OF PEABODY.

- Diploma, to F. M. Allen, Lynn, for pen Light Brahma fowls.
- \$2.00. First premium, to F. M. Allen, Lynn, for pair Light Brahma fowls.
- 1.00. Second premium, to F. M. Allen, Lynn, for pair Light Brahma chicks.

- 2.00. First premium to David L. Story, Beverly, for pair Light Brahma chicks.
 1.00. Second premium, to David L. Story, Beverly, for pair Light Brahma fowls.
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To the Committee on Poultry :

GENTLEMEN.—Having finished my duties in judging the Poultry Department of your exhibition, I beg to hand you herewith my report. I was unable to complete the work, as the high wind of this morning entirely demolished the tent, stopping further work. I was therefore obliged to leave the *Light Brahma Class, and Eggs, without being passed upon.

I am pleased to inform you, that in my opinion, the quality of your Poultry Exhibition is *far in advance* of last year, and as last year was superior to the one preceding, it is plain that poultry culture is advancing in your section and this department of your show is on the gain.

I had the pleasure of recommending, in my report of last year, a few changes in the arrangement of your premiums, which you did me the honor to adopt; the increase in the exhibit of those specialties, and the better quality of the same, prove the change to have been wise.

I would suggest that at the next exhibition your Society offer a premium of—say five dollars—for the best display of Poultry Appliances. There are a great many new and ingenious devices now in the market, very interesting to Farmers and Poultry Breeders, and some of them are of great practical value.

Respectfully yours,

W. F. BACON, *Judge*.

Sept. 26, 1888.

* Judged after the storm, by C. L. Becket.

Maj. D. W. Low :

SIR.—The committee beg to submit to you the following

report of the Poultry Department of the Essex Agricultural Fair of Sept. 25 and 26, 1888. Your committee were much pleased with the exhibition of Fancy Poultry, Turkeys and Geese. The display was quite large, very much in advance of the last four years, so much so that we feel no hesitation in saying that the interest in this department is decidedly on the increase. The interest which the large numbers in attendance manifested was very gratifying evidence that this was one of the important features of the exhibition. The display of *dressed* poultry, although not as large as we could wish, was nevertheless quite fine, and we feel confident that when it becomes better known that the Society wish people to compete in this line, we shall make a better display from year to year, and we look for a good display in the near future. There was also a good display of eggs. We think that the increased interest in these lines is owing to the generosity of the Society in offering larger premiums from year to year for the last four years. We think this fact and the employing of an *expert* as Judge has met with very general approval. Next year an additional premium will be offered on Poultry *Appliances*.

It seems to the committee that almost every other business is overdone while in this there is room for more. The United States does not produce eggs enough for her own consumption. New York City alone consumes 135,000 eggs daily. Statistics show that in 1882 the value of the poultry produced in the United States exceeded the value of either of the hay, cotton, wheat or dairy products, as the following figures show :—The Hay crop was \$436,000,000 ; Wheat, \$488,000,000 ; Cotton, \$410,000,000 ; Dairy products, \$254,000,000 ; Poultry products, \$560,000,000. Even at this rate it is necessary for us to receive a large importation of eggs. Managed with the same care and attention to details that one would give to any other business, we assert that no business will pay so large a return for the amount invested.

Respectfully yours,

A. F. HARVEY, *Chairman Poultry Committee.*

AGRICULTURAL IMPLEMENTS.

The Committee on Agricultural Implements have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- \$5. First premium, to Jas. W. Joyce, Lawrence, for market wagon.
- \$3. First premium, to H. P. Whipple, Peabody, for farm wagon, for 2 horses.
- \$3. Gratuity, to H. P. Whipple, Peabody, for business wagon.
- \$3. Gratuity, to H. P. Whipple, for lumber wagon.
- \$3. Gratuity, to Dole & Osgood, Peabody, for hose wagon.
- \$3. Gratuity, to Geo. E. Daniels, Rowley, for hay wagon.
- \$1. Gratuity, to G. L. Richardson, So. Peabody, for drinking fountain.
- \$10. First premium, to J. L. Colcord & Son, Peabody, for collection of 16 varieties.
- \$3. Gratuity, to E. L. Blake & Co., Peabody, for seed drills.
- \$1. Gratuity, to E. L. Blake & Co., Peabody, for combination banker hoe.
- \$1. Gratuity, to E. L. Blake & Co., Peabody, for cutting hoe.
- \$1. Gratuity, to E. L. Blake & Co., Peabody, for 1 wheel hoe.
- \$1. Gratuity, to E. L. Blake & Co., Peabody, for onion sett machine.
- \$1. Gratuity, to E. L. Blake & Co., Peabody, for collection wheel hoe blades.
- *Diploma, to C. H. Thompson & Co., Boston, for excellence of display of agricultural implements (23 varieties).

John L. Shorey, Horace C. Ware, Geo. W. Adams—*Committee.*

*Awarded by Trustees at November meeting. Car containing the implements was delayed, and no entry made with Secretary in time for Oct.

CARRIAGES.

The Committee on Carriages have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$5. Gratuity, to H. H. Pillsbury, Danvers, for box buggy.
- \$3. Gratuity, to H. H. Pillsbury, Danvers, for Goddard.
- \$3. Gratuity, to H. H. Pillsbury, Danvers, for Doctor's Rockaway.
- \$5. Gratuity, to Lambert, Hollander & Co., Amesbury, for Goddard
- \$2. Gratuity, to Lambert, Hollander & Co., Amesbury, for open Surry.
- \$2. Gratuity, to Lambert, Hollander & Co., Amesbury, for box top buggy.
- \$4. Gratuity, to T. W. Lane, Amesbury, for Corning top buggy.
- \$3. Gratuity, to T. W. Lane, Amesbury, for open buggy.

T. P. Harriman, Alfred Cross, Rufus Kimball—*Committee.*

IN EXHIBITION HALL.

REPORT OF SUPERINTENDENT OF HALL.

I would respectfully report that the Exhibition of the Society, held in the Town Hall, in Peabody, on the 25th, 26th and 27th of September, 1888, indicated a good degree of interest on the part of exhibitors. The contributions on the whole were remarkably good, and the attendance on the first day was quite large, giving every promise of a still larger attendance for the second day and a highly satisfactory financial result. But the very remarkable storm of rain and wind, beginning on the night of the first day and continuing through the forenoon of the second day, made the attendance of any considerable number of visitors quite impossible, and although the

exhibition in the hall was continued through another day and evening, the tide of success had been turned ; people from other towns had returned to their homes, and those kept at home by the storm of Wednesday did not arrive on Thursday. The continuance of the exhibition on Thursday added about \$125 to the net receipts, and so far helped to make up the deficiency.

In the exhibition hall there was an excellent exhibit of fancy work and works of art, probably quite equal both in quantity and quality to any former exhibit of the Society.

* I would suggest the appointment of a special committee on works of art, and another on fancy work, instead of combining the two as at present, and that the sum of fifty dollars, to be given in gratuities, be placed at the disposal of each committee. There is throughout the community a growing interest in each of these departments, and no part of the general exhibit is more attractive than the Art Department and Fancy Work. Ladies especially are attracted to these more than to all others, and the encouragement given to contributors by the award of gratuities will be sure to amply compensate for a little more expenditure by drawing in a larger number of visitors. There is an unwillingness to exhibit valuable articles in the fancy department, unless the same can be protected by being placed in glass cases. Several cases were borrowed this year for that purpose. Would it not be advisable for the Society to own a few cases for use in this department ?

There was a large exhibition of Afghans and Quilts. Many of these were in excellent design and fine workmanship. In the Rug department there was a great variety of style and patterns. Some of these were beautiful in design and finish : one especially, drawing the first prize, was of a remarkably artistic design and ar-

* This recommendation, except that \$30 was voted for each instead of \$50, was adopted by Trustees at November meeting.

range of colors, and would compare favorably with a fine quality of imported rugs. The Afghans, Quilts and Rugs, arranged around the front of the balcony, made quite an attractive feature of the exhibition. The exhibition of white and colored wool mats, entered by H. E. Foan, is worthy of especial mention, and was a surprise to those not otherwise informed of the excellent work which is done in the finish of these goods.

In the Flower department it was feared that the show would prove a failure, in consequence of the early frost; but notwithstanding this, quite a good exhibit was made, and many fine specimens were shown of cut flowers, foliage plants and bouquets of native flowers.

The Fruit tables were well filled, and of many kinds of Apples and Pears excellent specimens were contributed. The fact that the season had been unfavorable to the ripening and growth of fruit did not greatly reduce either the quantity or quality of this important part of the exhibition.

The show of Grapes and Peaches was quite limited. A few plates only of each were exhibited.

The room for the exhibition of vegetables was well filled. Several excellent collections were shown; and fine specimens of individual kinds were also shown by many others.

A very large number contributed to the Bread department, and the specimens furnished seemed to be of excellent quality.

A glass case filled with specimens of Cake, made by young ladies, members of a Cooking Club, was on exhibition. The samples exhibited were quite creditable to the members of the club.

In General Manufactures the supply was not all that ought to be expected of an Essex County exhibit. A great variety of small wares are manufactured in the county; many of these could be exhibited with but little trouble or expense. While the society cannot offer prizes as an inducement to exhibitors, except to a limited extent,

yet it can not fail to be of benefit to manufacturers of small wares to call public attention to their work, especially where the hall accommodations are ample for the purpose. Fine needle-work and works of art are an attraction to one portion of visitors; farmers are especially interested in orchard and farm products: but there is another class, who, though interested in these, would be especially attracted by a larger exhibit of the many articles of handicraft and manufactures which are produced in great variety in this county. If a larger number and greater variety of articles, classified under Articles of General Merchandise, were exhibited, with the same variety and quantity exhibited this year, in all other departments, the Essex County Agricultural Exhibition, in the Hall department, would be all that could be desired.

The Superintendent was greatly assisted by the Committees appointed to receive and arrange the contributions to the several departments, and also to those who served as Clerks. Most of them, both on Committees and as Clerks, served the previous year, and that experience was of great service. Without the assistance of those who have had such experience it is hardly possible to receive the exhibits which arrive on the morning previous to the opening of the hall, and arrange them properly for exhibition. By reason of the efficient aid of Committees and Clerks the hall was made ready for the Examining Committees to make their awards at the appointed time.

Many persons appointed on committees to make awards, failed to appear, and on some committees only one or two were present. It was necessary to appoint others to fill their places. This could only be done by appointing some who had served on the Committee of Arrangement.

Some provision should be made for that purpose. Some authority given either to the Superintendent or to some person or persons who should be in the hall to fill vacancies when the books are given to committees.

The selection of committees to make awards is of much importance, and should be made with especial reference

to the fitness of each person to judge of the merits and comparative worth of articles in the department in which he or she may be appointed to serve. The acting committees of this year, some of whom were informally appointed, were quite prompt in making their awards and in returning their books and reports to the Superintendent.

Respectfully submitted,

AMOS MERRILL, *Superintendent of Hall.*

DAIRY.

CORRECTION OF ERROR OF 1887. By some mistake, the Dairy Committee of 1887 returned to the Secretary the statement of Mrs. B. H. Farnum of her exhibit of butter as that of "D. G. Tenney," and his statement as hers, and they were so published in the Transactions of the Society, much to the surprise of Mrs. Farnum who disowned any such statement as appeared under her name. In behalf of the Society, I express its regret for the mistake and trust Mrs. Farnum will pardon it.

D. W. Low, *Secretary.*

The Committee on Dairy have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- \$8. First premium, to C. W. Gowen, West Newbury, for 5 lbs. butter.
- \$6. Second premium, to W. K. Cole, West Boxford, for box butter, 5 lbs.
- \$4. Third premium, to Mrs. H. A. Perkins, Peabody, for box butter, 6 lbs.

N. Longfellow, J. K. Bancroft, Ezekiel G. Nason, D. Bradstreet—*Committee.*

STATEMENT OF MRS. C. W. GOWEN.

This is Jersey butter, made by setting milk in pans about half full, and skimming in thirty-six hours. It is churned and salted at the rate of $\frac{3}{4}$ oz. of salt to a pound of butter. I wash it in two or three waters before salting. After standing awhile, it is ready to put up in pound balls as exhibited.

STATEMENT OF WILLIAM K. COLE.

The butter (5 lbs.) which I enter for premium is made from the milk of two grade Jersey cows, as follows: Milk set in pans in cellar; after 36 hours skimmed, and cream churned once a week. As soon as the butter comes it is washed with cold water, then rinsed again and is immediately worked over, and put up in packages for market or for the table. Salted about 1 oz. to a pound of butter. No coloring matter was used on this butter.

One of the cows had 1 qt. of meal and 1 qt. of shorts per day: the other none. They were fed some corn fodder night and morning, and had the run of a poor pasture.

STATEMENT OF MRS. H. A. PERKINS.

Milk set, 48 hours. Churned, 15 minutes. Butter-milk drawn and butter rinsed in water and salted 1 oz. to lb., and worked by hand until all the water is removed. This butter is made from pure Jersey cream and no coloring used.

 BREAD, HONEY AND CANNED FRUIT.

The Committee on Bread, Honey, etc., have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- \$3. First premium, to Winnie Manning, Topsfield, for white bread.
- \$2. First premium, to Mrs. Lura Mafuta, Salem, for graham bread.
- *\$5. First premium, Dummer Special, to Mrs. Lura Mafuta, Salem, for Glen Mills Improved graham bread.
- \$2. Second premium, to Olivia J. Spencer, Peabody, for white bread.
- \$1. Second premium, to Mrs. N. E. Ladd, Groveland, for graham bread.

- *\$2. Second premium, Dummer Special, to Mrs. N. E. Ladd, Groveland, for Glen Mills Improved graham bread.
- *\$1. Third premium, Dummer Special, to Mrs. D. H. Southwick, Peabody, for Glen Mills Improved graham bread.
- \$1. Third premium, to Miss Mary Lyons, Salem, for white bread.
- 50c. Gratuity, to Mrs. A. McGregor, Peabody, for brown bread.
- \$3. First premium, to Mrs. A. Wilson, No. Beverly, for best collection of Preserves and Jellies.
- 50c. Gratuity, to Mrs. L. H. Perry, Danvers, for graham bread.
- \$2. Second premium, to Mrs. W. H. Fellows, Peabody, for preserves and pickles.
- 50c. Gratuity, to Mrs. H. C. Torr, Peabody, for pickles and preserves.
- 50c. Gratuity, to Mrs. C. H. White, Danvers, for 1 doz. jelly.
- \$2. Gratuity, to Cooking Club, Peabody, for collection of cake and pastry.
- 50c. Gratuity, to Mrs. A. Harrington, Peabody, for angel cake.
- \$3. First premium, to J. H. Nagle, Danvers, for honey.
- 50c. Gratuity, to Mrs. Arthur P. Reed, Danvers, for white bread.
- Diploma, to N. N. Dummer, Glen Mills, Rowley, for prepared cereals and cooked food.
- \$5. First premium, to B. A. Blake, Peabody, for aparian implements.

Mrs. J. Henry Hill, Mrs. D. W. Low, Mrs. W. L. Bowdoin, Mrs. C. M. Poor—*Committee*.

NOTE.—Given by N. N. Dummer, Glen Mills, Rowley.

FIRST PREMIUM GRAHAM BREAD.

1 qt. of graham flour, 1 teaspoonful of salt, $\frac{1}{2}$ gill of mo-

lasses, $\frac{1}{2}$ cup of potato yeast, dessert spoonful of lard; raised 9 hours; kneaded 10 minutes; baked $1\frac{1}{4}$ hours. Made from Glen Mills Improved graham flour.

MRS. LAURA MAFUTA.

85 Lafayette St., Salem, Mass.

SECOND PREMIUM GRAHAM BREAD.

Bread made from Glen Mills Improved graham flour, put up by N. N. Dummer, Rowley, Mass.

Process of making: One quart Graham flour, one teaspoonful salt, one large spoonful sugar, piece of butter size of walnut, $\frac{1}{4}$ of a Vienna yeast cake, one pint new milk. Rise over night: in the morning knead, put in pan and rise again one hour. Bake one hour in a moderately heated oven.

MRS. N. E. LADD, Groveland.

THIRD PREMIUM GRAHAM BREAD.

Graham bread made from Dummer's Glen Mills flour.

Put two quarts of graham flour into the bread bowl, make a hole in the middle, pour in a pint of water, add half a tablespoonful of butter, a little salt, a gill of molasses, one half cake of compressed yeast, dissolved in one cup of warm water, stir all together twenty minutes, and rise over night; then mould into loaves, then rise in the pans; bake one hour and fifteen minutes.

MRS. D. H. SOUTHWICK, Peabody.

FIRST PREMIUM WHITE BREAD.

This bread was made as follows: To 3 quarts Haxall flour add one pint each of milk and water, milk warm, one-half yeast cake, one tablespoonful of salt. Knead half an hour and leave to rise over night. Knead again in morning and let rise. Mould into loaves and leave on pans for an hour and a quarter. Then bake in a moderate oven one hour.

WINNIEFRED E. MANNING,

Age, 14 years.

Topsfield, Mass.

SECOND PREMIUM FLOUR BREAD.

1 pint milk, 1 pint water, 1 tablespoon lard, 1 tablespoon white sugar, 1 teaspoon salt, 1 quart flour, $\frac{1}{2}$ compressed yeast cake. At night I made a sponge of the above, slightly warming the milk and water. In the morning I kneaded it five minutes, working in 1 more quart of flour. (The flour is Imperial Haxall.) Then I placed it in a pan and let it rise three hours, kneading it down once or twice during the time. Then I moulded it into shape and let it stand for one-half hour in its pan. Baked it three-quarters of an hour, in a moderate oven.

OLIVIA J. SPENCER,
Peabody, Mass.

THIRD PREMIUM BREAD.

Made with Haxall flour, raised with Compressed yeast, and milk scalded, small piece butter, raised over night, kneaded for five minutes, put into pans and raised again, and baked forty (40) minutes.

MARY LYONS, Salem.

STATEMENT OF E. L. BLAKE & CO. OF PEABODY,

Concerning their exhibition of Bees, Hives and Apiarian Implements at the fair of the Essex Agricultural Society, held at Peabody, Mass., Sept. 25 and 26, 1888.

In regard to bee hives, we use three styles of our own manufacture. The hive that we consider the best of the three styles, and also the best we think ever got up, is called Blake's Improved American Hive. It is a double walled hive, designed to be packed with chaff in the cold season, which we consider an improvement over the styles that are not intended to be packed. It is the most simple hive possible. We are able to remove the bees and frame in from two to five minutes when we wish so to do. It is called complete with eight brood frames, but is capable of being increased to twelve. The surplus is taken

care of in a crate holding 24 one-pound section boxes placed directly on the frames, separated by a honey board when desired to exclude the Queen. The frames rest upon a cleat upon the bottom board, about $\frac{3}{4}$ of an inch high above the bottom, giving plenty of room for the access of the bees and also a free circulation of air. We use a feeder with this hive placed upon the top-board inside of the hive directly over the frames, thereby preventing all robbing, which is a great annoyance with outside feeders. This hive is made of good sound pine, and painted two coats, and is made throughout in the best possible manner.

We also make and exhibit and also use a hive styled Blake's Eclipse Observatory Hive. This hive is a single walled eight frame hive with removable glass door in the back. It is intended for ladies and amateurs desiring to study the bees at work, and it is a superior article for this purpose, as the bees can be seen through the glass back. The frames are skeleton frames and are removable. We have none of this style in use at the present time. The surplus is taken off by a crate of ten 2-lb. boxes placed in the second story. This hive also is fed upon the inside by a feeder placed in the second story.

Our box hive is the common box hive in use fifty years or more ago. It has no frames whatever, and contains two ten-pound boxes for the reception of the surplus honey. We consider almost any frame hive superior to the box hive.

We use a small quantity of foundation in all of our frames and consider it a great improvement. We use Clark's cold blast smoker for smoking bees, and consider it a superior article in every respect.

Hive No. 1. Italian Bees.

This swarm is in our Improved American Hive described above. We consider this variety of bees as the best for all purposes, as they are quieter and better workers, and increase faster, and winter well, and also are less

liable to run away. This swarm has produced some 25 lbs. of honey this season and still have some in the comb. They have thrown two swarms this season. Our honey was taken up on the last of August and the first of September. It has been a very poor season for honey in this vicinity. We carry seven swarms of Italians.

Hive No. 2. Hybrid Bees.

This is also in our American Hive. These are a cross between the Italian and common bees. They are a very good variety if a person does not mind their being a little treacherous. They are excellent workers and winter well, coming out vigorous and healthy in the spring. They have produced about 20 lbs. of honey, and have thrown two or three swarms. We carry three stands of this variety.

Hive No. 3. Black Bees.

This swarm is shown in our box hive. They are the most unprofitable of any that we have, their main recommendation being in their wintering well and also being great stingers. They are good garnerers of honey and also great consumers of honey. They have produced from 10 to 15 lbs. of honey. Have also thrown two swarms. We carry one hive of this kind, which we retain more for fancy than profit.

PEARS.

The Committee on Pears have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- \$3.00. First premium, to M. W. Bartlett, West Newbury, for Bartlett pears.
- 3.00. First premium, to A. K. Raddin, Peabody, for Belle Lucrative pears.
- 3.00. First premium, to G. D. Walton, Peabody, for Bosc pears.

- 3.00. First premium, to Edwin Bates, Lynn, for d'Anjou.
- 3.00. First premium, to Edwin Bates, Lynn, for d'Angouleme pears.
- 3.00. First premium, to W. P. Hutchinson, Danvers, for Dana Hovey pears.
- 3.00. First premium, to C. B. Haven, Peabody, for Lawrence pears.
- 3.00. First premium, to J. C. Burbeck, Salem, for Louis Bon de Jersey pears.
- 3.00. First premium, to A. J. Hubbard, Peabody, for Maria Louise pears.
- 3.00. First premium, to C. B. Haven, Peabody, for Onondaga pears.
- 3.00. First premium, to Benj. R. Symonds, Salem, for Paradise d'Automne pears.
- 3.00. First premium, to J. H. Hill, Amesbury, for Seckle.
- 3.00. First premium, to Aaron Low, Essex, for Sheldon.
- 3.00. First premium, to Stephen Fernald, Peabody, for Urbaniste pears.
- 3.00. First premium, to M. W. Bartlett, West Newbury, for Vicar pears.
- 3.00. First premium, to Edwin Bates, Lynn, for Howell.
- 3.00. First premium, to J. E. F. Bartlett, Peabody, for Beurre Hardy pears.
- 3.00. First premium, to A. J. Hubbard, Peabody, for Beurre Clairgeau pears.
- 1.50. Gratuity, to J. M. Ward, Peabody, for Goodell.
- 1.00. Gratuity, to M. J. Pollock, Salem, for Belle Lucrative pears.
- 1.00. Gratuity, to M. J. Pollock, Salem, for Bartlett.
- 1.00. Gratuity, to Edwin Bates, Lynn, for Louis Bon de Jersey pears.
- 1.00. Gratuity, to Edwin Bates, Lynn, for Lawrence.
- 1.00. Gratuity, to D. A. Pettengill, Danvers, for Vicar.
- 1.00. Gratuity, to Benj. R. Symonds, Salem, for Seckle.
- 1.00. Gratuity, to J. H. Hill, Amesbury, for Dana Hovey pears.
- 1.00. Gratuity, to J. H. Hill, Amesbury, for Bose pears.

- 1.00. Gratuity, to S. W. Spaulding, Danvers, for d'Anjou.
- 1.00. Gratuity, to W. B. Little, Newbury, for Sheldon.
- 1.00. Gratuity, to Geo. Pettengill, Salem, for Congress.
- 1.00. Gratuity, to E. F. Webster, Haverhill, for Beurre Hardy pears.
- 1.50. Gratuity, to J. W. Dodge, Danvers, for Dodge Seedling pears.
- 1.50. Gratuity, to Geo. D. Walton, Peabody, for Branch of Howell pears.
- 6.00. First premium, to Edwin Bates, Lynn, for collection of 13 varieties.

Geo. Pettengill, Edwin V. Gage, P. M. Neal, J. Henry Hill—*Committee*.

APPLES.

The Committee on Apples have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$3.00. First premium, to Alfred McLeod, Danvers, for Porter.
- 3.00. First premium, to B. P. Ware, Marblehead, for Sweet Baldwin.
- 3.00. First premium, to S. F. Newman, Newbury, for Tolman's Sweet.
- 3.00. First premium, to E. A. Emerson, Haverhill, for Hubbardston.
- 3.00. First premium, to S. Fuller, Danvers, for Bailey's Sweet.
- 3.00. First premium, to George Buchan, Andover, for Granite Beauty.
- 3.00. First premium, to W. Burke Little, Newbury, for Smith's Cider.
- 3.00. First premium, to C. L. Beckett, Peabody, for R. I. Greening.
- 3.00. First premium, to Mrs. David Warren, Swampscott, for Pickman Pippin.

- 3.00. First premium, to J. Henry Hill, Amesbury, for Red Russett.
- 3.00. First premium, to S. B. George, Groveland, for Baldwin.
- 3.00. First premium, to Wm. Burke Little, Newbury, for Tompkin's King.
- 3.00. First premium, to D. A. Pettingill, Danvers, for Danvers Winter Sweet.
- 3.00. First Premium, to P. M. Ilsley, Newbury, for Roxbury Russett.
- 1.50. First premium, to Mrs. N. E. Ladd, Groveland, for Hyslop Crab Apples.
- 6.00. First premium, to J. Henry Hill, Amesbury, for Collection.
- 1.50. Gratuity, to Frank Whitman, Wenham, for Danvers Winter sweet.
- 1.50. Gratuity, to B. P. Ware, Marblehead, for Baldwin.
- 1.00. Gratuity, to Hattie T. Osborn, Peabody, for Hyslop Crab.
- 1.50. Gratuity, to John Bowen, Peabody, for Hubbardston.
- 1.50. Gratuity, to Susan P. Newhall, Peabody, for Porter.
- 3.00. First premium, to S. B. George, Groveland, for Hunt's Russett.
- 3.00. First premium, to Augustus Very, Danvers, for Hurlburt.
- 3.00. First premium, to E. L. Hill, Danvers, for Gravenstein.
- 1.00. Gratuity, to S. W. Spaulding, Danvers, for Wealthy.
- 1.00. Gratuity, to Charles T. Bushby, Peabody, for Northern Spy.
- 1.50. Gratuity, to W. H. Perkins, Peabody, for Gravenstein.
- 1.50. Gratuity, to Abel Stickney, Groveland, for King of Tompkins County.
- 1.50. Gratuity, to Wm. Burke Little, Newbury, for Roxbury Russett.
- 1.00. Gratuity, to J. N. Rolfe, Newbury, for Maiden's Blush.

- 1.00. Gratuity, to Alfred Ordway, Bradford, for Ordway Apple.
- 1.00. Gratuity, to Munroe Brothers, Lynn, for Baldwin.
- 1.00. Gratuity, to William K. Cole, West Boxford, for Williams Favorite.
- 1.50. Gratuity, to Horace Ware, Marblehead, for Sweet Baldwin.
- 1.50. Gratuity, to W. Pettingill, Salisbury, for R. I. Greening.
- 1.00. Gratuity, to Mrs. C. H. White, Danvers, for Romanite.
- 1.00. Gratuity, to David L. Haskell, Essex, for 20 ounce Pippin.
- 1.00. Gratuity, to Oliver P. Killam, West Boxford, for Dutch Codlin.
- 1.00. Gratuity, to David L. Haskell, Essex, for King of Tompkins County.
- 1.00. Gratuity, to Kendall Osborn, Peabody, for Summer Baldwin.
- 1.00. Gratuity, to D. N. Stoddard, Peabody, for Osgood Favorite.
- 1.00. Gratuity, to Abel Stickney, Groveland, for Snow.
- 1.00. Gratuity, to George C. Goldthwait, Salem, for Killam Hill.
- 1.00. Gratuity, to Kendall Osborn, Peabody, for Fall-awater.
- 3.00. First Premium, to George F. Sanger, Peabody, for Drap d'Or.
- 1.50. Second premium, to J. Henry Hill, Amesbury, for Smith's Cider.
- 1.00. Gratuity, to J. Henry Hill, Amesbury, for King of Tompkins County.

J. J. H. Gregory, Joseph How, Geo. W. Chadwick,
Thomas Hale—*Committee*.

REPORT OF COMMITTEE ON APPLES.

The exhibition of 1888 was not of average excellence,

the samples being of smaller size than usual, while the individual specimens were more often wormy, or not as fair. Without doubt, the exceptional coldness of the past season, and, possibly in some localities, the effect of hail storms on the fruit, were the agencies which contributed largely to produce its inferior size and poor condition.

Without doubt, the apple is, and is to be, the King fruit of New England. We dwell within that fortunate zone where it reaches perfection, for, within the area of New England nearly every known variety attains its highest quality. The Cherry, the Peach, and the Plum grace our tables for a short season; the Pear is with us a little longer, and a few varieties, by tender care, accompany us into the winter months, luxuries on the table of those who can afford to indulge in them,—but the democratic Apple, in its hundreds of varieties, enters every household in plenteous abundance, too common to be called a luxury, and just above being a necessity.

The good province of the apple tree is, by no means exhausted, when we say it bears sweet fruit or sour fruit; crisp fruit or spicy fruit; early or late fruit; or that the tree is a good cropper or a good grower. It would be a sorry time for the race were the mouth and the pocket to be the sole measures of value. There are utilities in things which are essential to our higher happiness that the mouth and the pocket know not of. Do we appreciate our apples at their full desert, for the pleasure they afford our other senses besides that of taste? Certainly the rich red of the William's Favorite, the delicate bloom on the Astracan, the clear, transparent straw color of the Porter, the brilliant gold and carmine of the Gravenstein, and the delicate beauty of the Maiden's Blush are a feast to the eye, and make these of more value to us than though they had just as good eating qualities as now, but were each contained within a green or drab skin. No class of fruits can compare with the apple in richness and variety of color. The peach, the pear, and the plum,

have each its attractions, but at every fruit show the apple will always bear the palm of superiority for the greatest difference in brilliant colors in their various attractive combinations. Even the citrus fruits, of which the orange is a type, though attractive to the eye, are limited in their coloring to two or three shades of uniform orange and yellow.

Again, do we appreciate our apples for the variety of delicious odors which they exhale that are grateful to the sense of smell beyond those from any other fruit, not even the quince excepted. Is there, the wide world over, to be found a more delicious fruit odor than that which fills the air from a freshly opened barrel of the Red Astracan apples? The store of the fruit dealer exhales a richer fragrance than the shop of the apothecary, who is supposed to deal in perfumes directly from "Araby the Blest." No, we do not appreciate, and, therefore, do not enjoy half as much as we may the characteristic fragrance belonging to many varieties of the apple. A lady friend was in the habit of keeping a dish of the Red Astracan in her parlor, as long as they were in season, and to every one who entered it their delicate boquet was a delightful surprise. I keep one or two apples in my drawer with writing materials, not to eat, but to catch the rich odor as I open it. They remind me of the fragrance which comes from pansies growing in a cold frame, when the sash is raised.

Not only is it the province of the fruit to afford us other enjoyments than that which comes through the sense of taste (for if not, why then did the Creator bestow upon it color and fragrance?), but it is the sphere of the tree itself to administer to the esthetic side of our natures. Is there any tree in the vegetable kingdom of the north temperate zone so beautiful as an apple tree in bloom? The peach, the plum, the cherry and the pear, each are beautiful, but in the three former it is a mere mass of dead color, while in the latter the blossoms are all white, besides being disagreeable in their odor, but those of the apple, in various shades of delicate pink in the

opening buds, passing into white as the bud develops into the open flower, with bud and blossom elegantly intermingled in their wax-like structure, and each separate bunch set in a background made up of a circle of fresh young leaves, with their color of delicate green, make the most charming sight of spring. Then their delicious fragrance, laden with the very breath of spring-time! The large apple-tree directly front of my house, in its season of blossoming, calls out more exclamations of delight than do all the flowers of the garden through the entire season, and bear as heavy as it may of excellent fruit, to us by far the most valuable crop it yields are its ten thousand bouquets of fragrant blossoms, "the home of the ever busy bee, alive through all its leaves."

Again, the characteristic forms peculiar to different trees make in the orchard a pleasing variety. In the Killam Hill we always find an eccentric angularity in its limbs, while in the Sweet Bough we have a type of perfect symmetry: and it is a singular fact that the fruit of these two trees partake in their shape of the trees themselves. Among the various forms which characterize different trees I think that of the 20 ounce Pippin surpasses all for beauty. The form natural to the tree is one of nearly perfect symmetry, and its habit of growth is to make more fine branches than other varieties, and hang its fruits on the very tips of these branches; the result is that when the large, symmetrical, elegantly colored apples are mature, they hang down as elegant pendants all over the tree, and so please the eye, that any lover of the beautiful having once seen the sight will never forget it.

It seems to me that a classification of apples is needed to include those varieties which are the best adapted for our comparatively new and growing industry, that of evaporated fruit, for it is a well-known fact that some varieties are better than others for this purpose. There is another limited use to which we put this king of all our fruits, for which some varieties are better than others. I refer to the manufacture of jellies and marmalade. These are probably the most easily made and the cheap-

est of all our home preserves, and as usually made probably the poorest, too; but when made from the varieties best adapted to this purpose, there are but few put upon the table that are preferred to it. It is with apples as with grapes, while wine of some sort can be made from all varieties, some (such as the Isabella) will be almost worthless, while that from others (such as the Catawba and Ives), will rank with the very best. In all our home experiments, in the making of jelly and marmalade, we have found none to equal in quality that made from matured Pickman Pippins. It is to be regretted that the fine variety is so little planted nowadays. The tree is long lived, grows to a large size, and is a heavy cropper. The apples are full average in size, elegant in their gold and carmine color, very crisp in their flesh, and possess a very brisk, sub-tart flavor, which is very much liked by many. For all cooking purposes they cannot be surpassed. I believe it would make a first-class variety for evaporated fruit. Its time for perfection is the late fall and early winter. The one objection to it is that it is not a very good keeper, but with so many good qualities that can be utilized it ought to be found in every nursery catalogue.

While there is but little danger amid the present apathy in orchard planting of our entering on apple culture so extensively as to overstock the market, native and foreign, yet before entering on any plan for cultivating the late varieties on a large scale, it might be wise for us to bear in mind what our Nova Scotia neighbors are doing in this line of business. They have almost unlimited area in Annapolis and an adjoining county which are capitally adapted to apple raising, and as their fruit is taking the precedence not only in the English market but also in our own, by reason of the care with which it is packed as well as for its excellent quality and for superior keeping qualities, paying them a much larger profit than any other crop they raise, they are fully aroused to their opportunities, and are planting out thousands of acres of new orcharding with every year. As it has been

estimated that the two counties which appear to be specially adapted to apple culture, are capable of raising from five to ten millions of barrels annually, it is obvious that the future of the apple market will probably be to a large extent in their hands. Under such a present and prospective condition of affairs could the Department of Agriculture better serve the farmers of New England than by sending a commission to Nova Scotia to get at all the facts in the case, and more especially to determine whether or not there are any varieties which the European market would take that we can raise here better than they can there?

A word from my experience with the Russet Baldwin, a variety which has been highly praised at some of our institute gatherings—and as far as quality goes not overpraised for in this respect it is superior to the famous Baldwin itself. In its cropping qualities I find it to be decidedly inferior to the Baldwin. On my farm I had many native trees grafted to it which I now intend to regraft with the Baldwin.

For several years I have sold my apple crop on the trees either at a fixed price per barrel or by the lump, the purchaser in the former case to take all on the ground after a given date, previous to which I had all the windfalls picked up, this condition being made in order that I might not lose by any storm that might occur after the sale. I have found on figuring over the matter that the profit on the apple crop, where pickers are hired, is not so large as is generally believed. My figures are as follows. In them I assume that 8 barrels is an *average* days' work by a careful hand, taking the whole orchard as it averages:—

Dr.

Barrel of Apples,

To picking,	\$0 19
Barrel,	20
Sorting, filling and heading,	10
Marketing at rate of ten barrels per day,	25
	<hr/>
	\$0 74

Cr.

Barrel of Apples,

2-3 of barrel good, at rate of \$1.50 per bbl., \$1 00

1-3 seconds, at \$1.00 per bbl., 33

 \$1 33

74

 Profit per barrel,

59

If these figures are correct it follows that in case we have to hire men to pick our apple orchards, we should do better to sell our apples on the average at 60 cts. per barrel. I have made no account of the cider class, for I consider that those just about pay for their picking up.

I have devoted the larger portion of the paper to a presentation of the esthetic side of our king of fruits. Should any good friend inquire why I have done so I will reply in the word of a distinguished philosopher, "It is wise to care for the beautiful in life; the useful will take care of itself."

JAMES J. H. GREGORY, *for the Committee.*

PEACHES, GRAPES, AND ASSORTED FRUITS.

The Committee on Peaches, Grapes, and Assorted Fruits have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- \$2.00. First premium, to Edwin Very, Danvers, for Essex County Seedling peaches.
- 2.00. First premium, to E. S. Burbeck, Peabody, for Freestone White Flesh Grove Mignone peaches.
- 2.00. First premium, to E. S. Burbeck, Peabody, for Yellow Flesh Crawford peaches.
- 1.50. Gratuity, to J. A. Peasley, Peabody, for White Flesh Old Mixon peaches.
- 1.50. Gratuity, to Minnie Walton, Salem, for White Flesh Seedling peaches.

- 1.50. Gratuity, to George Pettengill, Salem, for Ives' Blood peaches.
- 1.00. Gratuity, to C. B. Haven, Peabody, for Haven's Seedling peaches.
- 50c. Gratuity, to David Loud, Peabody, for Yellow Flesh Crawford peaches.
- 3.00. First premium, to Frederick Lamson, Salem, for collection of peaches.
- 1.00. Gratuity, to E. F. Colcord, Danvers, for Crawford peaches.

GRAPES.

- 3 00. First premium, to C. B. Haven, Peabody, for Concord grapes.
- 3.00. First premium, to Dr. J. W. Goodell, Lynn, for Hartford Prolific grapes.
- 3.00. First premium, to W. P. Hutchinson, Danvers, for Moore's Early grapes.
- 3.00. First premium, to W. P. Hutchinson, Danvers, for Niagara grapes.
- 3.00. First premium, to C. B. Haven, Peabody, for Delaware grapes.
- 3.00. First premium, to E. P. Hutchinson, Danvers, for Worden grapes.
- 3.00. First premium, to Samuel Cammett, Amesbury, for Martha grapes.
- 1.50. Gratuity, to W. H. Little, Peabody, for Lee's Early grapes.
- 1.50. Gratuity, to J. N. Estes, Peabody, for Salem, No. 2 grapes.
- 1.50. Second premium, to Geo. F. Barnes, Peabody, for Concord grapes.
- 50c. Gratuity, to A. C. Osborne, Peabody, for Champion grapes.
- 50c. Gratuity, to W. P. Hutchinson, Danvers, for Lady grapes.

COLD HOUSE GRAPES.

- 6.00. First premium, to R. F. Morris, Peabody, for Black Hamburg grapes.

- 4.00. Second premium, to R. F. Morris, Peabody, for Barbarosa grapes.

QUINCES.

- 1.00. Gratuity, to C. B. Haven, Peabody, for Orange quinces.
 1.00. Gratuity, to Alfred McLeod, Danvers, for Champion quinces.
 1.00. Gratuity, to Henry O. Wade, Essex, for Orange quinces.

PLUMS, ETC.

- 1.00. Gratuity, to Geo. P. Osborne, Peabody, for Yellow Egg plums.
 1.00. Gratuity, to Otis Brown, Peabody, for Lombard plums.
 75c. Gratuity, to Mrs. Joseph Henderson, Peabody, for Coe's Golden Drop plums.
 50c. Gratuity, to J. M. Burbeck, Peabody, for Weaver plums.
 50c. Gratuity, to Susan P. Newhall, Peabody, for Green Gage.
 50c. Gratuity, to J. H. Hall, Lynn, for cluster Cuthburt Raspberries.

ASSORTED FRUITS.

- 4.00. First premium, to Edwin Bates, Lynn, for Basket.
 3.00. Second premium, to A. J. Hubbard, Peabody, for Basket.
 1.50. Gratuity, to Mrs. Heylingberg, Peabody, for Basket.
 50c. Gratuity, to Sumner Southwick, Peabody, for Pyramid Pears.
 50c. Gratuity, to Sumner Southwick, Peabody, for Pyramid Apples.

John Preston, W. B. Foster, Geo. Pettengill—*Committee*.

 FLOWERS.

The Committee on Flowers have attended to their

duty, and respectfully report to the Secretary that they have made the following awards:

- \$1.00. First premium, to Mrs. J. S. Hodgkins, Peabody, for *Amaryllis*.
- 1.00. First premium, to Miss M. E. Peirce, Peabody, for *Asters*.
- 1.00. First premium, to Miss M. E. Peirce, Peabody, for *Pansies*.
- 50c. Gratuity, to Agnes H. Hale, Rowley (12 years of age), for bouquet Wild Flowers.
- 1.00. First premium, to Mrs. Alonzo Raddin, Peabody, for Garden Dahlias.
- 50c. Gratuity, to Abbie Felton Wilson, Peabody, for bouquet Garden Flowers.
- 50c. Gratuity, to Mrs. Chas. E. Marsh, Lynn, for collection of *Gladioli*.
- 1.00. Gratuity, to Mrs. James Buxton, Peabody, for collection of Dahlias.
- 1.00. Gratuity, to Mr. M. B. Faxon, Saugus, for collection of *Nasturtiums*.
- 50c. Gratuity, to Mrs. Heylingberg, Peabody, for *Begonia*.
- 50c. Gratuity, to Mrs. J. Henry Hill, Amesbury, for collection of Garden Phlox.
- 50c. Gratuity, to Chas. H. Robinson, Lynn, for two bouquets.
- 1.00. First premium, to Mrs. David Warren, Swampscott, for Basket of Garden Flowers.
- 50c. Gratuity, to Mrs. David Warren, Swampscott, for Bouquet of Garden Flowers.
- 50c. Gratuity, to Mrs. David Warren, Swampscott, for Bouquet of Native Flowers.
- 1.00. First premium, to Mrs. Susie Vickary, Lynn, for Bouquet of Garden Flowers.
- 1.00. First premium, to Mrs. J. C. Vickary, Lynn, for Drummond Phlox.
- 1.00. First premium, to Mrs. H. A. Perkins, Peabody, for *Begonia*.

- 2.00. Gratuity, to R. F. Morris, gardener to Jacob C. Rogers, Peabody, for collection of Plants.
- 50c. Gratuity, to Mrs. Kattie L. Forniss, Peabody, for collection of White Dahlias.
- 1.00. First premium, to Mrs. Joshua Buxton, Peabody, for Nasturtiums.
- 50c. Gratuity, to Miss Carrie S. Dummer, Rowley, for Boquet Native Flowers.
- 2.00. First premium, to Mrs. M. E. Fuller, Middleton, for Design Native Flowers.
- 1.00. Gratuity, to Miss L. H. Newhall, Peabody, for 10 Coleus.
- 1.00. First premium, to Miss L. H. Newhall, Peabody, for Roses.
- 50c. Gratuity, to Sylvester Parrott, Lynn, for Coxcomb.
- 1.00. First premium, to S. C. Lord, Peabody, for Single Dahlias.
- 50c. Gratuity, to Mrs. Simon Buxton, Peabody, for Marigolds.
- 1.00. Gratuity, to J. M. Ward, Peabody, for Hand Boquet.
- 50c. Gratuity, to Mrs. J. A. Cain, Lynn, for Pansies.
- 1.00. First premium, to Mrs. J. A. Cain, Lynn, for Marigolds.
- 1.00. Gratuity, to Mrs. J. A. Cain, Lynn, for Cut Flowers.
- 2.00. Second premium, to Mrs. J. A. Cain, Lynn, for collection Cut Flowers.
- 50c. Gratuity, to M. S. Perkins, Danvers, for Boquet Native Flowers.
- 1.00. First premium, to T. C. Thurlow, W. Newbury, for 12 Japan Lilies.
- 1.00. Gratuity, to T. C. Thurlow, W. Newbury, for collection of Lilies.
- 1.00. First premium, to T. C. Thurlow, W. Newbury, for Garden Phlox.
- 50c. Gratuity, to C. A. Buxton, Salem, for collection of Pansies.

- 2.00. Gratuity, to E. & C. Woodman, Danvers, for Begonias.
- 1.00. Gratuity, to J. M. Ward, Peabody, for collection of Plants.
- 50c. Gratuity, to Mrs. J. Henry Hill, Amesbury, for Basket of Flowers.

We desire to call special attention to specimen flowers of "*Desmodium pendulifolium*," a hardy shrub exhibited by T. C. Thurlow, W. Newbury. Also to display of Single Petunias exhibited by Mrs. J. Henry Hill, Amesbury, Mass.

Edward E. Woodman, Mrs. E. V. Gage, Mrs. William Horner, Clara A. Hale, Henry N. Berry—*Committee*.

NOTE.—The Chairman, Mr. Woodman, made recommendations to the Trustees, revising the Rules and Premium List of Flowers, which were partially adopted. See the list for 1889, near the last pages.

D. W. Low, Secretary.

VEGETABLES.

The Committee on Vegetables have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$3.00. First premium, to Edwin Bates, Lynn, for Eclipse beets.
- 3.00. First premium, to Aaron Low, Essex, for Dewing's beets.
- 3.00. First premium, to Aaron Low, Essex, for Edmand's beets.
- 3.00. First premium, to Henry Bushby, Peabody, for Danvers carrots.
- 3.00. First premium, to Nathan Bushby, Peabody, for Short Horn carrots.
- 3.00. First premium, to Edwin Bates, Lynn, for Mangold Wurtzels.
- 3.00. First premium, to H. A. Stiles, Middleton, for purple top turnips.

- 3.00. First premium, to H. A. Stiles, Middleton, for White flat turnips.
- 3.00. First premium, to Richard Jaques, Newbury, for Yellow Ruta Baga turnips.
- 3.00. First premium, to M. B. Faxon, Saugus, for White Ruta Baga turnips.
- 3.00. First premium, to Wm. A. Jacobs, Danversport, for Maltese parsnips.
- 3.00. First premium, to David Warren, Swampscott, for Danvers onions.
- 3.00. First premium, to Richard Jaques, Newbury, for Yellow Flat onions.
- 3.00. First premium, to S. F. Newman, Newbury, for Red Globe onions.
- 3.00. First premium, to M. B. Faxon, Saugus, for Early Rose potatoes.
- 3.00. First premium, to M. B. Faxon, Saugus, for Beauty of Hebron potatoes.
- 3.00. First premium, to Wm. E. Sheen, West Peabody, for Clark's No. 1 potatoes.
- 3.00. First premium, to M. B. Faxon, Saugus, for Pearl of Savoy potatoes.
- 3.00. First premium, to J. J. H. Gregory, Marblehead, for Early Maine potatoes.
- 3.00. First premium, to Henry Bushby, Peabody, for Savoy cabbage.
- 2.00. Second premium, to S. F. Newman, Newbury, for Savoy cabbage.
- 3.00. First premium, to Aaron Low, Essex, for Deephead Brunswick cabbage.
- 2.00. Second premium, to Jerry Bresnehan, Peabody, for Fottler's Brunswick cabbage.
- 3.00. First premium, to David Warren, Swampscott, for Stone Mason cabbage.
- 2.00. Second premium, to Philip Bushby, Peabody, for Stone Mason cabbage.
- 3.00. First premium, to S. P. Buxton, Peabody, for Red Drumhead cabbage.

- 2.00. Second premium, to Jacob G. Bodge, Peabody, for Red Drumhead cabbage.
- 3.00. First premium, to C. R. Anderson, West Boxford, for cauliflower.
- 2.00. Second premium, to Jacob G. Bodge, Peabody, for cauliflower.
- 2.00. First premium, to E. C. Smith & Son, Rowley, for celery.
- 3.00. First premium, to Aaron Low, Essex, for Early Cory sweet corn.
- 3.00. First premium, to M. B. Faxon, Saugus, for Stowell's Evergreen corn.
- 3.00. First premium, to Wm. A. Jacobs, Danversport, for Dunlap's Prolific Marrow squash.
- 3.00. First premium, to A. C. Osborn, Peabody, for Turban squash.
- 3.00. First premium, to David Warren, Swampscott, for Hubbard squash.
- 3.00. First premium, to Aaron Low, Essex, for Essex Hybrid squash.
- 3.00. First premium, to Wm. A. Jacobs, Danversport, for Bay State squash.
- 2.00. First premium, to Aaron Low, Essex, for Musk melons.
- 2.00. First premium, to B. P. Ware, Marblehead, for Nutmeg melons.
- 2.00. First premium, to B. P. Ware, Marblehead, for Boss watermelons.
- 3.00. First premium, to E. & C. Woodman, Danvers, for Paragon tomatoes.
- 3.00. First premium, to E. & C. Woodman, Danvers, for Volunteer tomatoes.
- 3.00. First premium, to Aaron Low, Essex, for Cardinal tomatoes.
- 3.00. First premium, to Aaron Low, Essex, for Dwarf Champion tomatoes.
- 3.00. First premium, to Aaron Low, Essex, for Essex Hybrid tomatoes.

- 3.00. First premium, to Aaron Low, Essex, for collection of tomatoes.
- 3.00. First premium, to Wm. K. Cole, West Boxford, for peck cranberries.
- 2.00. Second premium, to Andrew Lane, Rockport, for peck cranberries.
- 1.00. Third premium, to Francis Marston, Danvers, for peck cranberries.
- 8.00. First premium, to J. J. H. Gregory, Marblehead, for collection.
- 6.00. Second premium, to Aaron Low, Essex, for collection.
- 50c. Gratuity, to John V. Warner, No. Beverly, for citron melon.
- 3.00. Gratuity, to E. C. Larrabee, Peabody, for collection.
- 50c. Gratuity, to Wm. A. Jacobs, Danversport, for Hubbard squash.
- 50c. Gratuity, to Wm. Martin, Wenham, for cucumbers and corn.
- 1.00. Gratuity, to H. F. Broderick, Peabody, for mammoth squashes.
- 50c. Gratuity, to Munroe Bros., Lynnfield, for sweet corn and beets.
- 2.00. Gratuity, to Wm E. Sheen, West Peabody, for collection of potatoes.
- 1.00. Gratuity, to Richard Jaques, Newbury, for Guerande carrots.
- 1.00. Gratuity, to Richard Jaques, Newbury, for parsnips.
- 1.00. Gratuity, to Philip Bushby, Peabody, for Butman squashes.
- 1.00. Gratuity, to Philip Bushby, Peabody, for Danvers carrots.
- 50c. Gratuity, to E. & C. Woodman, Danvers, for pepper plant in pot.
- 50c. Gratuity, to George Buchan, Andover, for Cleveland tomatoes.
- 1.00. Gratuity, to George Reynolds, Peabody, for six pots sweet herbs.

- 1.00. Gratuity, to C. R. Anderson, West Boxford, for White Egg turnips.
- 1.00. Gratuity, to S. W. Spaulding, Danvers, for Marrow squashes.
- 2.00. Gratuity, to Aaron Low, Essex, for new varieties potatoes.
- 2.00. Gratuity, to M. B. Faxon, Saugus, for turnips and sweet corn.
- 50c. Gratuity, to Nellie J. Horace, Topsfield, for cauliflower.
- 50c. Gratuity, to Nathan Bushby, Peabody, for Lentz beets.
- 1.00. Gratuity, to Nathan Bushby, Peabody, for Dleer's Improved Lima beans.
- 1.00. Gratuity, to Nathan Bushby, Peabody, for Long Orange carrots.
- 1.00. Gratuity, to Chas. B. Haven, Peabody, for Ancient Egyptian corn.
- 50c. Gratuity, to George Foan, Peabody, for Marrow squash.
- 50c. Gratuity, to H. J. Foan, Peabody, for Marrow squash.
- 50c. Gratuity, to Samuel Killam, Boxford, for Burbank Seedling potatoes.
- 50c. Gratuity, to Geo. Hawkes, Lynnfield, for potatoes.
- 1.00. Gratuity, to F. H. Appleton, W. Peabody, for corn and Lima beans.
- 50c. Gratuity, to J. W. Osborn, Peabody, for squashes.
- 50c. Gratuity, to Aug. Harrington, Peabody, for corn and potatoes.
- 50c. Gratuity, to R. H. Wilson, Peabody, for cabbages and potatoes.
- 2.00. Gratuity, to S. P. Buxton, Peabody, for collection.
- 50c. Gratuity, to G. H. Tufts, Middleton, for cranberries.
- 50c. Gratuity, to L. G. Moulton, West Peabody, for cranberries.

Your committee are pleased to report that the display of vegetables offered for premiums was both large in

quantity and excellent in quality. The beets and carrots shown were for the most part well grown, especially Mr. Low's beets and Mr. Henry Bushby's Danvers carrots, which were very perfect specimens. Quite a number of the exhibitors showed beets and carrots with the tops on, which took up a large amount of unnecessary space, crowded the tables, and did not improve the appearance of the vegetables in the least, and the committee would suggest that in future all roots be shown without tops.

H. A. Stiles, as usual, received the premiums for Purple Top and White Flat turnips; both lots were very smooth and of uniform size. Mangold Wurtzels and Ruta Baga turnips were well represented. Onions as a rule were poorly ripened, although Mr. Gregory's Yellow Danvers, Yellow Flat and Red were excellent, and David Warren's Yellow Danvers were all that could be desired.

The display of potatoes was large and for the most part of good quality, being free from rot and very smooth, but most of the exhibitors pay too much attention to size, and as a result exhibited tubers that were too large for family use, and in making the awards your committee followed the foot-note in regard to size of vegetables which says that potatoes shall be of good size for family use, and a most excellent rule it is, as mere size is certainly one of the last requisites of a good potato. Wm. E. Sheen made an exhibit of twelve varieties of potatoes, all of which were well grown, smooth, and of the proper size. The manner in which he arranged them on the tables deserves commendation, they being displayed in wooden boxes of uniform size which made a very neat appearance. M. B. Faxon received first premium for Early Rose, Pearl of Savoy, and Beauty of Hebron potatoes.

The large number of entries and good quality of the cabbages made it a very difficult matter for your committee to decide on the premiums. Warren's Stone Mason, Low's Peerless, and Deep Head Brunswick cabbages were well represented, and are three fine varieties and deserve a place in every kitchen garden. The Cauliflower and Celery was fair, although only a few entries were made.

Mr. Low's twelve ears of Early Cory sweet corn received the first premium for the ripest and best early, and M. B. Faxon was awarded the prize for late corn in milk, for Stowell's Evergreen. Squashes are remarkably good this year and are well ripened. Some fine specimens of Dunlap's Prolific Early Marrow were shown. This squash, though a comparatively new variety, is fast gaining in popular favor. It is a true type of marrow squash, very early, and a great improvement on the common variety. Low's New Bay State squash is also an early ripening sort and very prolific, and Mr. Low tells us that it is an excellent keeper. Some nice Hubbard, American Turban and Butman squashes were also on the tables.

The wet weather has not been favorable for ripening melons, the specimens shown being only of fair quality, although some very nice Boss watermelons were noticed.

The usual good display of tomatoes was made. Messrs. Woodman exhibited a plate called Volunteer, a round, smooth tomato of good quality. Your committee would advise a change in the prizes offered for tomatoes, as it is almost impossible to tell where the line should be drawn between round and flat and flat and spherical tomatoes, therefore we suggest that prizes for tomatoes be as follows: *¹ For best twelve specimens Acme, Emery, Cardinal, Essex Hybrid, or any other variety, each variety, premium of three dollars; the prize for exhibition of greatest variety to remain as at present."

There were five entries of cranberries, all of which were of most excellent quality. The first prize for collection was awarded to James J. H. Gregory, who placed upon the tables eighty varieties of vegetables, amongst which were noticed a collection of twenty-five varieties of sweet corn, including the standard kinds, Old Colony, Potter's Excelsior, and Stowell's Evergreen; peppers, cucumbers, and potatoes were shown in good variety, and his display of melons, squashes, pumpkins and onions was not only large

*Suggestion adopted by Trustees, with slight amendment, at November meeting.

but of most excellent quality, making altogether a collection of which Mr. Gregory may well be proud.

H. F. Broderick exhibited Mammoth pumpkins. Porter's Market of Salem was represented by a large horn of plenty, well filled with flowers, fruits and vegetables. Chas. B. Haven's ancient Egyptian corn proved quite a novelty. This corn was the growth of three years, from seed obtained from an Egyptian mummy ante-dating four thousand years.

S. W. Spaulding brought thirteen large marrow squashes which were raised on a single vine. These squashes would easily have filled two barrels, which is of course a most remarkable yield. Having mentioned the leading features of this department and referring to the list of premiums and gratuities attached for the details, your committee would call the attention of our exhibitors to the following rule which in many cases seems to have been forgotten: "No competitor for premium to exhibit more or less number of specimens of any vegetables than the premiums are offered for." In several cases fourteen and fifteen specimens were shown where the schedule called for twelve, and sometimes as low as nine or ten were exhibited when twelve was the required number. As a result your committee were obliged to debar these exhibitors from competition. But as a whole the display in this department was very satisfactory.

Respectfully submitted,

M. B. FAXON, *Chairman.*

GRAIN AND SEED.

The Committee on Grain and Seed have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- §8. First premium, to Aaron Low, Essex, for 285 varieties Field and Garden seeds.
- §6. Second premium, to J. J. H. Gregory, Marblehead, for 257 varieties Field and Garden seeds.

- \$1. First premium, to S. W. Weston, Middleton, for 1 peck barley.
- \$1. First premium, to S. W. Weston, Middleton, for 1 peck rye.
- \$1. First premium, to F. O. Kimball, Danvers, for 1 peck shelled corn.
- \$5. First premium, to M. L. Emmerson, Haverhill, for 25 ears field corn.
- \$3. Second premium, to Chas. J. Peabody, Top field, for 25 ears field corn.
- \$2. Third premium, to John B. King, Middleton, for 25 ears field corn.
- \$3. First premium, to J. A. Curtis, Peabody, for 25 ears pop corn.
- \$2. Second premium, to Edwin Bates, Lynn, for 25 ears pop corn.

Rufus Kimball, Albert W. Howe, D. Bradstreet, James W. Kimball—*Committee*.

COUNTERPANES AND AFGHANS.

The Committee on Counterpanes and Afghans have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$3. First premium, to Miss Anna Bushby, Peabody, for silk quilt.
- \$2. Second premium, to Mrs. Augustus Southwick, Peabody, for afghan.
- \$2. Second premium, to Mrs. Chas. M. Osborn, Peabody, for silk quilt.
- \$1. Gratuity, to Mrs. Chas. H. Brooks, Peabody, for silk quilt.
- .50. Gratuity, to L. A. Israel, Peabody, for silk quilt.
- .50. Gratuity, to Miss Mary T. Weston, Peabody, for patch quilt.
- .50. Gratuity, to Miss Nellie A. Huntington, Amesbury, for woolen quilt.

- .50. Gratuity, to Mrs. Thomas Carroll, Peabody, for silk quilt.
- .50. Gratuity, to Mrs. Anna H. Little, Newburyport, for silk puff.
- 50. Gratuity, to Miss Lola M. Cate, Peabody, for woolen quilt.
- .50. Gratuity, to Mrs. Sarah Paul, Beach Bluff, for silk quilt.
- .50. Gratuity, to Mrs. Susan Howard, Peabody, for knit quilt.
- .50. Gratuity, to Mrs. Webster Dane, Salem, for velvet quilt.
- .50. Gratuity, to Mrs. Susan Hind, Tapleyville, for patch quilt.
- .50. Gratuity, to Miss Carrie B. Swan, South Peabody, for plush quilt.
- .50. Gratuity, to Mrs. Henry Farnum, Peabody, for silk quilt.
- .50. Gratuity, to Mrs. Frank T. Arnold, Peabody, for silk quilt.
- .50. Gratuity, to Mrs. G. B. Beckett, Peabody, for silk quilt.
- .50. Gratuity, to Mrs. J. Roberts, Salem, for patch quilt.
- .50. Gratuity, to Miss Helen Bushby, Peabody, for silk quilt.
- 1.00. Gratuity, to Mrs. Chas. Goldthwait, Peabody, for afghan.
- 1.00. Gratuity, to Miss Minnie Osborn, Peabody, for afghan.
- 1.00. Gratuity, to Miss Alice Nelson, Peabody, for afghan.
- 1.00. Gratuity, to Mrs. A. A. Foster, Salem, for afghan.
- .50. Gratuity, to Mrs. C. H. Brooks, Peabody, for afghan.
- .50. Gratuity, to Mrs. Amos Buxton, Peabody, for afghan.
- .50. Gratuity, to Mrs. Mary A. Cheeny, Danvers, for afghan.
- .50. Gratuity, to Mrs. Frank M. Goss, Peabody, for afghan.
- 1.00. Gratuity, to Mrs. C. C. Pike, Peabody, for afghan.

- 1.00. Gratuity, to Mrs. E. M. Little, Peabody, for afghan.
 .50. Gratuity, to Miss Alice Nelson, Peabody, for afghan.
 .50. Gratuity, to Mrs. M. A. Hill, Peabody, for afghan.
 Mrs. Chas. H. Brooks, Mrs. Elizabeth A. King, Mrs. A.
 F. Harvey, Mrs. A. Raddin—*Committee*.
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CARPETINGS AND RUGS.

The Committee on Carpetings and Rugs have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- \$3.00. First premium, to Mrs. J. Fairbanks, Salem, for rug.
 2.00. Second premium, to Mrs. David Warren, Swampscott, for rug.
 Diploma, to Herbert J. Foan, Peabody, for wool skin rugs.
 1.50. Gratuity, to Miss M. M. Plummer, Salem, for rug.
 1.50. Gratuity, to Mrs. Moses E. Cook, Newburyport, for rug.
 1.50. Gratuity, to Delia D. Hale, Rowley, for wrought rug.
 2.00. Gratuity, to Mrs. Chas. T. Mooney, Salem, for 2 rugs.
 1.50. Gratuity, to Miss M. A. Chute, Salem, for 2 rugs.
 1.00. Gratuity, to H. F. Savory, Salem, for rug.
 1.00. Gratuity, to Miss F. C. Smith, Salem, for knit rug.
 1.00. Gratuity, to M. M., 101 Washington St., Peabody, for rug.
 1.00. Gratuity, to Mrs. Henrietta Pushee, Beverly, for rug.
 1.00. Gratuity, to Mrs. George Gammell, Peabody, for drawn rug.
 1.00. Gratuity, to Mrs. Frank A. Witham, Middleton, for drawn mat.
 1.00. Gratuity, to Mrs. G. W. Gardner, Danvers, for rug.
 1.00. Gratuity, to F. W. Steinbeck, Lynn, for 2 rugs.
 1.00. Gratuity, to Mrs. Charlotte P. Dodge, Beverly, for rug.
 1.00. Gratuity, to Mrs. M. E. Roberts, Salem, for rug.
 1.00. Gratuity, to Mr. Calvin Foster, Beverly, for 2 rugs.
 .50. Gratuity, to Mrs. Daniel Emerson, So. Lynnfield, for rug.

- .50. Gratuity, to Mr. Freeman Murray, Lynn, for rug.
- .50. Gratuity, to Miss R. E. M. Richardson, So. Peabody, for rug.
- .50. Gratuity, to Miss Mary D. Bomer, Peabody, for rug.
- .50. Gratuity, to Miss Lizzie Baxter, Beverly, for rug.
- .50. Gratuity, to Mrs. S. F. Stoddard, Peabody, for rug.
- .50. Gratuity, to Mrs. Wm. Gray, Peabody, for rug.
- .50. Gratuity, to Mrs. Wm. Gray, Peabody, for rug.
- .50. Gratuity, to Mrs. Frank A. Winchester, Peabody, for rug.
- .50. Gratuity, to Mrs. L. E. Andrews, Salem, for 2 rugs.
- .50. Gratuity, to Mrs. George Gammell, Peabody, for rug.
- .50. Gratuity, to Mrs. Mary O. Smith, Danversport, for knit rug.

Andrew Nichols, Sarah B. Shorey, Isabelle S. Ladd—*Committee.*

ARTICLES MANUFACTURED FROM LEATHER.

The Committee on Articles Manufactured from Leather have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$5.00. First premium, to C. P. Spencer, Salem, for carriage harness.
- 5.00. First premium, to Chas. McTernan, Danvers, for team harness.
- 5.00. First premium, to Herbert Gardner, Peabody, for express harness.
- 3.00. Gratuity, to C. P. Spencer, Salem, for case of leather goods.
- 2.00. First premium, to John E. Todd, Rowley, for hand made boots.
- 2.00. Gratuity, to Alonzo Raddin, Peabody, for hand made Congress boots.
- 2.00. Gratuity, to Chas. R. Smith, Lynn, for women's button boots.
- 1.00 Gratuity, to A. T. Blake, Peabody, for leather cases.

- 2.00. First premium, to Alonzo Raddin, Peabody, for machine made women's shoes.
- 2.00. First premium, to Chas. R. Smith, Lynn, for hand made women's shoes.
- 2.00. First premium, to P. H. Flint, Danvers, for children's shoes.

Diploma recommended to be given to Alonzo Raddin of Peabody, Mass., for best exhibition of boots and shoes manufactured in Essex County.

Hiram N. Harriman, Augustus T. Billings, D. B. Burnham—*Committee*.

MANUFACTURES AND GENERAL MERCHANDISE.

The Committee on Manufactures and General Merchandise have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$3.00. Gratuity, to Newhall M. Jewett, for horn goods.
- 3.00. Gratuity, to Wheeler & Wilson, Salem, for sewing machines.
- 2.00. Gratuity, to Fred Friend, Salem, for boat.
- 2.00. Gratuity, to Geo. R. Norton, Peabody, for stoves.
- 2.00. Gratuity, to F. L. Sears, Peabody, for stoves.
- 2.00. Gratuity, to W. Noyes, Newburyport, for safe.
- .50. Gratuity, to Hamlett & Powers, Salem, for cases of corn.
- .50. Gratuity, to G. L. Richardson, So. Peabody, for drinking fountain.
- .50. Gratuity, to Edward C. Sanger, Peabody, for shells.
- 1.00. Gratuity, to Jesse R. Smith, Peabody, for horse shoes.
- .50. Gratuity, to Geo. R. Knowlton, Hamilton, for tin ware.
- .50. Gratuity, to J. R. Fogg, Amesbury, for fruit picker.
- Diploma, to F. Osborn Jr. & Co., Peabody, for kip leather and splits.
- Diploma, to A. B. Clark, Peabody, for calf skins.

- Diploma, to A. B. Clark, Peabody, for skivers and skins.
 Diploma, to Murray & Carroll, Salem, for horse shoes.
 Diploma, to Dole & Osgood, Peabody, for horse shoes.
 Diploma, to R. B. Pray & Co., Danvers, for cigars.
 Diploma, to Wm. Mayhew, Peabody, for grocers' index.
 Diploma, to M. Bodge, Lynn, for plated ware.
 Diploma, to Wiley & Poor, Peabody, for splits and dongola.
 Diploma, to H. A. Southwick, Peabody, for I. S. dongola.
 Diploma, to J. F. Ingraham, W. Peabody, for fancy skins.
 Diploma, to Geo. E. Marsh & Co., Lynn, for soap.
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FANCY WORK AND WORKS OF ART.

The Committee on Fancy Work and Works of Art have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- Diploma, to Mrs. L. G. Howard, Salem, for fancy work in fish scales.
- \$1.00. Gratuity, to Mrs. Daniel Emerson, Lynnfield, for 6 oil paintings.
- 1.00. Gratuity, to M. N. Pond, Salem, for oil paintings.
- 2.00. Gratuity, to Mary A. Southwick, Peabody, for fancy articles.
- .50. Gratuity, to Mrs. Olive E. Rodie, Peabody, for handkerchief.
- 1.50. Gratuity, to Miss M. O. Barrett, Peabody, for pen sketchings.
- .50. Gratuity, to Miss M. O. Barrett, Peabody, for wash paintings.
- .50. Gratuity, to Mrs. Franklin Osborne, Peabody, for table mats.
- .75. Gratuity, to Mrs. C. C. Pike, Peabody, for two tidies.
- 1.00. Gratuity, to Mrs. C. M. Poor, Peabody, for 3 oil paintings.
- .75. Gratuity, to Annie Jones, Danvers, for pillow shams.
- .50. Gratuity, to Mrs. Mary F. Shirley, Danvers, for infant's dress.

- 1.00. Gratuity, to Miss Lizzie M. Goodrich, Lynnfield, for 2 charcoal drawings.
- 1.00. Gratuity, to Nellie F. Everett, Danvers, for 2 oil paintings.
- .50. Gratuity, to Mrs. W. O. Gray, Peabody, for banner.
- .50. Gratuity, to L. J. Putnam, Danvers, for apron.
- 1.00. Gratuity, to Mrs. Horace C. Ware, Salem, for oil painting.
- 1.00. Gratuity, to A. R. Thacher, Peabody, for 2 crayons.
- .50. Gratuity, to Mrs. S. P. Baker, Peabody, for doilies.
- 1.00. Gratuity, to Lizzie T. Fallon, Peabody, for 3 oil paintings.
- 1.00. Gratuity, to Percy Grosvenor, Peabody, for tray cloth and tidy.
- 1.00. Gratuity, to Percy Grosvenor, Peabody, for 3 oil paintings.
- .50. Gratuity, to Mrs. Mary F. Pierce, Peabody, for knit lace.
- 1.50. Gratuity, to Mrs. A. P. Newhall, Lynn, for handkerchiefs, tidies and doilies.
- .75. Gratuity, to Lillie S. Heylingberg, Peabody, for 2 oil paintings.
- .50. Gratuity, to Mrs. S. L. Hardy, Peabody, for 2 netted tidies.
- .50. Gratuity, to Georgie S. Hart, Peabody, for scarf.
- .75. Gratuity, to Mrs. Chas. P. Mills, Newburyport, for plaque.
- .50. Gratuity, to Mrs. E. W. Thomas, Salem, for towels.
- .75. Gratuity, to Miss Nellie Magoon, Danvers, for 2 oil paintings.
- 1.00. Gratuity, to Annie S. Symonds, Peabody, for 2 oil paintings.
- 1.00. Gratuity, to Mrs. Frank M. Goss, Peabody, for hammered brass.
- .50. Gratuity, to Mrs. R. W. Wilkinson, Peabody, for knit lace.
- .50. Gratuity, to Alice Sawyer, Peabody, for paper flowers.

- .50. Gratuity, to Miss Amanda D. Low, Gloucester, for
crochet skirt.
- 1.00. Gratuity, to Mrs. G. H. Jacobs, Peabody, for water
colors.
- 1.00. Gratuity, to Carrie B. Sivan, So. Peabody, for oil
painting.
- .50. Gratuity, to Miss F. T. Arnold, Peabody, for table
scarf.
- .50. Gratuity, to Gennie Arnold, Peabody, for pillow
shams.
- 1.00. Gratuity, to J. S. Tufts, Peabody, for crochet apron.
- .75. Gratuity, to Mrs. J. L. Taylor, Salem, for embroidery.
- 1.00. Gratuity, to Alice H. Berry, Peabody, for portrait.
- 1.00. Gratuity, to M. H. Pierce, Peabody, for pillow shams.
- 1.00. Gratuity, to Lizzie Arnold, Salem, for 2 oil paintings.
- .50. Gratuity, to Fannie Thomas, Peabody, for handker-
chief.
- 1.00. Gratuity, to S. B. Mansfield, So. Peabody, for 3 oil
paintings.
- 1.00. Gratuity, to Apphia C. Symonds, Salem, for 2 oil
paintings.
- 1.00. Gratuity, to N. Vickary, Lynn, for 4 cases of birds.
- 2.00. Gratuity, to Mrs. Geo. H. Jacobs, Peabody, for china
paintings.
- .75. Gratuity, to L. M. Goodrich, Lynnfield, for blanket.
- .50. Gratuity, to Mrs. Webster Dane, Salem, for skirt.
- 1.00. Gratuity, to Hattie P. Allen, Beverly, for tidy.
- .50. Gratuity, to Lizzie Arnold, Salem, for painted necktie.
- .75. Gratuity, to Louise E. Osborne, Peabody, for table
cover.
- 1.00. Gratuity, to Osman Jewett, Salem, for 3 oil paintings.
- .50. Gratuity, to Margaret Lord, Peabody, for scarf.
- 1.00. Gratuity, to John S. Sutton, Peabody, for 2 oil
paintings.
- 1.00. Gratuity, to Julia M. Smith, Danversport, for col-
lection of crocheting.
- .50. Gratuity, to Mrs. J. R. Peabody, Topsfield, for table
cover.

- 1.00. Gratuity, to Miss Alice Stoyte, Peabody, for crayon sketch.
- 1.00. Gratuity, to Mrs. J. Hayden Smith, Lynn, for curious jewelry.

The number of entries in this department were two hundred and sixty. Nearly four hours were devoted to the awarding of the gratuities. *We, as the committee, recommend the separation of Fancy Work and Works of Art. \$50 is certainly needed in *each* department in order to do justice to the many meritorious exhibits: we most earnestly request the Trustees to act on this before the next annual fair.

The paintings completely occupied the wall on one side of the hall, while two long tables were devoted to fancy articles. Nearly every article deserved special notice. We doubt if there was ever a larger display or one of finer work in this department, at our county fair.

Lizzie I. Huntington. Mrs. D. P. Grosvenor, Emily H. Campbell—*Committee*.

*NOTE.—The recommendation was adopted by the Trustees as far as separation and allowing \$30 to each Committee for gratuities.

WORK OF CHILDREN UNDER TWELVE YEARS OF AGE.

The Committee on Work of Children under Twelve Years of Age have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- \$3.00. First premium, to Ida F. Searle, Salem, for crazy quilt.
- 2.00. Second premium, to Reubens M. Holmes, Essex, for two quilts.
- 1.50. Gratuity, to Mary H. Woodbury, Salem, for hand-made shirt.
- 1.00. Gratuity, to Belle Ferren, Peabody, for sofa pillow.

- .50. Gratuity, to Mabel Perkins, Peabody, for knit edging.
- .50. Gratuity, to Hattie Pushee, Beverly, for chair cushion.
- 1.50. Gratuity, to Lena G. Morgan, Manchester, for afghan.
- .50. Gratuity, to Hannah G. Blaney, Peabody, for paper flowers and tidy.
- 1.00. Gratuity, to F. W. Legro, Lynn, for Lord's prayer.
- .50. Gratuity, to Gertrude P. Cole, Peabody, for flannel skirt.
- .50. Gratuity, to Annie and Marian Warner, Peabody, for afghan.
- .50. Gratuity, to Ben Lester Porter, Peabody, for bureau scarf.
- .50. Gratuity, to Linda M. Balcom, Peabody, for tidy.
- .50. Gratuity, to Gertrude and Alice Barrett, Peabody, for towel and tea tray.
- .50. Gratuity, to Ethel and Annie Longfellow, Byfield, for lamp mats.
- .50. Gratuity, to Norah Conroy, Peabody, for tidy.

Mrs. Chas. J. Peabody, Mrs. M. E. Fuller, Mrs. David Warren, Mrs. Frances O. Perkins—*Committee*.

IMPROVING WASTE LANDS.

In recommending an award of first premium, \$15, to C. K. Ordway & Son of West Newbury, would respectfully report that Mr. Ordway's improvement of waste land is rather exceptional in its character, but nevertheless it *is* an improvement, the best evidence of which is the fact that his neighbors are preparing to follow his example, though before he had attempted it they had given it that smile of incredulity which is the benison usually bestowed upon enterprises that are regarded either as impracticable or impossible. Every one who has sailed on our New England rivers, in whose eyes good land has a value, has felt regret at the great waste of the alluvium, the very richest of soil, which is so often made evident by bare, perpendicular

banks of dark, rich soil, eaten away by the devouring water. The waste of so much fertile land along the banks of all our large streams is an enormous loss to agriculture. The erosion by some of our larger rivers is so extensive that in some portions of their course they have changed their entire bed in a single season, leaving stranded inland towns that were built upon their banks, thus utterly destroying their commerce and all enterprises founded on it. This eating away and devouring the rich soil which it has itself deposited in the course of the ages, is strikingly illustrated by our own Connecticut, in what is known as the great "ox-bow" in the vicinity of Northampton. What the possibility of this means as regards the comfort and happiness of the inhabitants of such districts, may be learned by talking with the farmers of old Hadley, who will point out to you a bend at the centre of the town, against which, during the spring freshets, the river impinges with such force, that in spite of all the precautions taken, as evinced by an extensive series of piles driven near the bank and the masses of brush and stone used as a defensive backing, and the arrangement by which all the inhabitants, with their teams and tools came hurrying to the point of danger at the warning tone of the alarm bell at any hour of the day or night, it is still the firm belief of the inhabitants of that old puritan town, that it is merely a matter of time when the mighty river shall break through all barriers, and cut its way directly across the centre, bearing along the Academy and other buildings which are regarded as fated, on its angry waters. Our Merrimac does not carry so mighty a stream within its banks, nevertheless all along its course can be seen the effects of the wasting action of its waters, ancient or recent, caused either by the impinging of floating logs or ice against its banks, or by the sucking friction of the water of high freshets. How to prevent the denuding of its shores and check the erosive action of the running water, is the problem which the brave enterprise of Mr. Ordway has attempted to solve. It was one out of the beaten track such as required a man of some originality of mind to conceive.

Your committee found the extensive river border of Mr. Ordway's farm sloping gently to the water, all well graded over and capable of being cut with a mowing machine. Adjoining the farm the banks of the river were in their natural state, and showed, very plainly by contrast, just what Mr. O. had accomplished. These were covered with trees and bushes, were steep in many places, full of irregularity and depression, mostly the effects of former river action, and every here and there were areas washed out by the recent action of the waters of the Merrimac. Mr. O. has not only reclaimed a waste and levelled its irregular surface by plowing down here and filling up there, so that a mowing machine can run over it, but, best of all he has made his slope at such an angle as to prevent from the possibility of future erosion. I have never seen the subject discussed, but will venture the suggestion that the angle at which the slope of the soil meets the water to insure protection from wearing away in the future, must be about the same along our river bank as that known as the "beach angle," along the coast of the ocean. The fact that there is such an angle, and that the coast or any structure to which the waves have access is liable to destruction until that is formed, is a discovery of comparatively recent years. When the great breakwaters were being built off the coast of Cherbourg in France and Plymouth in England, the first attempts failed, every heavy storm tearing them to pieces and frustrating the skill of the ablest engineers of their day. Finally it was noted that where the slope of stones made an angle with the water of about 20 degrees they were no longer disturbed. Some scientist, on studying into the matter, found that the same angle was the one at which beaches meet the ocean, where they protected the land from erosion, and hence it was called the "beach angle." I would therefore suggest that in making these protecting slopes in improving the banks of our river, the angle of safety to the ocean coast be had in mind. For protection from the effects of the impinging of floating logs and ice there can be no angle of safety: the price for them must be eternal vigilance.

Mr. Ordway and his neighbors are fortunate in having apparently an unlimited depth of friable clay on their land bordering the river ; they have no poor subsoil to bother them while making their improvements. On ascending from the river meadows to the upland we found the clay gradually replaced by a sandy soil, which brought to mind the old quatrain, which contains a hint worth acting on :

“ Clay on sand
Makes very good land ;
Sand on clay
Throws money away.”

JAMES J. H. GREGORY, *for the Committee.*

STATEMENT OF C. K. ORDWAY & SON OF WEST NEWBURY.

This piece of land we offer for premium, measuring 300 rods, is on the banks of the Merrimac river between the Intervale and the water. It was covered with wood and bushes. We cut off and pastured it with sheep two years.

In 1884, we plowed and dug out the stumps, graded down the bank, harrowed, and planted it with potatoes, without manure, at the expense of \$75. (The bank that we graded down was washed out eight feet deep in places. We have graded it so that we can mow with a machine to the water's edge.) We raised 120 bushels of potatoes that sold for \$1.25 per bushel.

In 1885. The second year we put on seven cords of manure, plowed and planted with corn and raised 100 bushels of shelled corn, worth 75 cents per bushel.

In 1886. We plowed and sowed it with oats and grass seed. Raised 50 bushels of oats worth 50 cents per bush.

In 1887. We mowed from it two tons of English hay, worth \$18 per ton, and one and a half tons of swale hay worth \$10 per ton.

In 1888. We mowed from it two tons of English hay worth \$18 per ton, and 3200 lbs. of swale hay worth \$10 per ton.

IMPROVEMENTS. *Dr.*

1884.—Cost of preparing ground for planting,	\$75 00
Cost of potatoes for seed,	9 60
Cost of hoeing them once,	2 00
Cost of harvesting,	8 00
	<hr/> \$84 60
1885.—Cost of 7 cords manure put on,	56 00
Cost of ploughing and harrowing,	6 00
Cost of seed and planting,	2 00
Cost of hoeing,	4 00
Cost of harvesting,	12 00
	<hr/> 80 00
1886.—Cost of ploughing, harrowing and sowing,	7 00
Cost of oats for seed,	2 50
Cost of grass seed,	3 00
Cost of harvesting oats,	11 00
	<hr/> 23 50
1887.—Cost of cutting and storing hay,	10 00
1888.—Cost of cutting and storing hay,	10 00
	<hr/>
Total cost for five years,	\$208 10

Cr.

1884.—120 bushels potatoes raised,	\$150 00
1885.—100 bushels shelled corn,	75 00
3 tons of stover,	24 00
	<hr/> 99 00
1886.—50 bushels oats,	25 00
Straw,	12 00
	<hr/> 37 00
1887.—2 tons English hay,	36 00
1½ ton swale hay,	15 00
	<hr/> 51 00
1888.—2 tons English hay,	36 00
Swale hay,	15 50
	<hr/> 51 50
	<hr/>
Total value products for five years,	\$388 50

Profit for five years \$180.40, or \$36.08 yearly.

See Note next page.

NOTE.—5 years products per acre, average \$41.44 yearly,	\$207 20
5 years expenses per acre, average \$22.19 yearly,	110 95
	<hr/>
5 years profit per acre, average \$19.25 yearly,	\$96 25
beside increased value of land.	

REPORT OF COMMITTEE ON GRAIN CROPS.

The Committee on Grain Crops report but two entries for the society's premiums. One by Oliver P. Killam of Boxford, of Indian corn; his statement is imperfect inasmuch as he does not state the amount of shelled corn his 158 bushels would yield, nor should it be inferred that from this quantity of ears that the crops was very heavy, yet as the year has been very unfavorable, and as when viewed there was evidence of good care and thorough culture we recommend that Mr. Killam be given the premium of \$10.

The other entry was of a crop of barley by William W. Perkins of Newbury. This was one of the best fields of "waving grain" seen for many years. The Committee regret that Mr. Perkins did not give the weight of straw upon the acre entered as this is an important element in the value of the crop. We know that it was heavy, and in the scarcity of straw in Essex County, think it of about two-thirds of the value of the grain. We recommend that Mr. Perkins be given the first premium of \$10.

Respectfully submitted,

William Little, James P. King, Baxter P. Pike—*Committee*.

STATEMENT OF OLIVER P. KILLAM.

To Essex Agricultural Society. Statement concerning a crop of corn raised by Oliver P. Killam in the town of Boxford, 1888. The crop of 1886 was English hay about 1200 pounds per acre. No manure was used. The crop of 1887, English hay, about 1000 pounds. No manure was used. The soil is a light gravel loam. Ploughing

was done about the middle of May, six inches deep. Barn manure was spread and plowed under, twenty-four loads to the acre of thirty bushels each. Value of manure \$2 per load. Cost of plowing and harrowing \$9. Used 300 pounds of fertilizer in the hills at a cost of \$4.80. Planted the field May 22, by hand, using one peck of eight-rowed yellow corn with hills three and one-half feet apart each way. Cost of planting \$3.50. Cultivated four times each way, and hoed by hand twice. Cost of both \$7. Commenced cutting and stooking Sept. 10. Cost of harvesting \$13. Amount of crop 158 bushels of corn on the ear. I think the smuts discounted from five to ten bushels of ears per acre.

COST OF CROP.

Barn manure,	\$48 00
Fertilizer,	4 80
Plowing and harrowing,	9 00
Seed and planting,	3 80
Cultivating and hoeing,	7 00
Harvesting,	13 00
	<hr/>
	\$85 60
Allowing half value of manure to remain in ground,	26 40
	<hr/>
Total cost per acre,	\$59 20
Nov. 9, 1888.	

I hereby certify that I have measured one acre of land, planted to corn, for Oliver P. Killam, of Boxford, to be entered for premium with Essex Agricultural Society.

MOODY K. STACY.

This is to certify that I have helped husk, and seen to measuring the corn grown on the above acre which amounted to one hundred and fifty-eight bushels.

MOODY K. STACY.

Nov. 9, 1888.

STATEMENT OF WM. W. PERKINS OF WEST NEWBURY OF
BARLEY CROPS.

To the Committee on Grain Crops, Essex Agricultural Society.

GENTLEMEN :—The acre of barley which I have entered for premium was a part of three acres and thirty-five rods. The ground was plowed the middle of May, six inches deep; harrowed and sowed with three bushels of seed, after the seed was sown, brushed in with brush harrow and rolled with heavy roller. The soil is clay loam, clay predominates, ground quite low, underdrained a few years since. I used no manure, as the ground had been planted with onions for ten or fifteen years, highly manured and generally kept clean from weeds. Harvested the middle of August, threshed and measured. Whole amount of barley on the lot, three acres and thirty-five rods, 133 bushels. On the acre I present for premium, forty-three bushels and three pecks weighing forty-eight pounds per bushel. Cannot estimate straw. Was offered 80 cents per bushel for barley.

EXPENSES.

Plowing acre,	\$2 50
Harrowing “	1 00
Sowing “	50
Brush Rolling acre,	50
Seed 3 bushels, at \$1.35,	4 05
Harvesting,	1 50
Threshing,	6 00
Cleaning,	1 50
Mowing,	1 50
	<hr/>
	\$19 05

WM. W. PERKINS, Newbury.

Nov., 1888.

NOTE.—B 3-4 bushels barley at 80 cents,	\$35 00
Straw estimated,	23 33
	<hr/>
	\$58 33
Expenses,	19 05
	<hr/>
Profit,	\$39 28

I hereby certify that I have measured one acre of ground, planted with barley, entered for premium by Wm. W. Perkins of Newbury.

Nov., 1888.

JAMES H. ILSLEY, Newbury.

This may certify that I have measured for Wm. W. Perkins of Newbury, forty-three and three-fourths bushels barley, grown on one acre of ground.

HENRY MORRISSEY.

NEWBURY, Nov., 1888.

REPORT OF COMMITTEE ON ROOT CROPS.

The committee selected to examine the Root Crops entered for the society's premiums, have attended to that duty, and report ten entries from seven competitors, viz.:

John H. George, Methuen, crop of onions. Chas. W. Mann, Methuen, crop of onions and cabbage. H. G. Herrick, Lawrence, crop of carrots. Paul M. Ilsley, Newbury, crop of squashes. Romulus Jaques, West Newbury, crops, Swede turnips, and onions. C. K. Ordway & Son, West Newbury, crop carrots. David Warren, Swampscott, crops, cabbages and squashes.

Your committee feel that they have been amply repaid for the time and expense they have incurred in visiting the different competitors for premiums, as they have been most hospitably entertained in every case, and our hosts were not only willing and desirous to show all of their farm products and talk freely of the different methods of farming, but were willing and anxious to show us other farms or anything that might be of interest in their respective towns, to an extent that would consume more time than was at our command.

The first visit we made was to see Mr. John H. George's crop of onions on Sept. 11, and found a heavy crop of medium size, all dried down, and ready to pull and mar-

ket, with scarcely a scullion or pickler on the piece. They grew on a piece of reclaimed swamp land with no under-drain, but an open ditch all around the piece. The rows were sowed only twelve inches apart. Mr. George has but a few acres of land, and that is all made to produce a crop that any farmer might well feel proud of.

On the same day we visited the crops of onions and cabbage entered by Mr. Chas. W. Mann. Mr. Mann's onions were on a piece of good, strong dark loam soil, sloping slightly to the west, that was suitable to raise a good crop of any farm product. His crop was some two or three weeks later than Mr. George's, being but partly dried down, but it was a fine piece of onions for the size of it, there being some four acres devoted to that crop, and the committee were somewhat at a loss to tell where the best half acre was he had entered for a premium. The rows were fourteen inches apart and the onions being thin grew of large size, with very few picklers, and if they had been sowed a little thicker would have been a very heavy crop.

Mr. Mann's crop of cabbage was on a piece of strong land near the base of quite a high hill sloping somewhat to the westward. It was a very heavy crop of "Mr. Mann's strain of Stone Mason," the heaviest crop, the committee thought, they ever saw. They stood higher on the stump than the common Stone Mason. In looking over the field the committee could not find a cabbage but what had a good solid head of very large size for that time of the year, it being early in the season for the crop to have its full growth. The rows were three feet apart, the plants two feet in the row.

While in Methuen Mr. George took us to see Capt H. G. Herrick's farm in that town, and we were fortunate in finding the genial Captain there. He took us over his whole place and showed us the many improvements which he is making, and among other things he showed us a fine piece of carrots, which he has since entered for a premium. The carrots were on a piece of dark loam, on

which was an orchard of young apple trees. Mr. Herrick bought the seed for Danvers carrot, but to his disgust about one-half of it was the Gerande. If it had all been the Danvers the crop would have been very heavy, there being nearly thirteen tons to the half acre as it was.

On Sept. 21 the committee visited Mr. Paul M. Ilsley of Newbury, who had entered a crop of squashes, and also on the same day visited Messrs. C. K. Ordway & Son of West Newbury, who had entered a crop of carrots, and Mr. Romulus Jaques of the same town, who had entered a crop of Swede turnips and onions.

Mr. Ilsley had an acre of fine Essex Hybrid squash on a piece of land of the nature of a sandy loam. That was planted in 1886 to corn, manured with barnyard manure. In 1887 it was planted to potatoes manured with fertilizer. The crop was not so heavy as some, but was very even, all well ripened, and ready to gather; very few small or inferior ones: so much so that one of the committee asked him what he had done with the poor ones or seconds.

Messrs. C. K. Ordway & Son, whose farm is located on the banks of the Merrimac River, and a considerable portion of it is fine intervale land that is capable of producing a good crop of anything they see fit to cultivate. Our object was to see a half acre of carrots which they had entered for a premium. They were of the Chanternoy variety, which in our opinion are not so profitable to raise as the Danvers, although they had a very good crop. They were short, but held their size the whole length, and could be pulled as easily as turnips, requiring no digging. But carrots are not the only good crop they raise, they having several acres in corn, and one of their pieces some of the committee estimated to produce very near one hundred bushels of shell corn to the acre. They also took pride in showing us their dairy, in the shape of a fine lot of home-made cheese, for which they find a ready market in Haverhill at an advance in price from the common article. The Messrs. Ordway are experimenting this

season, selling one-half of their milk, and making the other half in cheese and feeding the whey to several large fat hogs to see where the most profit is. We are inclined to think that the most profit will come from the cheese and pork.

Mr. Romulus Jaques had a very promising crop of turnips planted on soil of a loamy nature. His onions were a fair crop of good quality and size, but rather late.

On Oct. 3 we went to Swampscott to see a crop of squash, and cabbage entered by David Warren. It was an unfavorable time to visit Mr. Warren as his land is rather low and flat, although it is all underdrained. The heavy rains of the preceding week made the land very wet and in many places being covered with water, especially where his cabbages were. He had a good crop of cabbages, every head being perfect and very solid, set close to the ground on a short stump. The heads were not so large as Mr. Mann's, but we should say more preferable for family use, although comparing the weight to the acre we should say Mr. Mann had decidedly the most.

Mr. Warren's crop of Bay State squashes grew on black loam with gravelly subsoil, partly underdrained. The squashes were of good size, hard and well-ripened.

The committee feel that it is somewhat difficult to decide on the cabbage and squash crops, everything being so nearly equal, and for that reason have given it to the largest crop.

The committee award the following premiums:

- \$10. First premium, to John H. George, Methuen, for crop onions.
- \$5. Second premium, to Chas. W. Mann, Methuen, for crop onions.
- \$10. First premium, to David Warren, Swampscott, for crop squashes.
- \$5. Second premium, to Paul M. Hsley, Newbury, for crop squashes.
- \$10. First premium, to Chas. W. Mann, Methuen, for crop cabbages.

- \$5. Second premium, to David Warren, Swampscott,
 for crop cabbages.
 \$10. First premium, to Horatio G. Herrick, Lawrence,
 for crop carrots.
 \$5. Second premium, to C. K. Ordway & Son, West
 Newbury, for crop carrots.
 \$10. First premium, to Romulus Jaques, West Newbury,
 for crop turnips.

JOHN M. DANFORTH, *For the Committee.*

STATEMENT OF A CROP OF ONIONS, GROWN BY JOHN
 H. GEORGE, OF METHUEN.

The land on which they were grown, is peat meadow. The crops of 1886 and 1887 were onions; manure, in form of compost, applied at rate of 8 cords per acre. This year it had at rate of 10 cords, good horse manure and night soil, per acre, ploughed in about 4 inches deep, in the fall; in the spring it was harrowed, brushed, and dragged, and sown with Yellow Danvers seed, 4 lbs. per acre; hoed five times; weeded three times; harvested 372 bushels on the half acre.

CROP.

Dr.

To Preparation of Land,	\$1.50
Manure, 5 cords at \$5.00,	25.00
Seed and sowing,	7.00
Hoeing five times,	2.00
Weeding three times, boy labor,	6.00
Harvesting and topping, at 5 cents per bushel,	18.60
Interest and taxes on land,	6.00
	<hr/>
	\$70.10

Cr.

By 372 bush. onions (sold early) at 90c., average price per bushel,	\$334.80
	70.10
	<hr/>
Balance,	\$264.70

See Note next page.

NOTE—Crop per acre, 744 bushels at 90 cents.	\$669.60
Cost per acre,	140.20
	<hr/> \$529.40

I hereby certify that the land upon which grew the crop of onions entered for premium, by John H. George, measured eighty rods.

JOS. S. HOWE, *Surveyor*.

METHUEN, Sept. 11, 1888.

STATEMENT OF CHARLES W. MANN, OF METHUEN, ON
ONION CROP.

To the Committee on Root Crops :

The piece of onions that I enter, was grown on a westerly slope of rather heavy loam, and has been in cultivation five or six years, once stony but now quite free from large stones, though small ones are still plenty. I find it difficult to give the expense and crop from a half acre and so shall give the account of one bed as taken from my crop book, and though this will not show as heavy a yield as a picked half acre, or two quarters, the premium is offered for the "best experiment" so I may stand some chance of winning even if the yield be not the largest.

The bed measures 102,000 feet or about 2 1-3 acres. Eighty spreader loads of a compost of stable manure muck, night soil and grease waste or mudgeon was applied and plowed under last October, after removing a crop of onions, and onion, beet, cabbage and parsnip seed. The crop in 1886 was seed and cabbage, being only fairly manured in 1886 and 1887, perhaps seven cords per acre or its equivalent in other fertilizers.

April 25, began harrowing with Climax wheel harrow, applied 1200 pounds Tucker's Bay State Phosphate to the upper part of the field and had the piece smoothed down with the Meeker harrow ready for sowing April 30, using Danvers Yellow Globe seed of my own growing, crop of 1887. The crop started well, though rather slowly and a little thinner than some years, but later in

the season, grew rapidly and were plenty thick enough to be good size and yield well. The crop ripened well except in one wet corner where there were some scullions and there were no picklers, all the onions being large. The first weeding begun May 30, just 30 days from sowing, the second June 20, third July 6 and fourth July 23, after which they had very little attention.

Here is the account :

	Dr.
20 cords manure.	\$160 00
1200 pounds phosphate,	21 00
Applying phosphate,	1 00
Plowing, 15 hours at 40c.,	6 00
Harrowing, 10 " " "	4 00
Meeker, 8 " " 30c.,	2 40
8 pounds seed at \$5.	40 00
Sowing, 10 hours at 20c.,	2 00
6 bags salt applied,	4 00
1st weeding, 7½c. to 20c. per hour.	40 70
2d " "	36 45
3d " "	21 70
4th " "	19 60
Removing weeds &c.,	3 75
Pulling,	7 00
Raking and drying,	6 00
Picking up,	12 50
Teaming and storing,	25 00
	<hr/>
Total,	\$413 10
Yield 1250 bushels.	
Cost stored per bushel,	\$ 33
Cost per acre,	177 00
Yield per acre, 535 bushels.	

I do not know what the crop will sell for, but hope to realize a fair profit. There are really many items that enter into the cost of our farming that are not charged to these special crops such as taxes, interest, insurance, cost of tools and teams and repairs on same, depreciation of

value of horses and harnesses, keep of team in winter and stormy weather, and a thousand and one others that we might think of, a certain portion of which should be charged to each crop, but they never are, at least when we figure for a premium. Whatever the profit may prove to be I feel that "seedtime and harvest" have not failed as far as this crop is concerned.

CHAS. W. MANN.

I hereby certify that the piece of land on which the crop of onions, entered for premium by Mr. Mann, was grown, measures, 102,000 feet.

C. H. T. MANN.

STATEMENT OF DAVID WARREN, OF SWAMPSCOTT, ON SQUASH CROP.

The following is a statement concerning a crop of Bay State squashes raised by David Warren, of Swampscott, on one hundred and twelve rods of land.

The crop of 1886 was squashes, one application of stable manure at the rate of seven to eight cords to the acre.

The crop of 1887 consisted of cabbages, manure applied at the rate of eight cords to the acre.

The soil is a dark loam with gravelly sub-soil. It was ploughed in the fall of 1887, and cross ploughed in the spring of 1888, and stable manure applied with Kemp's spreader, by going over it twice, then harrowed with Randall harrow; planted 22d of May in hills eight feet apart, four seeds to a hill, cultivated twice, and hoed twice.

COST OF SQUASH CROP.

Rent of land,	\$3 00
Ploughing in the fall of 1887,	1 50
Ploughing in the spring of 1888,	1 50
Cost of manure used on the piece,	23 00
Furrowing and preparing hills,	75
Planting,	1 00

Cultivating and hoeing twice.	3 00
Cost of harvesting,	5 00
Seed,	1 50

Cost on 110 sq. rods, \$40 25

Product on 110 sq. rods, 19,380 lbs.

NOTE.—Product per acre, 27,685 lbs.

Expenses per acre, \$57.50.

DAVID WARREN.

SWAMPSCOTT, Oct. 6, 1888.

This certifies that I have this day measured a tract of land having on it a crop of squashes, owned by David Warren of Swampscott, and entered by him for the Essex Agricultural Society's premium, and that such tract contains one hundred and twelve rods of land.

ALLEN ROWE.

SWAMPSCOTT, Oct. 4, 1888.

From David Warren, loads of Bay State squashes, gross 47,940 lbs. : tare 28,560 lbs. : net 19,380 lbs.

C. S. LEWIS, *Weigher*.

STATEMENT OF PAUL M. ILSLEY, OF NEWBURY, ON SQUASH CROP.

The crop of squashes which I enter for premium was grown on a soil of sandy loam, planted in 1886 with corn, manured with 5½ cords of strong barn manure, and planted in 1887 with potatoes, manured with 900 lbs. fertilizer in the drill.

In the spring of 1888 ploughed seven inches deep, turning under about 5 cords of barn manure, and put in each hill two forkfuls of manure in which was mixed a quantity of fish offal, about 6½ cords altogether.

The hills were made 8½ feet each way, and planted about May 25, with Essex Hybrid seed, six to the hill, and thinned to three plants.

The crop was cultivated twice each way, hoed twice, and harvested October 5.

Quantity of No. 1 squashes on 1 acre,	24,488 lbs.
Seconds estimated,	1,000 lbs.

This certifies that I weighed one load of the squashes which P. M. Ilsley entered for premium, and loaded the remainder as near as possible to an equal weight, and that the above figures are correct.

JOHN M. LITTLE, JR.

Cost of crop :

Ploughing and preparing ground, about	\$5 00
Value of manure applied, about	53 00
Seed and planting, about	3 00
Cultivation and care,	10 00
Harvesting and storing, about	12 00
	<hr/>
	\$83 00

PAUL M. ILSLEY.

NEWBURY, Oct. 25.

This certifies that I measured the land on which P. M. Ilsley raised the above crop of squashes, and that its area is one acre.

JOSEPH ILSLEY.

STATEMENT OF CHARLES W. MANN, OF METHUEN, ON CABBAGE CROP.

To the Committee on Root Crops :

The crop of cabbages that I enter for premium was grown on a sidehill piece running from wet meadow to gravelly knoll.

In 1885 and 1886 the land yielded a crop of stone that would certainly have taken a premium had there been one offered for that crop. The yield was fully 300 perch per acre and perhaps more, as it was just cram full of them and big ones too. The land was first ploughed in November, 1886, with a team of four, two oxen and two horses, and it was a tough job.

In 1887 more stones were taken off, and about 4 cords of manure put on and harrowed in as well as possible, and sowed to oats, which gave perhaps a ton of dry fodder. Late in the fall the piece was cross ploughed and more stone removed. Soon after June 1st we spread on 25 cartloads of strong manure from barn cellar mixed with some stable manure from the city, and June 12th it was ploughed and harrowed and more stone picked. Furrowed three feet apart and dropped a handful of phosphate to the hill a little over 2 feet apart, covered with a hoe, and dropped seed and covered that with a hoe, being careful to cover it very lightly and stamp it well; this was done on the 13th and 14th of June. The variety was my own strain of Stone Mason. The crop was cultivated and hoed twice in July, after which only one half day's work pulling weeds was required to keep it clean until the harvest which began Oct. 11th, pulling them and storing in barn cellar to keep for seed purposes.

The seed came up in four days and lost no time through the season. The land measures 23,920 feet, 2140 over one-half acre.

Here is the account as taken from my crop book :

<i>Dr.</i>	
6½ cords manure at \$8.00,	\$50 00
600 lbs. Tucker's Bay State,	10 50
Plowing and harrowing,	3 00
Furrowing and planting,	6 00
6 oz. seed,	1 50
Cultivation,	12 00
	<hr/>
Total cost ready to harvest,	\$83 00

Yield 3630 heads or 300 bbls., for 12 heads would fill a barrel on the average and I rather think that ten would. The cost to raise was 27 2-3 cts. per bbl.; cost to cut and market 20 cts. per bbl., and selling price in Lawrence 40 cts. per bbl., which would have made a loss, if sold, of about 8 cts. per bbl. The cost of pulling, teaming a half mile and storing was ¾ of a cent a head.

Where the whole cost of manure is charged to the one crop I think it unnecessary to charge interest and taxes. The cost per acre was \$149.00; the yield per acre 6600 heads or 550 bbls., and the profit or loss per acre no man knoweth until sold, but whether it be a profitable crop this year or not, it was the heaviest field of Stone Mason I ever raised or saw, and there is some satisfaction in a big crop outside of its cash value.

CHAS. W. MANN.

I hereby certify that the piece of land on which the crop of cabbages, entered for premium by Mr. Mann, was grown, measures 23,920 feet.

A. A. TARR.

STATEMENT OF DAVID WARREN, OF SWAMPSCOTT, ON
CABBAGE CROP.

The crop of cabbages which I enter for premium was grown on land that had been in grass two years preceding. The soil is a dark loam with gravelly sub-soil; ploughed in the fall of 1887, six inches deep; stable manure applied in the spring of 1888 with Kemp's spreader, at the rate of eight cords to the acre, wheel harrowed in with Randall harrow first of June. The seed put in with seed sower, in rows three feet four inches apart, thinned down from two to two and a half feet apart, cultivated twice and hoed twice, and thinned.

Cost of ploughing in the fall,	\$4 00
Cost of wheel harrowing in the spring,	2 00
Value of manure on land,	50 00
Cultivating, hoeing and thinning,	8 00
Seed,	6 00
Rent of land,	6 00
Expense of crop on one and one quarter acres,	<hr/> \$76 00

NOTE.—Expenses per acre,

\$60.80

DAVID WARREN.

The piece of land of David Warren's, having a crop of cabbage, contains one acre and a quarter of land.

ALLEN ROWE.

STATEMENT OF H. G. HERRICK, OF LAWRENCE, ON CARROT CROP.

The land occupied by this crop is an apple orchard, the trees of six years planting, twenty-five feet apart, and is one-half acre in Methuen. The land is a dark, heavy loam and rather wet.

The crop of 1886 was mangolds, manured with stable manure. The crop of 1887 was corn; manure 18 loads (30 bushels per load), stable manure, and Mapes' corn fertilizer broadcast and in hills, 500 lbs.

The land was ploughed in fall of 1887, cross ploughed in spring of 1888, 7 to 8 inches deep, harrowed with wheel and smoothing harrows. The land was too wet and heavy to be pulverized as well as it ought to have been. Manured with 5 cords stable manure ploughed in. Sowed May 26. The seed was bought for Danvers, but proved, to my great disgust, about one-half Geronde. Rows 17 inches apart; weeded and hoed twice, thinned and cultivated with a small tooth cultivator about as close as possible. Harvested last week in October.

Amount of crop: 458 bushels = 12.6 tons.

Cost, manure,	\$25 00
Hauling and spreading manure,	5 00
Ploughing and harrowing,	5 00
Seed,	1 87
Sowing,	75
Weeding and hoeing,	10 00
Harvesting,	10 00
	<hr/>
Total cost,	\$57 62

NOTE—Product per acre, 26.95 tons, at \$12 per ton,	\$323.40
Cost per acre,	123.33
	<hr/>
Profit per acre,	\$200.07

This certifies that the piece of land on which the crop of carrots, entered by Capt. H. G. Herrick, for Essex County Agricultural Society's premium, was grown, measures 20,350 square feet: and the lot of carrots grown thereon measures 458 bushels.

CHAS. H. F. MANN

METHUEN, Nov 13, 1888.

STATEMENT OF C. K. ORDWAY & SON, OF WEST NEWBURY,
ON CARROT CROP.

This crop of carrots we offer for premium was raised on land that one-half was carrots, the other half in corn last year. This year we put on two cords of barn-yard manure, and ploughed from nine to ten inches deep, and sowed to carrots. The seed was Chantenoy seed. The seed was obtained from Mr. J. J. H. Gregory of Marblehead. We hoed and weeded three times during the season, and thinned to about five inches the second weeding. Finished harvesting Oct. 18. Weighed the entire crop on the public scales and had 18,594 lbs.

Cost of crop:

Manure, 2 cords,	\$20 00
Ploughing and harrowing,	2 00
Raking and sowing,	2 00
One pound of seed,	1 15
Hoeing and weeding,	18 00
Harvesting,	10 00

\$53 15

Products 9 tons, 594 lbs. at \$12 per ton,	111 55
Less cost,	53 15

\$58 40

Allowing half the value of the manure remaining in the land,	10 00
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The result will be a profit, \$68 40

See Note next page.

NOTE—Product per acre,	
18.6 tons at \$12,	\$223.20
Cost per acre,	106.30
	<hr/>
Profit per acre,	\$116.90
Allowing manure left in ground for land rent.	

I certify that I measured the land on which the above crop of carrots was raised, and that it contained eighty square rods and no more.

C. D. ORDWAY.

STATEMENT OF R. JAKES, OF WEST NEWBURY, ON RUTA
BAGA TURNIP CROP.

My turnip crop I offer for premium. The crop of 1886 and 1887 was grass, one-half ton to acre. This year I used for the turnips stable manure, at the rate of five cords per acre, no commercial fertilizer being used. Soil is sandy loam. One-half pound of seed was used, sown in drills two feet apart. Was cultivated once. Was weighed in baskets, sixty pounds to the bushel. The result was 275 bushels of merchantable turnips on the half acre.

Cost of ploughing and levelling,	\$4 00
Value of manure, two cords and one-half,	17 50
Value of seed and sowing same,	2 00
Cultivating once,	60
Weeding and thinning,	5 00
Harvesting,	12 00
	<hr/>

Whole expense,	\$41 10
Value of ruta bagas, 275 bushels at	
40 cts. per bushel,	110 00
Expense,	41 10
	<hr/>

Profit of half acre,	\$68 90
Rate of turnip crop per acre, 550 bush.,	\$220 00
Rate of cost of crop per acre,	82 20
	<hr/>

Profit per acre,	\$137 80
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This is to certify that I, J. O. Jaques, surveyed the land for Mr. R. Jaques, where the 275 bushels ruta bagas grew, and found it to be one-half acre.

J. O. JAQUES.

REPORT OF COMMITTEE ON STRAWBERRIES AND OTHER SMALL FRUITS.

The committee appointed to act on Strawberries and other Small Fruits, have attended to their duty, and would submit the following report :

There were but two entries, one of strawberries and one of grapes. Mr. George J. Pierce, of West Newbury, entered strawberries, 180 sq. rods. Two of the committee (Mr. Ilsley and myself), visited Mr. Pierce and viewed his strawberries early in July, found the beds clean and free from weeds. The berries were not as large as last year, but we thought Mr. Pierce entitled to the premium and awarded it to him.

A vineyard of Niagara grapes was entered by E. A. Goodwin of Amesbury, for examination and report, no premium being offered by the society. Three of the committee, Mr. Woodman, Mr. Ilsley and myself, visited Mr. Goodwin's vineyard, Oct. 3, found the vines loaded with fruit, but not ripe, and a part of the vines had been frosted at that time and would not ripen, and the remainder of the vines were frosted the 5th, so they were a total loss to Mr. Goodwin. He estimated the crop at about two tons. I think we are too far north to raise grapes at a profit in Essex County.

Respectfully,

J. HENRY HILL.

STATEMENT OF GEO. J. PIERCE OF BRAKE HILL FARM,
WEST NEWBURY.

Of crop of "Charles Downing," "Wilson," and "Crescent" strawberries, on 180 rods of land. Soil gravelly

loam, sloping to the west and southwest. Plants set in the spring of 1887, about the same quantity of each variety.

Cost of ploughing, harrowing, and preparing the ground for setting out the plants, \$4.50 per day, for man and team two days. 9500 plants to the acre were set, at a cost per thousand of \$2.50. Planting, \$7. Hoeing, \$9. For mulching, 2 tons of salt hay, at \$8 per ton. Picking cost two cents per quart; marketing, two cents per quart. First picking, June 22d, 50 quarts. Last picking, July 21st, 41 quarts. Total crop, 5452 quarts. Average selling price, 13½ cents. Rent of land and interest, \$5 per acre.

Crop report per acre :

Product per acre 4846 qts. of strawberries	
at 13½ cts.,	\$654 21

Expenses :

Ploughing, harrowing and preparing land	
for setting out plants,	\$8 00
9500 strawberry plants,	23 75
Planting,	6 22
Hoeing,	8 00
Mulching,	14 23
Picking 4846 qts. at 2 cts.,	96 92
Marketing same at 2 cts.,	96 92
Rent of land and interest,	5 00
	————— \$259 04
Profit per acre,	\$395 17

ESSAY ON ANNUALS AND THEIR CULTIVATION.—PART II.

It is with a feeling of great pleasure that I continue my talk to you about annuals, and you will pardon me if before proceeding I for a moment speak of the four flowers we considered last year. Not that I have any-

thing more to say at present about Asters, Pansies, Sweet Peas or Nasturtiums, but believing these four flowers to be the perfection of annuals, I cannot leave them without urging every one to include them in their list of flowers to be planted in next summer's garden. Their cultivation is simple : good soil, good seed and some care, which will be amply repaid by flowers that can well be said "To charm the fishes."

Asters should be planted early in the spring in the house, and set in the open ground in June, kept free from weeds and watered in dry weather. Pansy plants, after being set in the open ground, should have all buds picked off until thoroughly established, and until the latter part of August if large flowers are wanted. Sweet Peas should be planted early and deep, all blossoms picked off as soon as fully opened so they will not go to seed and stop blooming. Nasturtiums, as soon as well up should be thinned to not nearer than eighteen inches apart, but must be planted thickly as the seed as a rule does not germinate very well. These are the essential points, by the neglect of which most of the failures occur in growing these annuals. For fuller cultural notes see Part I in last season's transactions. I hope no one will think that annuals are at all difficult to grow, because so many little points should be borne in mind, as they are not : it is simply that the observance of these little minor matters help us greatly if we wish to grow them to perfection. I do not propose to devote much space to the cultivation of the flowers that follow, unless their culture should differ in some essential point from the methods already described. Let us now consider the single dahlia, grown from seed, as an annual.

SINGLE DAHLIA.

Single dahlias have of late years become very popular and deservedly so, as when cut with plenty of foliage they are certainly very pretty. But the seed must be started early in the house or greenhouse, that good large

stocky plants may be ready to set out as soon as the weather is warm and settled. The seed should be planted in March or the first part of April: as soon as the plants have been set out where they are to remain, and have made a good start, they should be tied to stout stakes, and carefully trimmed from time to time to make them symmetrical. Do not set the plants nearer in the rows than four feet apart and cultivate often. As regards varieties a good strain of mixed seed is what we need.

AGERATUM.

There are several varieties of this popular plant; blue, pink, lavender blue, and white. The *Ageratum* is valuable, on account of the length of time it remains in bloom and for contrast of color with the more brilliant flowers. It is good in clumps or masses, and the dwarf sorts are excellent bedding plants; it blooms constantly all summer, and if removed to the house will bloom in winter. The flowers are always clear in color and very desirable for boquet work. Their culture is easy as they succeed well in almost any soil: the seeds should be started early and the plants transplanted. The species *Mexicanum* is the one usually cultivated: color, lavender blue, and grows two feet in height; other varieties are *Lasseauxii*, pink; *Mexicanum Album*, white: Little Dorrit, a dwarf azure blue bedding variety, and Imperial Dwarf, also blue.

MARIGOLD.

The African and French marigolds are old favorites in our gardens, the former (*Tagetes Erecta*) have large yellow or orange colored flowers, and usually attain a couple of feet in height; the latter (*Tagetes patula*) are more dwarf, and have their flowers striped with deep brown, purple and yellow. The African is the most striking in large beds, or mixed borders, while the Dwarf French makes an excellent foreground to tall plants and is much used for edgings; but both varieties are very showy when planted in masses: they bloom continuously

all summer and fall until stopped by frost. Lemon and orange are the leading colors of the African type, while the French include brown, golden striped, yellow, brown and yellow, etc. One of the recent introductions amongst African marigolds is the "El Dorado," and I will give the originator's description which it has fulfilled in every respect: "Without exception the very finest type of this showy autumn flower. The flowers are from three to four inches in diameter, perfectly imbricated, and very double. The colors run through all shades of yellow, from very light primrose to the deepest orange, and the proportion of double flowers is greater than in almost any other selection." Another beautiful class of marigolds is the *Calendula* or pot marigolds: these are of the easiest culture and bloom almost the whole year outdoors or in the greenhouse: in fact the word *Calendula* is derived from *calendæ* meaning the first days of the months, in reference to its flowers being produced almost every month. The annual varieties mostly cultivated are the *Meteor* and *Prince of Orange*. The *Meteor* is light golden yellow in color, striped with intense orange, and blooms continually from May until late autumn. The *Prince of Orange* many consider surpasses the above in beauty, the flowers being striped with a more intense shade of orange, and this glowing tone is imparted to the whole flower: a bed of either is superb. There is also a white *calendula* but it is seldom grown.

BALSAM.

The *Balsam* (*Lady's Slipper*) being a tender annual should not be planted outdoors until warm, dry weather. They should be started in heat and set out when they have made two leaves, in rows or beds not nearer than two feet apart each way. The soil should be made as rich as possible, and the plants, as soon as they become well started, should be securely staked: being very profuse bloomers it is necessary to pinch off a portion of the shoots, which will increase the size of the flowers and add

vigor to the plants. Frequent waterings of liquid manure will be found very beneficial, as the balsam must be very highly fertilized if fine flowers are expected. This flower has been greatly improved during the last few years, and we now have the most beautiful colored flowers, including white, deep blood red, satiny white, white spotted and striped with lilac, and scarlet, etc. The finest strain is probably the camellia flowered, some of these flowers being almost as perfect and as double as a camellia: a mixture of this seed, containing all the self and fancy varieties is what we need.

CANDYTUFT.

The annual candytuft which we will now consider is universally known, and no garden is complete without it. It is much used in beds, borders, ribbon gardening, and for boquets, and single plants transplanted also look well and bloom abundantly. Seed sown in the fall and slightly protected with leaves or other light mulching, will bloom early in the spring, and sown from April to June will bloom from July until frost. The colors include white, purple, crimson and flesh color: the varieties are all hardy and easy to cultivate. Some of the sorts are very fine. Carter's New Carmine is a beautiful vivid carmine: Dunnett's Crimson is also good; Empress, a new variety, is pure white. The old favorite, White Rocket, if given more growing space than the others, and not planted nearer than two feet apart in rich soil, will completely cover the ground, and it is a fine variety with large white trusses.

PETUNIA.

The petunia, a small genus of half hardy herbaceous perennials, are all natives of South America, and mostly confined to Brazil. Though strictly perennial they may be grown as hardy annuals. As bedding plants they are unsurpassed if indeed equalled, and as they succeed in almost any soil, they are found in almost every garden:

also as house plants they are very popular, growing finely in the window-box or hanging basket. Either indoors or outdoors their richness of color, duration of bloom, and easy culture will always render them favorites. The seed can be sown in spring in the open ground, or planted still earlier in the hot-bed or a box in a sunny window, and the plants transplanted into beds from eighteen inches to two feet apart. By starting the plants early and transplanting them, they will come into bloom earlier though they flourish perfectly well sown in the open ground. The seeds being very small should be simply scattered over the soil, and slightly pressed into it: if covered deeply they will not germinate at all. At the present time there is a great variety of kinds, single, double, striped and blotched, fringed, etc., in great variety of colors and markings, and any one purchasing petunia seed will make a great mistake if they do not have the best, for the best petunias are simply superb.

PHLOX DRUMMONDII.

The common phlox of our gardens, *phlox drummondii*, is a native of Texas, and was discovered in 1835 by a Mr. Drummond, a botanical collector, sent out by the Glasgow Botanical Society, hence its name. Like the petunia it is universally grown, which is the strongest proof of its beauty and value as a flowering plant. Its culture is the same in all respects as the petunia. It remains in bloom a long time, and the colors are very rich, including white, rose, scarlet, purple and pale yellow.

ZINNIA.

To grow zinnias to perfection the seed should be started early in heat, and transplanted at least twice before they are set out where they are to remain; to make the plants stocky set them about two feet apart each way, more rather than less, and they will completely cover the ground. If large blossoms are wanted it will be necessary to pinch off a great many of the buds, as if

all are allowed to remain the flowers will be small. Should any plants show themselves to be single they must be immediately pulled up and thrown away. Zinnias being very thrifty growers do not need very rich soil and are not very particular as regards location, doing well almost anywhere. They grow easily from seed planted in May in the open ground, and having once blossomed remain in flower until frost, looking well until the seed is quite ripe. The fact of the flowers remaining so long perfect has given the plant one of its common names, "Youth and Old Age." Some of the varieties are grand, the beautiful scarlet, purple, orange and lilac flowers being perfectly double and as evenly imbricated as a camellia. Zinnias are certainly one of our best fall annuals.

CYPRESS VINE.

This half hardy climbing annual deserves to be more extensively cultivated than it is. Its delicate dark green feathery foliage, combined with an abundance of white, rose and scarlet flowers, make a very pretty appearance when properly trained on a veranda or trellis. The cypress vine requires a rich soil made very fine and porous, and if the seeds are soaked in hot water just before being sown they will germinate more freely than otherwise, some cultivators pour hot water on the ground after planting, but I have had better success by soaking the seed as above stated. Like other annuals, if the seed is planted in pots in the hot-bed or greenhouse, a much earlier growth can be obtained. One of the most unique, and I may say beautiful features of my garden has been what I call my "Cypress Vine Cone." It is made in the following manner and always attracts a great deal of attention: Select a good stout hard wood bean pole about ten feet or so long, and having made a slightly raised hill as for beans, set the pole firmly in the centre: around the pole draw a circle say three or four feet in diameter with the pole as a centre, and every three inches on the cir-

cumference of this circle drive a small stake strong enough to hold a strong twine running from it to the top of the pole; now fasten twine from all these little stakes to the top of the pole; this makes our cone. The next step is to plant the seed so that the vines will, when grown, completely hide both pole and strings making a solid mass of foliage and flowers. This is done by planting the seed thickly around the circle of stakes and watering until the young plants begin to run up the strings when they will look out for themselves. This cone can be made of various colors or of one color as may be preferred; in either case the effect is charming, and I hope this desirable climber will be more used in the future than it has been in the past.

MORNING GLORY.

While we are considering climbing annuals let us for a moment speak of that old familiar and always attractive plant, the morning glory. It will grow anywhere, on rockwork, stumps of trees or rough fences, and for covering trellises or rustic work is hardly equalled. The colors include blue, dark red, striped, white, etc. The dwarf morning glory has very rich colored flowers and is much used for beds and borders. The variety *Mauritanicus* which has blue flowers and is very floriferous is very desirable for hanging baskets.

MIGNONETTE.

It is hardly necessary to say that sweet mignonette (*Reseda odorata*) deserves a place in every garden, but without doubt it already has its corner. This plant succeeds best in a light sandy soil, as when grown in rich loam it loses its fragrance. Do not allow the plants to become crowded but keep them well thinned and they will grow strong and produce large spikes of bloom. If sown at intervals during the spring and summer mignonette will bloom until stopped by frost. Seed planted in the fall will flower in the spring, as when protected it

becomes a perennial. The best flowers are produced in cool weather, and if the seed is sown in July it will bloom to perfection from the first of September until cold weather. The seed must be firmly pressed into the soil and watered till well established, as when planted at this season the ground is usually pretty dry. There are quite a number of varieties, but the old and well-known fragrant sort called Sweet Mignonette is as good as any. One of the newer kinds called Machet is becoming quite a favorite for pot culture; it is a French sort of pyramidal growth, with thick dark green leaves, and throws up numerous stout flower stalks, bearing large spikes of very fragrant reddish flowers. Other varieties are Parson's White, Mile's Spiral and Crimson Giant, the best of some dozen or fifteen sorts.

I have already written more than was my intention, but one flower after another came to my mind and I could not slight any of my favorites; but now having mentioned some of the leading varieties of annuals which represent the various modes of cultivation, I will close this paper by asking you all to give in future more attention to this class of plants.

CABBAGE AND ONIONS.

BY CHAS. W. MANN, METHUEN.

Cabbage is one of the standard money crops grown among our Essex and Middlesex county farmers. The soil may be quite heavy if well drained, but good corn land, though not sandy, is about the thing for this crop. The manure may be strong and the more of it the better, and phosphate should also be used in connection with it for the best results. The best variety for fall and especially winter and spring market is the Stone Mason, by some called the Warren cabbage, as this when grown from true seed develops a deep, round head rather than a large flat one, being therefore very desirable for storing, as it peels well when

taken out, and is still of good shape when seen in the market in April and May. In selecting seed for our most valuable crops we should either grow it ourselves or buy of those who do grow it honestly and carefully, but never rely on such dealers as those who profess honesty yet never sell a package of anything without labelling it, "While we exercise the greatest care to have all Seeds pure and reliable, we do not give any warranty expressed or implied. If the purchaser does not accept the seeds on these conditions, they must be returned at once." For if the seed seller can't be sure of what he is selling, how can the seed buyer be sure of what he is getting?

Cabbage is quite a speciality among the farmers around Lowell, where it is extensively grown for winter and spring market. The Stone Mason of the best strains is the only variety planted to any amount, unless through ignorance or to save time somebody goes to the store for their seed, and then they raise a great variety of fodder and possibly a few heads of varied shapes and colors, but most of the farmers about there know their business too well to be caught napping that way. They believe in manuring heavily, plowing or harrowing it in, though sometimes putting it in the hill if the quantity is limited, and many of them use a little phosphate in the hill. For manure they go to Lowell or buy in Boston. They plant the seed in the hills where the plants are to grow and mature, from the first to the middle of June, and often set plants as late as the middle or last of July, if they have a little room to use where some early crop has been removed, but the heaviest crops are grown without transplanting. The cabbage crop should be cultivated and hoed often and thoroughly until the plants cover the ground; from three to four hoeings will be required to keep the crop clean and doing well. Winter cabbages will be ready to put away from the middle of October to the 10th of November, being about the last crop to harvest, unless we except turnips, for they are not injured by light or quite heavy frosts, and though the ground may freeze a little they will be unhurt: yet it is better to get them in a

day or two before you are obliged to, rather than leave them out one day too long, for repeated freezing and thawing will greatly injure their keeping qualities.

There are two methods of disposing of the crop. One is to sell at the going price directly from the field, getting from forty cents to a dollar a bbl., according to the market; this method gives very little if any waste, and makes very easy and clean trimming, and sometimes gives the best returns, for some years the price is as good at harvest time as in March or April following. The other method is to hold the crop until winter or spring, and this makes storing necessary. The farmers of Dracut practice storing in cellars, and a number of them have built large cellars for this purpose, while others use their barn cellars or the basement of some outbuilding. One of the largest of these storage cellars is about 60x40 feet, and 10 feet high, built in a side hill, with doors and shutters in the south side and a hen house in the roof over it: this cellar gives room for perhaps 1500 bbls. of cabbage, beside having one end partitioned off for storing 300 or 400 bbls. of onions. The cabbages are cut up about half way of the stump, the loose leaves trimmed off and the heads packed away in racks that are built from the floor to the top of the cellar: these racks are so arranged as to allow a passage every six feet or so, and the heads are laid in only one deep so as to allow a thorough circulation of air and frequent inspection. In such a cellar the cabbage can be taken out very conveniently at any time that the price is good enough to suit the owner, and if the temperature has been properly attended to will be fresh and crisp and bring the best price in the market.

Another way of storing is to cut them up about half-way of the stump if well headed, but if loose pulling roots and all, and set them heads up on grass ground and cover with pine shiver, oak leaves or meadow hay, but it requires much more hay than leaves to keep out the frost. And still another way of bedding is practised by some of the gardeners near Boston as well as by some seed growers,

who pack them away in a broad shallow pit, cover with hay or straw and then with dirt, and I have seen beds covered first with dirt and then with seaweed. The object being in all these different ways to so cover them as to keep them warm enough not to freeze much, a little freezing does not harm, and keep them cool enough not to heat and decay. This all seems simple enough, but when put in practice it is often found quite difficult to make a perfect success of it. Cabbage should be bedded in some well-drained spot, for wet ground or standing water will draw frost, so it is necessary to have the rain find a quick passage from the bed or frost will often follow it down and hurt or spoil the cabbage. I have tried to make plain the different methods of keeping the crop, and now as to the objects of keeping it, which are two, one to save valuable time at harvest and the other to gain money in selling.

Although there is sometimes a year when the price rises but little on account of an extra large crop somewhere, or for some such good reason, yet the price is generally much higher in winter or spring than when harvested, as was the case last year when the price rose from 50 cts. a barrel in Nov. to \$2.50 and \$3.00 in April and first week in May, and in Boston somewhat higher, although those who sold in January or February received only from 75 cts. to \$1.25. To know just how to keep the crop and just when to sell it requires experience and a close watching of both the market and the supply, but the reward when you get it is sufficient to pay well for the work and expense incurred.

We often hear of a crop of 400 bbls. per acre, but 300 bbls. is a good crop, and perhaps 200 or 250 would be nearer the average. One man near Lowell told me last winter that he had grown 1000 bbls. on 3 acres, and was just beginning to sell them at \$2.00 per bbl., and he really seemed quite happy about it.

Another man near Boston had the crop from six or seven acres bedded in and started them to market when the price reached \$2.50 per bbl.; he was doubtless happy, too, but I know a man who bedded a hundred barrels or so, covered

with hay a little too lightly, and nearly lost the whole by too much freezing, and another who stored a large cellar full, kept them a little too warm and shrunk them badly; they were sad. The cabbage grown around Lowell and Lawrence is partly sold in the cities named, but the bulk of the crop is shipped to Boston or further, and some days as many as ten carloads will be sent in from that vicinity.

Cabbage shades the ground so closely as to kill out such troublesome weeds as "pussly" and witch-grass quite easily. It would seem as though every one ought to know by this time that cabbage will not follow cabbage or turnips on the same ground without an interval of three years or more, on account of that once mysterious disease, the stump-foot, but every year someone gets caught and loses his crop because he does not know this, or because he does not believe what others tell him, or perhaps he knows more than any man can tell him.

I will give you the account of my premium crop of cabbage grown the past season. Of course it is the record of the best piece, but the rest did nearly as well. The soil is a deep, dark, mellow loam, somewhat stony, and located on a high hill naturally pretty well drained; for the three years previous it was cropped with beans and Hungarian, having but a slight application of phosphate. The land was in pasture at the time I bought it some four years ago, and has had no manure for at least ten years. It was plowed and harrowed June 4th, spreading twenty loads of barn manure on the piece before plowing, and applying 1200 lbs. of ground steamed bone before harrowing, and using 950 lbs. of Tucker's Bay State Phosphate in the hill, mixing it well with the soil before dropping the seed, which I prefer to plant where it is to grow rather than to do much transplanting.

The seed was planted in the hill, June 8 and 9, and the crop was cultivated and hoed three times; one hundred days from seed I could cut plenty of 8 and 10 lb. heads, the largest and best cabbage being found where there was the heaviest application of phosphate. The land measured

24,946 sq. ft., being 3166 feet more than a half acre. Cut and sold 108 bbls. in Lawrence and Methuen, 3 and 2 miles distant, and put away 1886 fine heads for seed purposes.

Here is the account as taken from my crop book :

Dr.

5 cords manure at \$8.00 per cord applied,	\$40 00
1200 lbs. bone, bought and hired it ground,	12 00
950 lbs. Bay State phosphate,	18 05
Plowing and harrowing,	3 00
Planting,	4 12
Seed,	2 00
Cultivation,	15 00
Cutting and marketing at 20 cts. a bbl.,	21 60
	<hr/>
Total cost,	\$115 77

Cr.

108 bbls. sold,	\$92 05
Fodder sold and used,	6 00
250 plants sold,	75
1886 heads stored, worth 5 cts. each in field,	94 30
	<hr/>
Total receipts,	\$193 10
Profit about 40 per cent.,	\$77 33
Receipts per acre,	\$338 08
Cost per acre,	202 70
Profit per acre,	135 38

Amount of crop about 400 bbls. per acre, and estimated weight of crop $32\frac{1}{2}$ tons per acre. You will notice that I charge the whole amount of fertilizers to the one crop and also make a liberal allowance for harvesting and marketing, believing that it is just as well to figure that I get fair pay for fertilizers and labor as to make out a tremendous profit and leave the impression that I do the work for nothing. Interest and taxes I have omitted for the land is certainly benefitted to that small amount.

The onion crop is another of our standard money crops, there being as many as 175 acres grown in Danvers alone,

while in the little town of Revere, only three miles from Boston, there were 40,000 bushels grown in 1886. The gardeners in Revere have somewhat the advantage of us in having a large supply of manure very handy and at a very low price; they will not pay anything for cow manure, and some will not take it away, as they say they can get very much better crops from horse manure, which starts the crops quicker, drives them faster and matures them earlier, while it is much easier to handle and team: they use very little commercial fertilizers as they can see no money in it; it does not seem to affect the crop at all, and why should it? If we country farmers could plow in 15 or 20 cords of manure twice a year, we wouldn't pay much for fertilizers I think, and we would be just as good farmers as anybody. It is the amount of manure used, and not the number of acres cultivated that makes the prosperous farmer. The secret of success in farming or gardening is found in the size of the manure pile rather than in the large extent of the farm or garden.

It is not the strength of the soil that gives the gardens of Arlington their fame, for much of their land is but a sandy plain that we should think only fit to grow white beans, or at best small corn, but it is horse manure and water that gives them their immense crops; they use 20 to 30 cords to the acre, and perhaps more, and turn on the hose whenever it is needed, and it is no wonder that things grow, but give us manure as plenty and water as free and we could beat them out and out with our strong soils, and our land would be growing better every year, while theirs would soon run out if left alone.

But to come back to onions again. I sowed three-fourths of an acre in 1886 on deep, black, heavy soil, somewhat stony, that had been cultivated for five or six years, but only a small portion of the piece had ever grown onions. I was somewhat doubtful of getting a full crop the first year on the land, as I heard so many say that "it took a number of years to get an onion bed started so as to do well," and the longer you sowed the same bed the better the results

would be, but I find that many an old theory goes to pieces when put to the test, and it was so in this case, but I will give my experience in detail.

Eight cords of good manure from a city stable was spread on the ground and plowed in April 20 and 21; the next day it was harrowed with the Aeme, and dragged with the old smoothing drag, then harrowed again and hand raked with iron rakes, the small stones and rubbish being carted away. Seven barrels of home-made phosphate, mostly bone and ashes, was applied just before harrowing. The raking took thirteen days' work. 3½ lbs. of Danvers Yellow Globe seed of my own growing was sown April 23 and 24 with the old-style Danvers seed-sower, a wooden machine that was invented about 1803, and for accurate sowing of small seed it has never been equalled or beaten, and I doubt if it ever will be. The rows were 14 inches apart. Onions were up so as to be seen across the piece May 8, fourteen days after sowing, and May 14 I began hoeing them with a Gregory finger weeder which I used until they were six inches high, when I found the Arlington slide hoe much better adapted to the work for the rest of the season. We finished first weeding June 1; second, June 21; third, July 12; fourth, July 30, and then went over the bed once in August, as much for the looks as anything, though it saved many weeds going to seed. Began raking out the onions Sept. 14, and in a few days they were dried and under cover and were soon sold. Most of the topping was done in rough weather and at odd times. Now for the figures, and it is not guess-work, for they are taken from the account kept through the season, and though I cannot figure the cost as small as some who win premiums, yet my statement may be just as correct.

The crop is charged with

Manure, 8 cords at \$8.00,	\$64 00
Phosphate,	17 50
Plowing, harrowing and dragging,	5 00
Raking, 13 days at \$1.50,	19 50
Horse, 1 day,	1 25

Seed, 3½ lbs. at \$2 50,	8 13
Sowing, 7 hours at 20 cts.,	1 40
Hoeing, at 20 cts. per hour,	8 00
1st weeding, at \$1.25 per day,	11 50
2d weeding,	10 00
3d weeding,	8 00
4th weeding,	10 00
5th weeding,	7 50
Interest and taxes,	15 00
Harvesting and marketing at 12 cts. per bu.,	71 82
	<hr/>
Total cost,	\$258 60

Cr.

598½ bushels onions at 75 cts.,	\$448.87
Leaving profit,	190 27
Receipts per acre,	\$598 49
Expense “ “	344 80
Profit “ “ 42 per cent.,	253.69
Yield per acre 800 bushels.	

Included in the above were 17 bushels of Early Red Globes from 2 ounces of seed, many of which were perfectly sound when taken out of the cellar, May 16.

The whole crop was very free from scullions, and as a Danvers man said when looking at them after they were in the shed, “They were as good looking a lot of onions as anybody need to see.” Remember, these were grown on land that never grew an onion before. The year’s experience, as given above, taught me a good many things by which I have profited in the year past. One thing that I learned was to get the manure all into the ground in the fall instead of having to cart and spread it in the spring when we ought to be harrowing and seeding, for every day then counts on the growth of the crop, while time is less valuable in the fall, and the manure gets better mixed with the soil and is better assimilated by the time the crop needs it. It is therefore much more available for plant food than when applied at time of sowing. I also plowed

my beds the fall before, turning the manure in about four inches and so leaving them ready to smooth down and sow the first day the ground was ready in the spring, and though the season was eleven days behind at the time of sowing yet I put in the first seed on the same day as the year before, and by so doing saved most of that eleven days on the growth of the crop which resulted in my getting a paying, though not a highly profitable crop, instead of little or none had I been ten days later getting the seed sowed. I raised three acres of onions the past season, getting a crop of some 1000 to 1100 bushels in all, and proving quite profitable.

I will give the report for the *best* half acre, it being a part of the same piece of land that made up the three-quarters of an acre sowed the year before. Twenty spreader loads of composted horse manure, muck and nightsoil were spread on Nov. 8, 1886 and plowed in three days later to the depth of five inches, using a Syracuse chilled swivel plow, which is the neatest general purpose plow, I know of. April 22, a dressing of ground bone and unleached ashes was applied and worked in with a common steel share harrow, and finally smoothed off with the Meeker which left it in fine shape for sowing. The cost of smoothing this piece with the Meeker was but 50 cents, while it cost me \$13 to hand rake the same piece the year before, and the Meeker leaves the best seed bed; this little item, together with the fact that the Meeker saved over \$50 in smoothing down the three acres, will give an idea of the value of good machinery and tools on the farm. I will say right here, that the Meeker should be run over the beds both ways, and the last time should be at right angles to, or across the way that the rows are to run so that the slight mark left by it may not interfere with the track of the seed sower and cause crooked rows. It is much easier to run the sower across the track of any harrow, than to run with it, and this is as true in planting corn as in sowing onions. The sowing was done April 25 and 28, using five and a half pounds of seed per acre, about a pound too

much I think, for general use. The crop was hoed three times with the Arlington slide hoe which I have concluded is the best for my kind of land, for it will do the finest work on land a little rough and stony of any hoe I have used, and on smooth, easy land it must do it to perfection, leaving very little for the hands to do except to pull the weeds between the plants; it pays to go slow with the slide hoe and run as close to the rows as possible, for one hour's work with the hoe will save more than two hours' hand weeding, and every hour's work saved, is money in the farmer's pocket. Keep the hoes going, start them before the weeds show and keep the soil stirring. The Arlington hoe is made by a blacksmith in Arlington and is a good serviceable tool, much better than the imitations in the market without his name on them. The fourth hoeing was done with a common scuffle hoe cut down to about 7 inches, as I found that the latter worked best of any, where the weeds were somewhat large, as I am sorry to say they were on this piece at the last weeding.

Finished first weeding May 31: second June 27 and third July 15 after which no more was necessary. The crop grew vigorously until the hot, sticky, moist weather, the last of July when they began to fall and were ready to rake out Aug. 25. After lying on the ground till Sept. 20, they were picked up into crates and allowed to stand out doors covered up with a waterproof cloth until Nov. 1, when they were taken in and weighed, there being 266 bushels on the half acre, all marketable onions, though not as large as those grown on the same ground the year before when the same half acre yielded 400 bushels. There were no scullions among them and a bushel of scullions could not be found on the whole three acres. The crop was not effected by maggots, smut or lice, but the blight seems to have spared no particular locality in its coming and my crop

NOTE.—I have also used the wheel hoes made by E. L. Blake & Co., Peabody, and find them very useful after the onions are up five or six inches, and think they will do more work in a day than any other I have used; one point in their favor is that they are honestly and thoroughly made, which is more than we can say of many of our farming tools.

was smaller on account of it, though but litly hurt aslig compared with the crop in the older onion sections of our county. I believe the cause of the blight to have been the exceedingly hot, and very wet weather of the month of July. Here is the account kept in the crop book with this half acre.

Dr.

Plowing,	\$ 1 25
Harrowing,	95
Smoothing with Meeker,	50
5 cords manure at \$8,	40 00
800 pounds ground bone,	8 00
20 bushels leached ashes,	5 00
Applying bone and ashes,	80
Seed, $2\frac{3}{4}$ pounds at \$3,	8 25
Sowing at 20 cts. per hour,	80
Hoeing, four times at 20 cts. per hour,	9.64
Weeding three times at $7\frac{1}{2}$ cts. to 15 cts. per hour,	25 82
Raking out,	3 50
Topping at 5 cts. per bushel,	13 30
Marketing at 7 cts. per bushel,	18 62
	<hr/>
Total cost,	\$136 43

Cr.

266 bushels, worth 90 cts. Oct. 1,	\$239 40
Leaving profit,	102 97
Product per acre, 534 bushels worth,	478 80
Expenses per acre,	272 86
Profit per acre, 42 2-3 per cent,	205 94

You will notice that I have charged 20 cts. per hour for my own time in sowing and hoeing, as I think I ought to be worth at least as much at my business as a common carpenter or stone layer: the weeding is charged at just what was paid for it. Interest and taxes might change the above account about \$10, but I think the improvement of the land will cover that. This half acre shows that the onion crop can still be called profitable in some places even in a very bad season.

My method of curing and storing the onion crop is somewhat different from any other that I have noticed. After raking out I allow them to dry a few days, just enough to get the outside moisture off from them, and then pick them up into crates, which I make about the size of a bushel box only somewhat deeper and slat two sides in place of making them solid all round. These crates when filled are piled up perhaps six high and two wide and as long a row as necessary, and are then covered with a strip of waterproof cloth, which I buy for this purpose in strips 5 ft. wide and 50 feet long, and are then allowed to stand out doors till November, perhaps six weeks after raking out. The sun shines on them and the drying autumn winds blow through and ripen them perfectly, so that they will keep through the winter without sprouting or rotting.

In topping onions I find it most convenient to have a low table, perhaps 4 feet by 6 feet and set up on boxes or barrels to a handy height to sit up to : such a table will hold four to five bushels and it is very convenient topping, being much handier than topping from the floor which is so common a custom.

The crates that I have, cost about 7 cents each besides the work, would cost perhaps 12 cents to buy all made : they will last for years and will almost or quite pay for themselves the first year in the saving of labor in handling the crop as well as in the improvement in quality. I have about 700 of them and should not know how to get along without them.

NOTE—Of Crops of David Warren that could not be completed on Pages 108 and 111, the information not being received soon enough.

SQUASH CROP.

Product per acre, 27,685 lbs. squashes,	\$276.85
Expenses per acre,	57.50
Profit per acre,	<u>\$219.35</u>

CABBAGE CROP.

Product per acre, 5000 cabbages, valued in the field 3 cents each, although of much more value to him for seed stock, which he retains them for, than the market value.	\$150.00
Expenses per acre,	60.80
Profit,	<u>\$89.20</u>

REPORT ON NEW MEMBERS.

The largest number of new members added to the Society's list in 1888, up to November 1st, was by Edwin Bates of Lynn, who is awarded the premium of six dollars for adding thirty-eight new members.

The total number of new members to January 1, 1889, including those who became members by reason of receiving awards of seven dollars or upwards, from the Society in 1888, three dollars of it, under the rules, making each a member if not one previous, were sixty-seven in number, from the following named places:

Amesbury,	1	Marblehead,	1
Beverly,	2	Peabody,	9
Bradford,	1	Rowley,	1
Danvers,	3	Salem,	3
Georgetown,	2	West Newbury,	3
Ipswich,	2		—
Lawrence,	1	Total,	67
Lynn,	38		

It will be seen by the list of members published this year, that there ought to be missionary work done in several places, even without the stimulus of a premium for the largest number of new members obtained, but rather that the next published list will not be so meagre in number under the name of some towns and cities, as to make its members ashamed of it, or others for them.

Respectfully submitted,

DAVID W. LOW, Secretary,

Committee.

TREADWELL FARM REPORT.

The Committee on the Treadwell Farm submit the following Report:

In the report of last year the new shingling of the two barns and shed was mentioned as having been commenced.

This has been duly finished, and also the cellar wall of the sheep barn rebuilt. The chimney of the house was found to be in a shaky and unsafe condition and has been rebuilt from the chamber floor up. Two new pumps have been furnished, and other necessary repairs made, which, in the aggregate, have drawn heavily upon the income of the farm to the society. But little repairing has been done for many years previous, so that necessity required these thorough and permanent repairs at this time. The buildings are now in good condition.

The committee have respected and cared for the many ornamental trees that the late Dr. Treadwell delighted to plant, and that have greatly beautified the farm; but a portion of them were in a decaying condition, and such have been cut and sold either for wood or timber, without seriously marring the beauty of the landscape, which the committee are anxious to preserve. The proceeds helped to their extent to lessen the expense of the repairs on the buildings.

The farm was leased last April 1st, to Mr. J. Plummer, Jr., on satisfactory terms, provided the conditions were faithfully complied with, but which the committee regret have not been as yet. One of which was the conduct of certain prescribed experiments, but his statement of them and of the crops grown upon the farm this season are so unsatisfactory, that it is deemed unadvisable to insert them here.

For the committee,

BENJAMIN P. WARE.

FARMERS INSTITUTES.

The Society held eight Institutes during the season of 1887-88. The fifth one at Amesbury, was with the Amesbury and Salisbury Agricultural Society, and the eighth one was a Field Institute, for exhibition and trial of Implements used for Cultivation of Crops. All of them

were good, and every season shows how well they are appreciated, by the increased interest and attendance at them, where the practical knowledge, by personal experience, of those who take part in them are of great value to others.

The 53d Institute was held Dec. 13, 1887, at the Town Hall, Bradford, to listen to a carefully prepared and instructive paper, by T. C. Thurlow of West Newbury, upon "Insects Injurious to Vegetation, especially to Farm Crops." Insects, he said, increase as civilization advances. In Missouri, a quarter of a century ago, not a wormy apple was seen; now they are more wormy than here. In Northern Illinois the codling moth is almost beyond control. In California insect pests are numerous, where they were unknown a few years ago. He uses, with good effect in destroying the tent caterpillar, the old fashioned way of a conical brush on a pole, just after hatching, early in the morning or when rainy. His result was a good crop of apples last year. The green aphid is destroyed by sponging or dipping the ends where they congregate in strong soap suds. Horse manure which has been used for mulching during the winter, when raked off in the spring, creates a smell that attracts the June Bug Beetles, who filled his heap with countless small grubs which he took to his poultry to dispose of. Birds, he said, are the natural enemies of the insect pests, and are fast disappearing, and in losing the robin, bobolink, thrush, and others of our common, native birds we are losing some of the greatest attractions, as well as benefits to rural life. We need a national law to protect our native birds, for no state laws can efficiently do the work for saving migratory birds.

President Ware destroys canker worms and codling moths with Paris Green and explained his method. Hon. Joseph How of Methuen, spoke of his experiences in contending with the enemies of the apple.

Before the afternoon meeting a visit was made by some to the stock farm of Col. Harry H. Hale, where some

seventy horses were seen, from the light trotter to the heavy Percheron, showing some fine stock.

The subject of afternoon discussion was the injury done to farm crops by insects.

Aaron Low of Essex, thought ashes as good as anything to check the ravages of the onion maggot. The squash maggot may be escaped by late planting. A solution of Paris Green is the best remedy for all squash vine enemies. The best remedy for cabbage worms is to grow the cabbages so rapidly that they cannot get into the head, a solid head being worm proof.

Mr. Hills, of Plaistow, N. H., said the cabbage flea is got rid of by plaster or ashes. No plum is proof against curculio. The "Arctic" does not drop so readily after being bit, as others.

Dr. Wm. Cogswell and others made brief remarks on the subject.

The 54th Institute was held in the Town Hall, Topsfield, January 5, 1888. The subject for the day was the question, "Is Free Trade or Protection the best for Farmers," which was opened by a long and exhaustive paper on the subject, by Benjamin P. Ware of Marblehead, in which he made many strong points in favor of the benefits of Protection. He urged that a home market for agricultural and manufactured products was the best market. The consumption is in proportion to the ability of the consumer to purchase. The price of all products are governed by the law of supply and demand. That nation whose legislature best protects the labor element, is the best governed country. History proves that a protective tariff best secures the preceding conditions. A protective tariff is not a tax upon the consumer of any product that his country can produce. He quoted from statistics to show the advantages of high over low tariff as judged by the periods of low tariff between 1850 and 1860, and of high tariff between 1860 and 1870. He spoke of the importation of eggs, free of duty, 14,465,764 dozen in 1886. He believed the hen should be protected. He urged the

taking off of the duty on sugar to reduce the revenue, and payment of bounty to Americans Planters, and removing the tax on tobacco, and increasing the tariff on imported agricultural products to stimulate increased production in this country, thus employing more home labor, without increased cost to the consumer.

Sidney C. Bancroft declared that he was not for free trade but tariff reform, a tariff for revenue only. He desired all raw material admitted free, and took issue with Mr. Ware that "free trade" and "tariff reform" were synonymous terms. He also took issue with other points of Mr. Ware's address.

A motion, by Rev. O. S. Butler of Georgetown, limiting the time of each speaker to fifteen minutes, was carried.

Rev. C. W. Luck of Topsfield, was in favor of free trade. Considered it a sign of weakness that Americans were not willing to enter into competition with our English brethren. If it was to continue, the best protection would be to build a Chinese wall around the United States and keep all foreigners out. He opposed freeing tobacco, and asserted there was as much poverty and destitution, in proportion, in New York as in London.

George W. Russell of West Newbury, made remarks that showed that he had given the tariff question, as to effects upon the laboring man, much thought. He urged that all our happiness and success depended upon the treatment of labor. He should be surprised if any one present and looking at such a gathering of Essex County farmers, after looking at a similar gathering of English farmers, could vote for free trade. He showed that it was home competition that lowered the price of our products. The duty on any article had nothing to do with it. The tariff was not a tax. The imports last year were \$200,000,000 and the exports \$240,000,000.

James J. H. Gregory of Marblehead, was surprised, he said, that the advocates of free trade or tariff reform had given them no answering arguments, nothing but irony

and sarcasm in answer to the solid arguments and very valuable information of the other side. They had none that were real. He supported Mr. Ware in many of his points.

D. W. Low of Gloucester, gave a few facts, showing the difference that the times of protection and the times of reciprocity, or free trade, has had on the fishing interests of the county, which largely interest the farmers, as they are large consumers of their products. He showed that with free trade the American fishing fleet decreased and the foreign fleet increased, and with protection the opposite was the case.

Charles W. Mann, one of the speakers of the day, introduced the following resolutions, which were adopted:

Resolved, That we favor the removal of the tariff upon sugar and favor a bounty to Southern Planters, to cover their loss.

Resolved, That we consider it advisable that a tariff of 40 per cent. be laid upon all vegetables possible of production in this country, and on poultry, eggs, and bed feathers.

The 55th Institute was held at Memorial Hall, Methuen, Jan. 24th, 1888, to consider, in the forenoon, "The Improvement of Waste Land." Opened by James C. Poor, of North Andover, manager of the Stock Farm of Hon. Wm. A. Russell, who said the term "Reclaiming of Waste Lands," may be applied to the bringing back to fertility of a worn out field, pasture, or land overgrown with bushes or brush, so that cultivated crops may be raised thereon, or more commonly applied to the clearing and draining of meadows and swamps to make them produce two heavy crops of English hay yearly; that land where alders grow abundantly will make splendid grass land and will pay a man to hire money to reclaim it and let his rocky fields go to pasture.

Fields from which certain kinds of crops have been taken yearly, are said to be worn out, and they are, for that kind of crop, but not for others. The farmer should find out what *can be* grown, and what fertilizer is needed. This he can do by sending a sample of his soil to the Massachusetts Agricultural College, for analysis, or by

experimenting with fertilizers and crops. He advocated the ploughing in of green crops for manure, in renovating land. One of the best is rye, as it grows fast. Red clover is perhaps the best, and turnips are good. Herd grass on reclaimed swamp land should not be cut below the first joint, if so, it will die. He thought the best land in Essex County and in the State was in the swamps, bogs, and marshes, which are full of decayed vegetable matter. Mr. Poor gave his experience in reclaiming twenty-five acres of swamp, underdrained with eight miles of stone and tiles, now yielding two crops of hay of two tons to the acre.

S. H. Boutwell of Andover, gave his experience in reclaiming six or eight acres of stony pasture land. Such work done at odd times pays: it would not pay to hire money to do it.

Hon. Warren Brown of Hampton Falls, N. H., believed in keeping sheep to eat down small bushes, and that dynamite was safer and better than powder for clearing land of stumps and rocks. His experience in that line was interesting.

W. H. Clark of Methuen, stated that he run in debt for a forty acre farm; now owns it all. Mostly reclaimed land. Says sand or coal ash put on swamp land makes all crops stand up.

John H. George for \$30 cleared a quarter acre of oak stumps with dynamite. C. W. Mann of Methuen and Sheriff Herrick all had had experience in improving waste land, and spoke on the subject.

In the afternoon, George M. Whittaker, of the *New England Farmer*, spoke on "Little Neglects," an address full of good advice, contrasting the well kept farm house and farm and its influence upon the town and county, with the loosely kept one, in such a vivid and truthful manner that the contrasts came home to every mind. He spoke of a Stockbridge man that many years ago, set out four elms in front of his house, in less than a day's work, which added \$1000 to the value of his farm when he sold

it. Little neglects impair the looks and value of any place, more especially the farm.

President Ware endorsed Mr. Whittaker, and said he knew manufacturers who had been doing a losing business, had, by utilizing what had been waste products before, made it a profitable business.

Hon. Joseph How of Methuen, urged those present to take the lesson of Mr. Whittaker home and profit by it.

Hon. Warren Brown spoke, as he usually does, in a humorous vein, but with good, sound sense mixed with it. He believed in destroying any old rubbish, and never regretted it. He used a boiler on his place, and all the rubbish, including the hired men's old clothes, boots, and such things, left lying around, found their way into it. Burdocks should be cut down and then killed by kerosene oil poured on them. It should be the duty of road surveyors to mow the roadsides.

James P. King and President Ware thought front fences should be done away with, and advocated the setting out of shade trees.

Messrs. O. L. Carlton of Danvers, Frank Marsh of Peabody, Mr. Case of North Reading, and others took part in the discussion.

The 56th Institute was held at the Town Hall, Peabody, February 14th, 1888, and was opened by Charles W. Mann of Methuen, on "Cabbage, Onion and Potato Crops," who said the secret of success for all crops of the farm and garden is more in the size of the manure pile than in the size of the field. Manure should be got into the ground in the fall, not in the spring, as it mixes better with the soil, and time is not so valuable. Keep the soil stirring by keeping the hoes going. Mr. Mann related his experiences with his crops, and said he had a book account with every crop.

Mr. J. J. H. Gregory of Marblehead, said there could be no accurate farming without farm accounts. Fruits and cabbages do better where they originate than elsewhere. Used ashes on cabbage land year after year,

without trouble from stump foot. Fish manure is good for cabbage land.

Mr. Tapley of Revere, planted a piece of land twice with beets and once with parsnips, last year. None came up. Turned over the soil and planted spinnage, and had 100 bushels on 1200 sq. ft. of land.

S. S. Pratt, James P. King, Aaron Low, T. C. Thurlow were among others who spoke on the subject.

In the afternoon, G. A. Tapley of Revere, spoke on "Fruit Culture." He said that pears need strong, rich, clayey soil or clay sub-soil to do best. He scatters three quarts of coarse, ground bone around the roots in setting out, and sets them three inches below surface, not over six inches in setting dwarfs on clay soil. Standards on gravelly soil must be set deeper. In setting on high land put wheelbarrow of clay under them; on clay land, loam. Sets Bartletts, Benre Bose, and Anjou's for money. If trees grow fast you cannot prune too much. Grafting can be done warm days in February, from then to time of blossoming. Would pick off half the fruit on tree; one good pear is worth four poor ones. Bartletts pick six or eight days before ripe. He commenced 2d of August, poorest fruit: next picking, picked half off. Don't prop a tree: pick the fruit off. Sorting important; putting poor with good makes all poor; difference of 75 cts. to \$1.00 per bushel between first and second quality Duchess. Totofsky is the earliest apple he raises. Sold at \$2 per bushel, from the tree, the past year. To keep apples in storage the temperature should be kept between freezing point and forty degrees, with occasional change of air.

T. C. Thurlow of West Newbury, didn't agree with Mr. Tapley about the Totofsky apple. He thought the Gravenstein the best apple for the market. Fruits brought here from a distance do not do as well as those originating here, such as the Baldwin and Hubbardston. Tolman's and Jacob's Sweet apples he considered the best for winter. He believed that hogs were of great value in an orchard, as also in the barn cellar, and more should be

kept. Hens are good. An apple orchard should be ploughed until it bears, and even after, unless sheep or hogs are kept. Potash and phosphate are needed for fertilizers.

Thadeus Hale of Rowley, said that strawberry beds will stand all the manure that can be put on them. The more the better.

J. S. Needham of West Peabody, spoke of the Hurlburt being a fine eating, but poor cooking apple. Will bear four or five years before the Baldwin.

James P. King of Peabody, believed that mulching peach trees would be a preventive from freezing.

Joseph How of Methuen, and one or two other speakers followed.

All the speakers agreed that the peach crop was a very uncertain one, but occasionally paid well. Potash recommended for the yellows.

The 57th Institute was held with the Amesbury and Salisbury Agricultural Society, at the new Opera House, Amesbury, Feb. 24th, 1888, where the "Care and Treatment of the Horse" was considered.

David Stiles of Middleton, who for over a half century has owned and shod them, opened the meeting. In regard to feeding horses, the amount of grain fed should vary with the size and condition of the horse, and never be over eight quarts of meal a day. Horse shoeing he considered a necessary evil, and improperly done a fruitful source of lameness and disease to the animal. Heavy shoes are a very common source of injury; the size and shape of the hoof should govern the size and shape of the shoe. To illustrate, the amount of weight a horse carries, wearing a two pound shoe on each foot, and taking a step every second, would, in an hour, lift 28,800 pounds. Many horses are required to do a great deal more than this. A horse's hoofs should be kept clean, and a better knowledge of its anatomy is needed. As a general rule, in giving medicine, a horse requires five times as much as would be a dose for a man.

B. P. Ware stated that he had never known a flatfooted horse suffer from contraction of hoof.

Albert Kimball of Bradford, would rather have his horses go bare than to touch their hoofs with hot iron. He believed in washing a horse's hoofs, and further that the vernicular disease and contraction could be cured, disagreeing with Mr. Stiles on those points.

James P. King of Peabody, broke a horse from running away by letting the animal run up hill and making him run until he was glad to stop from exhaustion. He cured a horse of colic by giving him two heaping spoonfuls of black pepper in warm water.

J. E. Page, foreman of Dr. Loring's farm, Salem, where some seventy horses are wintered, gave some experiences. The shoes are taken off their feet and they are allowed to run barefooted two to three hours every day all winter. They are given cut feed, ten or twelve pounds of hay with four quart mixture of grain and oats.

Quite a discussion was raised as to the best remedy for curing horses of worms. Among the medicines named were white mustard seed, wood ashes (two quarts mixed with feed for a dose), savin berries, dogwood bark (three or four ounces for a dose), cayenne pepper and sulphur. Garget and salt petre often used for cows, *are death to horses*.

The address for the afternoon, on "The Progress of Agriculture," by Edmund Hersey of Hingham, owing to the failure of his appearance, was given by President Ware, in an extemporaneous speech, in which he said that agriculture had its ups and downs, but history showed a successful nation to be one whose agriculture is prosperous, and where it is a failure that country is on the decline. In corn culture the Pilgrims took lessons from the Indian, scratching places in the rough ground to drop the seed, putting a fish in each, for a fertilizer. Next, a high hill was thought necessary for its successful cultivation, and now level cultivation is deemed best. The hard work formerly done with scythe and hoe is now done by ma-

chines, drawn by horses. The premium crops of this society, in earlier times as large as we get now, was because of virgin soil, but with harder work. We are obliged to make up this loss of fertility. A few generations from the early settlers farmers were obliged to keep animals to fertilize their soil: to-day, the farmer is obliged to use commercial fertilizers.

He then spoke of the progress in crops. Within his remembrance nearly all that was raised was hay, long red potatoes, a little barley, and a few cabbages, while nearly all of the standard vegetables of to-day originated, or were developed in Essex County. The ideas of some of the best implements started in this County.

A long discussion followed, some agreeing that agriculture was progressive, and others taking the opposite view. E. S. Nason of West Newbury, claimed that a young man could not run in debt for a farm, pay interest and taxes, keep the buildings in repair, and pay the mortgage, as well to-day as twenty-five years ago.

A. H. Coombs of Amesbury, agreed with Mr. Nason, but said that the reason he could not succeed as well to-day on a farm, was, because he wanted the best of everything there is going.

Warren Brown of Hampton Falls, referring to Mr. Ware's statement that with the improved machinery of to-day, one man can do what it formerly took ten to do, said there were a hundred ways to spend money now where there were ten formerly.

James P. King and John Q. Evans of Salisbury, and others, followed.

The 58th Institute was held March 13, 1888, at the Town Hall, Beverly. The subject of "Milk Production" was to be opened in the forenoon by John Q. Evans of Salisbury, but the violent storm kept him away as well as Edmund Hersey of Hingham, who was to open the afternoon discussion on "Fertilizers." The forenoon was profitably spent in listening to Mr. Gregory and others on milk production. Mr. Gregory urged the necessity of

giving attention to the quality of the feed for obtaining good milk. The nearer to English hay the better results. Rye hay cut early had been fed, with good success. He claimed that the Sawyer bean of Japanese origin is the richest feed. The beans pod out on the stock with beans round like peas, and will grow twenty bushels to the acre—with early and late varieties. They can be pulled before they are ripe and make excellent fodder for cows. Apple pummace he believed to be better than beets and mangolds, and had fed Hubbard squashes with good results. Corn ensilage cut in milk is economical feed for new milch cows. Ensilage takes the place of roots which have almost had their day for feeding. Cotton-seed meal he pronounced the cheapest food but it should be reduced with bran or a little common meal. In feeding cows it is a general rule that one-fifth of its value returns in the manure. A *warm* barn will pay its cost in increased production of milk. Green corn ensilage with one-third hay is as good as all hay.

President Ware said that Mr. Thompson of Southboro, had fed his stock on nothing but apple pummace and grain with apparently good results. Considerable discussion followed with the weight of evidence being that shorts alone as feed had no merit, but mixed with other feed they improved their value.

The afternoon discussion on "Fertilizers" was also opened by Mr. Gregory, who with other speakers all agreed that the best results follow their use in connection with other manures. He said potatoes should be planted deep as the roots need moisture. The largest growth of corn he ever raised was by plowing rye into the ground. Farmers could buy fertilizers at a saving of about \$5 per ton, by a number of them buying a car-load. In answer to question, he said he believed liquid manure as valuable as solid.

James P. King spoke of the value of night soil for manure, should mix with compost, one cord of night soil to two of compost, for onions, at a cost to him of about

\$3 per cord, and do its work as well as stable manure that would cost him \$7 per cord. He thought night soil could be used five years continuously on land without detriment, and the continual use of fertilizers on land would not be detrimental. Other speakers gave their experiences with fertilizers.

The 59th Institute, "Ladies' Day," was held at Plummer Hall, Salem, on March 29th, 1888, with "The American Farmer, his Blessings and Privileges" for the opening subject for forenoon by Mrs. Martha De M. Gage of Bradford, followed by a paper on "The Grange, from a Woman's Standpoint," by Miss Lizzie J. Huntington of Amesbury.

Mrs. Gage said that the American farmer is a very different being from the foreign peasant. Under the American social organization, he is the equal of representatives of other trades and professions. In no other country has equal mental activity and alertness been applied to the cultivation of the soil and a farmer requires mental and physical energy, interest in his work and judgment. The American farmer has the best blood of other nations in his veins,—the tenacity of the English, the versatility of the French, the stolid perseverance of the German, the mechanical ingenuity of the Swiss, and the energy of the more northern nations. He has improved machinery and the ability to use and care for it.

Mrs. Gage gave comparisons of wages received by farmers in different countries. In Massachusetts the farm laborer averages \$39.66 per month, in Iowa, \$17.41 monthly, for the year, including board and lodging and in some counties \$40 per month, without.

In western England, males, \$14.60 per month and females \$5.84, in summer and without board: in Wiltshire and Dorsetshire, males \$11.64 in summer, and \$10.68 in winter: in Hull district \$29 to \$72 for the year with board and lodging: in Yorkshire, the first man per week with cottage, \$4.06, second man, without cottage or board \$3.70, in Kent, \$4.13 without board, and so on.

In Alsace Lorraine, Germany, farm laborers receive, with board and lodging, \$67.30 per year; in Saxony, males \$44.26 and females \$22.84, much of the farm labor in Germany being done by women. In Japan with 12 hours work a day and five holidays a month, males receive \$8.50 to \$12.75 per year with food and lodgings; females with same hours work but no holidays, \$6 per annum with food and lodgings.

Comparison was also made of farming methods of this country with all its improved appliances and that of India whose methods were antiquated centuries ago.

Statistics for 1887 showed a valuation of leading farm products in this country of four billion dollars and 77 per cent. of total exports were agricultural products. The essayist pleaded for more thorough education of the farmer and argued in favor of establishing agricultural schools, where boys could be sent to learn the farmer's business and serve apprenticeship at it, as they do at other trades and professions.

Miss Lizzie J. Huntington spoke of the advanced position which women hold in the "Grange" as compared with the old farmer's Societies and Clubs. The organization had met with opposition, as a "Woman's Rights Association," the women being treated on an equal footing with men. The Grange is now represented in every state in the union. Other trades combine for mutual benefit, why shouldn't farmers? No other calling requires science and education more, which the grange supplies in part, it also increases the social spirit among farmers, an important feature in a farmer's life, a religious and temperate life is encouraged, and the mission of the grange will not be accomplished until every farmer in the land has received some benefit from it. The speaker gave a short history of the granges in Essex County from its first one, started less than two years before in Amesbury, and now having a county grange with a number of subordinate granges, all on a firm foundation with bright futures before them, already showing an improvement in the

social and mental condition of the farmers in the vicinity of them.

Miss Huntington's paper was followed by speaking on the subject by President Ware, Mrs. Wm. Horner of Georgetown, O. D. Hadwen of Worcester, James P. King of Peabody, Aaron Low of Essex, M. W. Bartlett of West Newbury.

Mr. Ware said he knew of no organization so well calculated to educate and cater to the social enjoyment and advancement of the farmer as the Grange. He also thought that farmers did not properly appreciate the advantages of a farmer's life and in illustration drew a picture between two farmer's boys starting out in life—one staying on the farm, the other going to the city and receiving, perhaps, \$2000 as salary. He contended that if the boys were equally endowed mentally and physically, the one who stayed on the farm would do best.

In the afternoon Mrs. Fannie A. Deane of Edgartown read a paper on "The Influence of Flowers on National Growth." No brief report can do justice to such an essay, it should be heard or read to be appreciated. It covered a wide field touching upon positions flowers had occupied as emblems of religious faith and national life, in architecture and in literature. Children should be trained to love flowers—it will make their lives purer and better. Flowers have a value in art, in manufactures, and in commerce, well illustrated by the essayist. Contrast the greenhouses of to-day in number with years ago and the varied and increased demands for flowers now, and then. The raising of flowers for perfumes is to acquire more importance in the future. It is being now done to small extent in California and the southern states.

The tender care of flowers by sailors in Holland and Germany was alluded to, also of the white and red roses as emblems of the great struggle in England. The "War of the Roses," The great love for flowers and the attention paid to their cultivation in Japan, was alluded to.

President Ware followed, mentioning the immense power for good that a dozen flowering plants did on board ship on a long voyage at sea—the captain of the ship stating that in his long experience he had never seen a more potent agency for good aboard his ship. Mr. Ware also spoke of the prizes offered by the Massachusetts Horticultural Society for window gardens and flowers generally.

John Robinson of Salem took an interest in the subject from a botanical point of view. The desirability of becoming acquainted with native flowering plants, and trees and grasses was dwelt upon.

Andrew Nichols, Jr. of Danvers, spoke upon wild flowers. He believed that botany should be a study in our primary schools instead of waiting until the pupil was advanced in the High school.

Aaron Low of Essex spoke of the improvements made, and great varieties in the colorings of flowers by their training and hybridizing, most of the improvements coming from Germany.

Remarks were also made on the subject by Mrs. Wm. Horner of Georgetown, Mrs. Nancy C. Andrews of Essex, Mrs. Martha De M. Gage of Bradford and others, which were interesting.

A vote of thanks was passed to the essayists of the day, for their interesting, instructive and valuable papers.

The 60th Institute and last of the season was a Field Institute and was held on the Gardner Farm, Peabody, on April 17, 1888. "For the Exhibition and Trial of all Implements used in the Cultivation of Farm Crops," at which some 200 or more were in attendance.

The largest exhibitor was J. L. Colcord & Son of Peabody, whose show of ploughs, harrows, cultivators and other machines and tools, was quite extensive.

Whitecomb & Carter of Beverly, also showed a line of machines of similar nature as well as C. H. Thompson of Boston.

In the trial of the ploughs a dynamometer was attached

to them to ascertain the draught required. The result was as follows.

No. 3 Yankee side hill plough—furrow 7 inches deep and 14 inches wide ; draught, 650 pounds.

Granger side hill—furrow 7 inches deep, 15 1-2 inches wide ; draught, 350 pounds.

North American side hill—furrow 7 inches deep, 14 inches wide ; draught, 550 pounds.

Plough 76—furrow 7 inches deep, 13 inches wide ; draught 575 pounds.

National sulky reversible—furrow 7 inches deep, 14 inches wide ; draught, 500 pounds.

Oliver chilled plough, side hill—furrow 7 inches deep, 15 inches wide : draught, 350 pounds.

Hussey plough, land side—furrow 6 1-2 inches deep, 14 inches wide ; draught, 300 pounds.

Swivel steel Yankee plough—furrow 7 inches deep, 14 inches wide : draught, 400 pounds.

It will be seen by these figures that the Granger side hill plough made a furrow one-half inch wider than any other tested and as deep as any other—7 1-2 inches, while its draught was only 350 pounds. The Hussey land side plough was the only one having a lighter draught, and this may be explained by the fact that its furrow was only 6 1-2 inches deep and 14 inches wide. The Granger plough was tested with one pair of horses which worked slow, and another pair which worked faster—both showing the same result.

The harrows were also given a practical test, but no figures could be taken to give the relative quantity or quality of their work. Each spectator was his own judge.

Altogether, the institute was a success and a benefit to farmers.

For the success which has attended our season's Institutes thanks are due to the Farmer's Clubs and other societies, who with members and friends of this society have procured the free use of halls, comfortably heated, in

the various places where they have been held, thus promoting the good attendance at them which we believe is productive of much good to the farming interests of our county. Thanks are also due to the essayists who have prepared so carefully such valuable papers for the meetings.

The ladies at nearly all the places visited, interested in charitable objects, provided good dinners for us at a fair price.

DAVID W. LOW, *Secretary.*

REPORT OF THE COMMITTEE ON ESSAYS, REPORTS AND STATEMENTS.

The committee received but a single Essay this year, that of Mr. Charles W. Mann, of Methuen, upon "Cabbage and Onions," published herewith, for which they have awarded the second premium of \$10. Fortunately Mr. Faxon contributed the second part of his Essay on "Annuals and their Cultivation," so that this department is not so deficient as it would otherwise have been. Mr. Faxon's essay is so meritorious, in the judgment of the committee, that they recommend to the Trustees that he be paid five dollars additional to the award of last year, which will raise the premium granted him, to the rank of first-class.

The committee hope that they may be able to report more essays another year. It can hardly be that with the constantly increasing interest in such writings there can be any permanent disinclination among our people to thus furnish us with the results of their experience and study. The essays are among the most valued features of our annual volume, and are eagerly read in the families of the farmers of Essex County, and by many interested persons not embraced in the membership of the society. These papers, hitherto published, have been extremely valuable and entertaining, and have largely contributed

to the excellent reputation which the Society enjoys throughout the state. We have, happily, many gentlemen who, in all respects, are competent to furnish such papers for the Transactions, and the committee would be greatly pleased if they should be induced to favor the society and the public with their thoughts upon some of the many topics which interest the agricultural public.

The committee have decided to make two awards for best Reports and Statements, namely, 1st premium of \$10 to Hon. J. J. H. Gregory, of Marblehead, for his report upon Apples, and the 3d premium of \$6 to Mr. John M. Danforth, for his report on Root Crops. Other than these the committee made no awards.

For the committee,

GILBERT L. STREETER, *Chairman*.

G. L. Streeter, Daniel E. Safford, Nathan M. Hawkes, David W. Low, Geo. W. Foster.—*Committee*.

IN MEMORIAM.

ROYAL DAY, of Bradford, who died in 1888, was a member of our Society over twenty years. "He was a well to do farmer, about 65 years of age; unmarried. He was much interested in the Society, serving on its Committees, and constant in his attendance at our Fairs."

JOHN O'BRIEN, of Bradford, who met his death by the "Haverhill Accident," being killed in a building crushed by the cars, joined this Society in 1878, and for several years previous took premiums for fruit at our Fairs, mostly on Pears, of which he made a specialty. In 1879 he took the first premium on report of Committee, he having served as Chairman of the Committee on Pears. In the following winter, at a "Farmers' Institute," in Lynn, he read a paper on "Fruit Culture." He was a constant and working member at our Annual Fairs and his fruit was always among the best.

RICHARD DODGE, of Beverly, died May 17, 1888. He was one of our oldest members, having joined in 1848. He owned and cultivated a large farm; was a good neighbor, pleasant and social, and was interested in his town, schools and church.

JOHN MEACOM, of Beverly, died December 1, 1888, on his 77th birthday, the last three years of his life having been one of the Trustees of this Society, joining it in 1858, and having been active since in its service, on important committees. He early learned the carpenter's trade and became a master builder, and the most prominent school-houses, churches, halls, and dwelling houses in Beverly are monuments of his skill. He was a great lover of his native town and served on its Board of Selectmen from 1859 to 1863 inclusive, the war period. Chairman of the Board a part of the time. A Representative in 1862. Overseer of the Poor from 1865 to 1873, most of the time Chairman. Was Director of the Beverly Savings Bank and of the South Danvers (Peabody) Mutual Insurance Company. In Masonic circles he was well known. He was a wise counsellor, a loyal friend, an enterprising citizen of most exemplary character and of large influence for good. He accumulated a large amount of real estate which became valuable, and portions of which he tilled to advantage.

JOHN BELL, of Beverly, died Dec. 2, 1888, aged 67, having for the past twenty years been a member of this Society. He was owner of many acres and a successful milk farmer. He was a citizen of energy and capacity and had served as Assessor for the town of Beverly, of which he was a native, and was connected with its Masonic and Odd-Fellows organizations at the time of his death.

JOHN HALE, of Boxford, died March 7, 1888, aged 86 years, 6 months, 27 days. He was an early exhibitor and member, taking premiums fifty years ago, for his exhibits of stock, at our exhibition, and was also an exhibitor of boots and shoes, in the department of Domestic Manufactures, of which for many years he was an exten-

sive manufacturer, until he met with heavy losses, after which he spent his time farming and marketing at Salem market, which he kept up until the last winter of his life. He was always sure to be at every Cattle Show of our society.

SAMUEL P. FOWLER, of Danvers, died Dec. 15, 1888, in his 89th year, having been born April 22, 1800. He was a direct descendent of Philip Fowler, born in Wiltshire, Eng., in 1590, who settled in Ipswich, Mass., in 1634. His ancestry was of the genuine sturdy New England type. His tastes were literary, although his only early education was from a country school, but he continued a student, taking a keen interest in nature, and wrote interesting articles on the "Birds of New England," also many botanical papers on trees and shrubs, and took an active part in the meetings of this Society of which he was long a valuable member.

He served Danvers as Selectman and Assessor, five years; Auditor, three years; frequently Moderator; on School Committee, seven years; Board of Health, three years; one of its Firewards when its Fire Department was first organized. Representative in 1837, '38 and '39. Was a member of the State Constitutional Convention, in 1853. Was President of the Peabody Institute for some time, serving on its most important committees. He was an officer of the banks and seems to have been placed in many responsible positions, on committees and elsewhere. His longest and most important public service was as member of the Board of Overseers of the Poor for forty-three years, most of the time as Chairman. He joined Jordan Lodge of Masons, in 1823, and remained one of its members until his death. No citizen of Danvers was more beloved or will be more missed. To very few is given such a long and useful life.

AMOS PRINCE, of Danvers, died March 11, 1888, aged 66 years, 9 mos., 11 days. Became a member of this Society in 1870.

SAMUEL WALLIS, of Danvers, died Sept. 9, 1888, aged 79 years, 3 days; followed the occupation of farming the most of his life. For thirty years he was a member of this Society, and always interested in its doings. He usually attended its Annual Fairs, and in the latter part of his life very many of its Farmers' Institutes.

DAVID KNOWLTON, of Essex, died March 29, 1888, aged 68 years. He was a farmer and teamster, taking loads of hay, wood, or piling to Gloucester, and bringing back rigging, and cables and anchors, for the new vessels, building in Essex, for the Gloucester fisheries, or else bringing back loads of manure to enrich his farm. He joined this Society in 1858; has served on many of its committees, and taken many premiums for horses.

MILES S. ANDREWS, of Essex, died Nov. 25, 1888, aged 76 yrs., 7 mos., 22 days. Became a member in 1856 and has served on its committees. He made farming a success, being especially successful in the cultivation of Asparagus and Strawberries.

DANIEL E. MOULTON, of Georgetown, died May 15, 1888. He was born July 10, 1821, in West Newbury, and worked on the old homestead farm until he moved to Georgetown, about forty years ago. For twenty years he has been a member of this Society, and has taken great interest in all that pertained to its welfare. Reared on a farm, although later in life he was actively engaged in manufacturing pursuits, yet his interest in agriculture never waned, and, on retiring from business his inclinations were toward the cultivation of the soil. His death was caused by injuries received while ploughing in his field. He served in several important official positions, and did a great deal towards building up the town. He was very benevolent toward the suffering, and kind and solicitous in sickness. Few men would do more to relieve the distressed.

JAMES R. NICHOLS, of Haverhill, died Jan. 2, 1888, aged 68 yrs., 5 mos., 13 days, was one of our most valued

members. He joined in 1855, and the same year was selected to deliver the annual address, and again in 1881, in which last he reviewed the progress of Agriculture in the County, in the twenty-five years since his first address. He was one of the Trustees of the Society for several years.

Dr. Nichols was one of the most scientific and successful chemists of his time, and the result of his research, with an inventive mind, were many important discoveries and inventions, of which the public are now enjoying the fruits. In 1855 and 1857 he travelled extensively in Europe, and his information there gained by observation, inquiry, and study, proved of great advantage to his future, in the production of chemicals used in printing, dyeing, photographing, and other arts which had hitherto only been supplied from the laboratories of Europe. His early education upon a farm caused him to apply chemistry to agriculture, and in 1863 he purchased a farm on the westerly shore of Lake Kenoza, known as the "Darling Estate," which he designed "for an experimental farm in the application of science in agriculture," and it was probably the oldest experimental farm in the country. His changes in process of cultivation proved a great success, as shown in the State Agricultural Reports and in the running history of the work, appearing in the "Journal of Chemistry," which had been established by him in Boston in 1866, and in other scientific and agricultural journals. He made hitherto unproductive territory teem with abundant crops, and its results are shown on Essex County farms, especially by improved methods and more science applied. In 1878 he was appointed by Gov. Rice on the Massachusetts State Board of Agriculture and was continued a member until his death, contributing many valuable papers to the literature of agriculture. Among the most prominent were, "The Proper way of Reclaiming Wet Meadows," "Water in Agriculture," "Artificial Fertilizers," "What Science has accomplished for Husbandry," "Muck—its Uses in Agriculture," and many others of kindred nature.

Prior to 1872, his works, "Fireside Science," and "Chemistry of the Farm and Sea," were issued and extensively read, contributing to increase his literary reputation, and in 1883, his book entitled, "Whence, What, Where?" proved to be the most popular of all his publications, with immense sales. His interest in the diffusion of useful knowledge caused him to found a public library in his native town of Merrimac. Besides his scientific, agricultural and literary pursuits, he held very important official positions, having been from 1873 to 1878, President of the Vermont State Railroad, and from 1873 to his death, a Director of the Boston and Maine Railroad.

JAMES E. GALE, of Haverhill, died Aug. 20, 1888, aged 56 years. He became a member in 1855.

WILLIAM MERRILL, of Haverhill, died Sept. 7, 1888, aged 76 years. He joined the Society from Andover, in 1865.

EDMUND GAGE, of Haverhill, died Dec. 6, 1888, aged 86 yrs., 6 mos., 26 days. He had been a member about fifteen years.

ADDISON GILBERT, of Gloucester, died July 2, 1888, at the age of 79 years, having been a member since 1872. Although not a farmer, he took great pleasure in cultivating fruits, flowers and vegetables in his garden. At the time of his death he was President of the City National Bank and the Cape Ann Savings Bank, and under the Town Government he served many years on its Board of Selectmen, most of the time chairman. He had, during his life, accumulated a large property, and left for the benefit of his native city, Gloucester, nearly \$200,000 to found a free hospital and an Aged Couples' Home, and for other charitable and like institutions in the city.

FRANCIS M. LORING, of Gloucester, died Aug. 17, 1888, aged 77 years. He was born in Boston, Aug. 27, 1811, and went to Gloucester forty-five years ago, as a journeyman tinsmith. Afterwards he was in business, winning

the confidence and esteem of all with whom he had dealings, and attracting a large circle of friends by his genial and social qualities. Elected in 1879, by the votes of all parties, on the Board of Aldermen, he rendered faithful and valuable service on its most important committees. He was a veteran Odd-Fellow and Mason, and joined this Society in 1872.

DANIEL S. RUSSELL, of Ipswich, died Feb. 5, 1888, aged 63 yrs., 4 mos. In early life he was a Lynn shoemaker, but for the past twenty-five years a farmer. He was an active member of the Ipswich Grange, and of this Society, having joined it in 1881. At the time of his death he was a member of the Board of Selectmen. He was a man of strict integrity, honest in all his dealings with others.

YORICK G. HURD, of Ipswich, died Sept. 24, 1888, aged 61 yrs., 7 mos., 7 days. He was born in Lempsten, N. H. Dr. Hurd was widely known as a successful physician and surgeon. In early life he worked on a farm. During the late Rebellion as surgeon of the 48th Reg't of Mass. Volunteers, he gained a high reputation for his skill. In 1865-6 he served in the State Senate, and in 1866 was appointed Master of the House of Correction, and Superintendent of the Insane Asylum at Ipswich, which he held for twenty-one years, and under his direction the farm was both improved and made remunerative, growing large and profitable crops. He was trustee of the Manning School Fund, and of the Ipswich Savings Bank. He took an active part in agriculture, as a member of this Society for nearly twenty years; also, in town affairs, and favored all improvements that he saw would bring good results. Was kind and obliging, ever ready and willing to lend a helping hand to all. He will be missed by all who knew his sterling qualities.

EDWARD A. FISKE, of Lawrence, died, after a lingering illness of two years, Dec. 28, 1887, aged 49 years. Major Fiske was born in Lowell, and was brother of General W. O. Fiske who died some over a year ago. When the

war broke out he was 23 years old and exploring timber lands one hundred miles north of Montreal. When the news reached him of the assault on our country's flag he set out for home which he reached at noon of a September day in '61, immediately going to a recruiting office, where he was rejected as below the required height. That night he had two thicknesses of leather placed on his shoes and returned next day and was again rejected, but he was so persistent to go that he was finally passed, and sent to Camp Chase and attached to Co. B. where he was elected 2d Lieut. Nov. 27, '61, and advanced to 1st Lieut. Aug. 21, '62. The Company was part of the 30th Reg't. On Oct. 21, '62, he was promoted to Captain. At the siege of Vicksburg, his regiment was on the river; the Rebel gunboat Arkansas was near by, doing a great deal of damage. Two Union gun-boats were ordered in pursuit, and Capt. Fiske had charge of one. A conflict resulted, that raged for six hours. During that time, the Captain stood by the pilot-house, pistol in hand, directing its movements. Men were falling on all sides of him, but he bravely held his position until the battle closed. On General Banks' expedition, anxious to be at the front, he got changed from the charge of the commissary dep't to Gen'l Berge's staff, and on the campaign had two horses shot from under him, the last one pinning him down by falling upon his sword, and he was compelled to cut the straps and flee for his life. Being sent to Washington on business, he came home on furlough and was presented with two beautiful swords. On his return to his regiment he took an active part in the closing engagements of the war, and on Feb. 17, 1865 was brevetted Major for gallant services in the field. His service was four years and four months.

At the close of the war the Major leased a plantation in South Carolina, investing several thousand dollars, but before his first crop was harvested sectional hatred was such in that locality that he was threatened with death if he persisted in remaining. He left for Pennsylvania,

and in 1868 came to Lawrence, where he engaged in business until the disease contracted in the army fastened upon him, causing a lingering illness of two years before his death. He was a member of the Loyal Legion of Massachusetts, a Knight Templar of Tuscan Masonic Lodge and prominent in the Grand Army. His obituary, published in the *Lawrence American*, from which the above extracts are taken, ends with this paragraph, which, notwithstanding the space already occupied for notice of his death, we know the patriotic farmers of this Society will pardon its addition.

"No braver soldier, more discreet and capable officer went from Massachusetts into the service of his country: no truer comrade of the Grand Army, with deeper, more constant devotion to the interests of all who had defended the flag, ever lived in our city: no more generous-hearted, open-handed, public-spirited citizen has blessed any community: A more unselfish, steadfast, self-sacrificing friend has not been born or lived in this generation than Major Edward A. Fiske.

WILBUR FISK GILE, of Lawrence, died Feb. 5, 1888, aged 56 years. Was born in East Bradford, now Groveland. Before he was twenty he began teaching school, his success winning advancement and attention of educators. In 1855 he became principal of the Grammar school in Lawrence, proving a superior teacher: but having a taste for legal matters he resigned, to study law. In 1860 he was admitted to the bar, and obtained a large and successful practice. For a number of years past he has been Associate Justice of the Lawrence Police Court. He took active interest in school matters. He served on the Republican State Committee, and was a member of several social clubs of Boston and Lawrence, and of the Masonic fraternity. He was of a remarkable genial and sunny disposition, large hearted, liberal and true to his friends.

REUBEN ALLEY, of Marblehead, died Jan. 7, '88. He was a Trustee of this Society at the time of his death.

and a member since 1875. He was one of the most successful of Marblehead market gardeners, and was a frequent and successful competitor at our exhibitions; quiet and unobtrusive in his manners, a good citizen and a kind neighbor, his example as a farmer and citizen was valuable in the neighborhood in which he lived and he is missed and lamented by all who knew him. He was a member of the Masonic Fraternity and Knights of Pythias.

CHARLES ADAMS, of Newbury, a member of this Society since 1869, was born May 18, 1824, and died April 30, 1888. Mr. Adams lived all his life upon a farm inherited from his father, in the centre of that town. He was a good citizen and a good farmer and he will be thought of as one who rose in our esteem as we came to know him better. His peculiar taste, one which may be too rare among us in like circumstances, was shown in the beautiful bank of flowers between his house and the road, cultivated each year with care, by him, for many years, which came to be a pleasing land-mark on the way from Dummer Academy to Newburyport. He left a widow but no children.

HIRAM YOUNG, of Newburyport, was born in Newbury, Nov. 18, 1834, and died in Newbury, Feb. 12, 1888. Though always dependent upon his own labor for support of himself and family, neither owning nor managing a farm, Mr. Young was always noted for his interest in all agricultural affairs, and for his skill and capacity in all farm work. That skill is shown by the award to him, from 1855 to 1880, of 15 first, 4 second, and 1 third premiums for his work upon the ploughing fields, at this Society's Fairs: in a larger part of these cases with a single ox-team, as driver and also holder of the plough. He joined this Society in 1858.

WILLIAM H. HUSE, of Newburyport, Mayor of the city, Editor of the *Newburyport Herald*, member of this Society, died suddenly March 28, 1888, aged 64 yrs., 3 mos., 23 days. He became a member in 1855, and has always

been interested in its welfare, and at the Fair held in that city, in 1885 and 1886 gave it personal help by word and deed. His loss was felt keenly in Newburyport, and its City Council said of him. "That in the death of Hon. William H. Huse, Mayor of this city, we are called to mourn for one who in many capacities, and during a long term of years, has faithfully administered every trust devolving upon him, and as Mayor has in the most able and impartial manner discharged the duties of the office. In every department he has proved of great usefulness, and attended carefully to every duty required at his hands, and ever been active to advance the interests and promote the welfare of our city, and his record is—'Well done, thou good and faithful servant,' which will also apply to other local, state and national positions which he had held."

WILLIAM THURLOW, of Newburyport, who died Dec. 14, 1888, aged about 70 years, was a sea Captain, and for several years a Pilot, and for many years a grocer in that city. Has served as Alderman and in other offices. Had been a member of this Society about twenty years and was interested in its welfare.

EDWARD W. JACOBS, of Peabody, who died 22d of April, 1888, at the age of 56 years, had been a member of this Society nearly twenty years. He had been prominently identified with the business interests of Peabody and an active worker for its welfare and prosperity, showing himself to be large hearted and charitable, but often too liberal for his own good. He not only succeeded his father in a large business, but also as President of the South Danvers National Bank and as Trustee of Peabody Institute: and held many places of honor in the town. He finally met with financial misfortune. While he was a business man he was also a farmer, his buildings being about one and a half miles from the town hall. His barn was thoughtfully arranged for practical utility, and he showed a strong liking for good stock and a desire to accomplish thorough work in conducting farming operations. He was one who was in life active in building up a business which helped

make the most desirable kind of a market that farmers can wish for, one that is nearest their homes.

NATHANIEL S. YORK, of Rockport, died March 7, 1888, aged 69 years. A member of this Society since 1872: was a native of North Yarmouth, Me., and resident of Rockport since 1839. He was a Master Mariner; afterwards, Overseer in the Steam Cotton Mill there; afterwards, Superintendent. In 1872 he was made a Trial Justice which office he held at death. He was on the School Committee eighteen years, most of the time chairman, and did much to improve the schools. He was one of the Selectmen six years, and a past master of Ashler Masonic Lodge. Mr. York was a man of strong convictions and wise in council. Taking great interest in his town, he was always ready to promote its best interests, and his qualities of heart and mind will cause him to be greatly missed.

JOHN B. HODGKINS, of Rockport, died Aug. 13, '88, aged 74 years. About fifteen years a member of this Society. Worked on a farm, as a boy, by the day or month. Later, hired land or took it on shares; later, butchering business; later, he excavated and formed a pond in his meadow, built two ice-houses and carried on the ice business several years. In later years he has been engaged in the milk business, and, notwithstanding poor health, he continued to supply his customers to within a few weeks of his death. He was a hard working, industrious man, large hearted, performing many acts of kindness, especially to the sick.

ELIJAH P. ROBINSON, of Saugus, died Sept. 2, 1888, aged 71 years. Born in East Bridgewater, May 19, 1817. He for fifteen years ploughed the seas, sailing once around the world and five times around Cape Horn, serving seven years as first mate. Later, he was Conductor on the Old Colony Railroad two years, until disabled by an accident. Afterwards for twenty-five years as Clerk of Births, Marriages and Deaths, in the office of the Secretary of State. As a citizen he was interested and active in town affairs, serving on its School Committee and other places of trust.

He joined this Society about twenty years ago, and has served as Trustee, and on various committees.

CHARLES A. STETSON, of Swampscott, for over twenty-five years a member of this Society, was a hotel keeper in New York City, as well as a farmer in Swampscott. He died in the latter place during the past year.

WILLIAM PUTNAM ENDICOTT died March 11, 1888, at his residence on Essex street, Salem. Born in Salem, March 5, 1803, son of Capt. Samuel and Elizabeth (Putnam) Endicott. Graduated from Harvard in the Class of '22, in the same class with Nath'l I. Bowditch, Robert Treat Paine, and other men of subsequent note. He sailed as supercargo on several voyages to the East Indies. In his earlier years he attained the rank of Major in the militia. In 1835 he became a member of the East India Marine Society, and in 1844 represented Salem in the General Court. His son, William C. Endicott, is Secretary of War.

Naturally of a retiring disposition, and habitually withdrawn from society, becoming almost a recluse in his later years, yet never losing, when the exigencies of life brought him into the company of others, the gracious deportment of an accomplished gentleman and a scholarly, kind and friendly man. He joined this Society nearly forty years ago, and has served it on its most important committees.

MOSES M. RIDGWAY, of West Newbury, died Jan. 7, 1888. He was born in March, 1800, being a little short of 88 years of age. He was among the oldest members of this Society, having joined it in 1838, fifty years before his death. In all those years he was thoroughly interested in agriculture and showed it by not only keeping up, but in raising the standard of his own farm, and making of farming, as well as of himself, a success.

M. B. MERRILL, of West Newbury, who died Feb. 13, 1888, aged 64 years, became a member in 1877. He went out in September, 1862, from that town, as 2d Lieut., Co. B, 48th Regt., Mass. Vols. In July, '63, he was promoted to Captain, in which capacity he served with honor and

efficiency. Since his service in the army he has suffered from malarial poisoning, especially in the later years of his life. He was a warm supporter of the Union cause and carried his spirit of enthusiastic loyalty with him into the army. He was connected with, and a warm friend of the Major Boyd Post of the Grand Army in West Newbury. His death will be a recognized loss to his family, his comrades, and to the public.

HON. CHARLES S. BRADLEY, of West Newbury, died April 29, 1888, aged 68 yrs., 9 mos., 19 days, in New York City. He was formerly Chief Justice of the Supreme Court of Rhode Island. Judge Bradley was born in Newburyport, July 19, 1819; was a student in Boston Latin School, and graduated with highest honors from Brown University in the class of 1838, which graduated so many distinguished men. He studied law in the Harvard Law School, and in Providence. He had his farm at Crane Neck Hill, West Newbury, and was owner of a fine herd of Short Horn Cattle, for specimens of which a number of premiums were awarded at the late Fair. During his life Mr. Bradley was interested in the Society, and frequently exhibited stock. He became a member in 1875.

Again we have been called upon to record a large death roll, and that not only of men prominent in the affairs of our Society, but also occupying important stations in other walks of life, showing that a good farmer is reliable anywhere. Another point will be noticed, the advanced age of those who have left us, confirming the statistical fact that of those who die in Massachusetts, above the age of twenty years, the farmer lives eighteen years longer than those engaged in any other occupation or profession.

This Society tenders to the relatives of its deceased members its deepest sympathy in their affliction, which is a mutual loss.

Benj. P. Ware. David W. Low—*Committee.*

List of Premiums Awarded in 1888.

— 300 —

FAT CATTLE.

Daniel Carlton. North Andover, for oxen, first premium,	\$8 00
B. P. Richardson, Middleton, for oxen, second premium,	6 00
Wm. A. Russell, Lawrence, for cow, first premium,	7 00
Francis O. Kimball, Danvers, for cow, second premium.	5 00

BULLS.

C. S. Bradley heirs, West Newbury, for "Short Horn," first premium,	8 00
C. S. Bradley heirs, West Newbury, for "Short Horn," under 2 years, first premium.	4 00
C. S. Bradley heirs, West Newbury, for "Short Horn" calf, first premium.	2 00
Joshua W. Nichols, Danvers, for Jersey, 2 years old, first premium,	4 00
Wm. A. Russell, Lawrence, for yearling Holstein, first premium,	4 00
Wm. A. Russell, Lawrence, for Holstein calf, first premium,	2 00
Wm. C. Cahill, Danvers, Ayrshire, second premium, over 2 years old,	4 00

MILCH COWS.

Wm. A. Russell, Lawrence, for best milch cow, Holstein, first premium,	15 00
Wm. A. Russell, Lawrence, for any age or breed, first premium,	10 00
Wm. A. Russell, Lawrence, for any age or breed, second premium.	4 00
Wm. A. Russell, Lawrence, for 4 years old and upwards, first premium,	10 00
Wm. A. Russell, Lawrence, for 4 years old and upwards, second premium,	4 00
C. S. Bradley heirs, West Newbury, Short Horn, first premium.	10 00

HERD OF MILCH COWS.

Wm. A. Russell, Lawrence, Holstein herd, first premium	18 00
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HEIFERS—FIRST CLASS.

C. S. Bradley heirs, West Newbury, for Short Horn, 2 years old, never calved, first premium.	4 00
C. S. Bradley heirs, West Newbury, for Short Horn, 2 years old, never calved, second premium,	3 00
C. S. Bradley heirs, West Newbury, for Short Horn, 1 year old, never calved, first premium,	4 00
C. S. Bradley heirs, West Newbury, for Short Horn, 1 year old, second premium,	3 00
C. S. Bradley heirs, West Newbury, for heifer calf, first premium.	4 00
C. S. Bradley heirs, West Newbury, for heifer calf, second premium.	3 00
Wm. A. Russell, Lawrence, for Holstein under 4 years old in milk, first premium.	*8 00
Wm. A. Russell, Lawrence, for Holstein, under 4 years old in milk, second premium,	*5 00
James C. Poor, North Andover, for Holstein calf, first premium.	4 00

*84 and 83 on 32 page, are incorrect.

HEIFERS—SECOND CLASS.

James F. Cody, Peabody, for milch grade, first premium.	8 00
Wm. A. Jacobs, Danvers, for milch native, second premium,	5 00
Francis O. Kimball, Danvers, for grade 2 years old, never calved, first premium.	4 00
Wm. Perkins 2d, Peabody, for grade yearling, first premium,	4 00
Ira F. Trask, Hamilton, for native twin yearling, second premium,	3 00
Peter Shehan, Peabody, for grade calf, first premium,	4 00
Arthur E. Fuller, Danvers, for native calf, second premium.	3 00

WORKING OXEN AND STEERS.

Lyman S. Wilkins, Middleton, for oxen, first premium,	12 00
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B. H. Farnum, North Andover, second premium,	10 00
James C. Poor, North Andover, third premium.	8 00
Samuel Thayer, Andover, for working steers, first premium.	10 00
Jacob L. Farnum, North Andover, second premium.	6 00

TOWN TEAMS.

Town of Lynnfield, for 10 pair horses, first premium,	20 00
Town of Topsfield, for 11 pair oxen, first premium.	20 00
Town of Middleton, for 8 pair oxen, second premium,	15 00

STEERS.

Benj. W. Farnum, North Andover, for yearling steers, first premium,	5 00
Benj. W. Farnum, North Andover, for steer calves, second premium,	2 00

STALLIONS—FIRST CLASS.

Harry H. Hale, Bradford, for Percheron, 5 years old, first premium,	10 00
Lamont G. Burnham, Essex, for Percheron, $4\frac{1}{2}$ years old, second premium,	*6 00
John Parkhurst, Boxford, for grade Percheron, 4 years old, third premium.	4 00
James Kinnear, Ipswich, for grade Percheron, 3 years old, first premium,	8 00

*\$5 is incorrect on page 36.

STALLIONS—SECOND CLASS.

Charles H. Walker, Georgetown, 3 year old, for driving horses, first premium,	10 00
Alfred C. Hill, Saugus, 11 year old, for driving horses, second premium,	6 00
John Looney, Salem, 3 year old, for driving horses, second premium,	5 00

BROOD MARES.

John Swinerton, Danvers, for mare and foal, first premium,	10 00
O. N. Fernald, Danvers, for mare and foal, second premium,	6 00
S. F. Newman, Newbury, mare and foal, third premium.	4 00

FAMILY HORSES.

M. C. Andrews, Andover. for brown mare, first premium,	10 00
James A. Croscup, Lynn. for roan mare, second premium,	6 00
Edwin Bates, Lynn. for chestnut mare, third premium,	4 00

GENTLEMEN'S DRIVING HORSES.

M. C. Andrews, Andover. for dark bay mare, first premium,	10 00
J. Henry Nason, Boxford, for iron gray gelding, second premium,	6 00
M. Looney, Salem. for chestnut mare, third premium,	4 00

FARM HORSES.

J. H. Perkins, Lynnfield. for dark bay mare, first premium,	10 00
Francis O. Kimball, Danvers, for dark brown gelding, second premium,	6 00
Frederick Symonds, North Andover, for a nine year old, third premium,	4 00

PAIRS OF FARM HORSES.

H. H. Hale, Bradford. first premium,	12 00
Amos Pratt, Danvers, second premium,	8 00
T. E. Cox, Jr., Lynnfield, third premium,	4 00

COLTS FOR DRAFT PURPOSES, SECOND CLASS.

H. H. Hale, Bradford, first premium.	8 00
J. J. H. Gregory, Marblehead, second premium,	5 00

COLTS FOR GENERAL PURPOSES—FIRST CLASS.

Harry H. Hale, Bradford. for "4 years old." first premium,	8 00
L. L. Morrison, Danvers. for 4 years old, second premium,	5 00
Edwin Bates, Lynn. for 3 years old, first premium,	6 00
Harry H. Hale, Bradford, for 3 years old, second premium,	3 00

COLTS FOR GENERAL PURPOSES—SECOND CLASS.

Edwin Bates, Lynn, for yearling colt, first premium.	5 00
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Herbert Jepson, Lynn, for yearling colt, second premium,	3 00
Charles Saunders, Salem, for 2 years old, first premium.	5 00
Daniel G. Tenney, Newbury, for 2 years old, second premium,	3 00

SWINE—FIRST CLASS.

John Mahoney, Rowley, for Berkshire boar, second premium,	5 00
John Mahoney, Rowley, for Berkshire sow, first premium.	8 00
John Mahoney, Rowley, for Berkshire sow, second premium.	5 00
Robert G. Buxton, Peabody, for Yorkshire boar, first premium,	8 00
Danvers Hospital, for Yorkshire boar, second premium,	5 00
Danvers Hospital, for Yorkshire sow, second premium,	5 00
Simon P. Buxton, Peabody, for Yorkshire sow, first premium,	8 00
Simon P. Buxton, Peabody, for litter of weaned pigs, first premium,	8 00

SWINE—SECOND CLASS.

Arthur C. Buxton, Peabody, for sow and ten pigs, first premium,	8 00
Simon P. Buxton, Peabody, for sow and ten pigs, second premium,	5 00
H. H. Hale, Bradford, for weaned pigs, first premium.	8 00
R. G. Buxton, Peabody, for weaned pigs, second premium.	5 00

SHEEP.

H. H. Hale, Bradford, for flock of sheep, first premium,	10 00
H. H. Hale, Bradford, for lambs, first premium.	4 00
S. S. Pratt, Danvers for Cotswold buck, first premium,	8 00

IMPROVING WASTE LANDS.

C. K. Ordway & Son, West Newbury, first premium.	15 00
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GRAIN CROPS.

Oliver P. Killam, Boxford, corn crop, first premium,	10 00
Wm. W. Perkins, Newbury, barley crop, first premium,	10 00

ROOT CROPS.

John H. George, Methuen, onion crop, first premium,	10 00
Charles W. Mann, Methuen, onion crop, second premium,	5 00
David Warren, Swampscott, squash crop, first premium,	10 00
Paul M. Ilsley, Newbury, squash crop, second premium,	5 00
Charles W. Mann, Methuen, cabbage crop, first premium,	10 00
David Warren, Swampscott, cabbage crop, second premium,	5 00
Horatio G. Herrick, Lawrence, carrot crop, first premium,	10 00
C. K. Ordway & Son, West Newbury, carrot crop, second premium,	5 00
Romulus Jaques, West Newbury, turnip crop, first premium,	10 00

SMALL FRUITS.

George J. Peirce, West Newbury, strawberry crop, first premium,	10 00
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NEW MEMBERS.

Edwin Bates, Lynn, most new members, premium,	6 00
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ESSAYS AND REPORTS.

Charles W. Mann, Methuen, essay on cabbages and onions, second premium,	10 00
J. J. H. Gregory, Marblehead, report on apples, first premium,	10 00
John M. Danforth, Lynnfield, report on root crops, third premium,	6 00

OTHER AWARDS.

Awarded by Committee on Poultry,	74 00
“ “ “ “ Agricultural Implements,	39 00
“ “ “ “ Carriages,	27 00
“ “ “ “ Dairy,	18 00
“ “ “ “ Bread, Honey, etc.,	35 00
“ “ “ “ Pears,	76 50
“ “ “ “ Apples,	93 50
“ “ “ “ Peaches, Grapes, etc.,	69 25
“ “ “ “ Flowers,	37 00

Awarded by Committee on Vegetables,*	183	50
“ “ “ “ Grain and Seed,	32	00
“ “ “ “ Counterpanes and Afghans,	25	00
“ “ “ “ Carpets and Rugs,	30	00
“ “ “ “ Articles manuf. from Leather,	31	00
“ “ “ “ Manufact's and Gen'l Mdse.	17	50
“ “ “ “ Fancy and Art Work.	50	50
“ “ “ “ Children's work,	15	00
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	\$1606	75

*Award of \$3, First Premium, to S. F. Newman, Newbury, for Fotters' Brunswick, omitted on Report printed,

RECAPITULATION.

FARMS.

Awarded for Improving Waste Land,	\$15	00
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FARM STOCK.

Awarded for Fat Cattle,	\$26	00
“ “ Bulls,	28	00
“ “ Milch Cows,	71	00
“ “ Heifers,	51	00
“ “ Heifer Calves,	18	00
“ “ Working Oxen and Steers,	46	00
“ “ Town Teams, Oxen, Horses.	55	00
“ “ Steers,	7	00
“ “ Horses,	153	00
“ “ Colts,	51	00
“ “ Swine,	78	00
“ “ Sheep,	22	00
“ “ Poultry,	74	00
	<hr/>	
	\$680	00

FARM PRODUCTS.

Awarded for Grain Crops,	\$20	00
“ “ Root Crops,	70	00

Awarded for Fruit Crops,	10 00
.. " Fruits,	239 25
" " Dairy,	18 00
" " Bread, Honey, etc.,	35 00
" " Flowers,	37 00
" " Vegetables.	183 50
" " Grain and Seed.	32 00
	<hr/> \$644 75

MISCELLANEOUS.

Awarded for Agricultural Implements,	\$39 00
" " Domestic Manufactures.	169 00
" " Carriages,	27 00
" " Obtaining New Members.	6 00
" " Essays and Reports,	26 00
	<hr/> \$267 00
	<hr/> \$1,606 75

Awarded to 402 different individuals and firms, in 33 different towns and cities in the county. All in the county receiving awards except Merrimac and Nahant, as follows, viz:—Amesbury, \$37.50; Andover, \$34.50; Beverly, \$11.50; Boxford, \$35.50; Bradford, \$64; Danvers, \$202.50; Essex, \$59; Georgetown, \$10; Gloucester, 50 cents; Groveland, \$13; Hamilton, \$3.50; Haverhill, \$11; Ipswich, \$11; Lawrence, \$102; Lynn, \$85.50; Lynnfield, \$44.25; Manchester, \$1.50; Marblehead, \$42.50; Methuen, \$35; Middleton, \$46.50; Newbury, \$59; Newburyport, \$4.75; North Andover, \$47; Peabody, \$341; Rockport, \$2; Rowley, \$27.50; Salem, \$82.25; Salisbury, \$1.50; Saugus, \$28; Swampscott, \$31; Topsfield, \$27; Wenham, \$2; West Newbury, \$103.

OFFICERS OF THE SOCIETY FOR 1888-9.

PRESIDENT,
BENJAMIN P. WARE, of Marblehead.

VICE PRESIDENTS.
GEORGE B. LORING, of Salem.
JAMES J. H. GREGORY, of Marblehead.
THOS. C. THURLOW, of West Newbury.
JAMES P. KING, of Peabody.

SECRETARY,
DAVID W. LOW, of Gloucester.

TREASURER,
GILBERT L. STREETER, of Salem.

HONORARY TRUSTEE,
JOSEPH HOW, of Methuen.

TRUSTEES.
Charles C. Blunt, Andover. Alvin Smith, Hamilton.
B. F. Huntington, Amesbury. E. A. Emerson, Haverhill.
Andrew Dodge, Beverly. Alonzo B. Fellows, Ipswich.
George B. Austin, Boxford. Horatio G. Herrick, Lawrence.
Albert Kimball, Bradford. Asa T. Newhall, Lynn.
Edw. E. Woodman, Danvers. John M. Danforth, Lynnfield.
Aaron Low, Essex. John Baker, Manchester.
Sherman Nelson, Georgetown. Wm. S. Phillips, jr. Marblehead.
Alonzo F. Harvey, Gloucester. James D. Pike, Merrimac.
Abel Stickney, Groveland. George B. Bradley, Methuen.

David Stiles, Middleton.	Henry A. Hale, Salem.
William Little, Newbury.	John F. Smith, Salisbury,
Wm. H. Bayley, Newburyp't.	Samuel Hawkes, Saugus.
Albert Berry, No. Andover.	David Warren, Swampscott.
Francis H. Appleton, Peab'dy	Salmon D. Hood, Topsfield.
Andrew Lane, Rockport.	Zachariah Cole, Wenham.
Thos. P. Hale, Rowley.	Oscar Gowen, W. Newbury.

68—NEW MEMBERS—1888.

Lambert Hollander, Amesbury.	E. E. Bray, Lynn.
Austin Whitecomb, Beverly.	W. L. Lamphier, Lynn.
Luther Woodbury, Beverly.	S. S. Ireson, Lynn.
Hiram L. Burpee, Bradford.	Henry H. Breed, Lynn.
Oliver Roberts, Danvers.	Lyman A. May, Lynn.
W. P. Hutchinson, Danvers.	Eli Jepson, Lynn.
William Bradstreet, Danvers.	M. V. B. Mower, Lynn.
Geo. S. Weston, Georgetown.	J. C. Wilson, Lynn.
Chas. H. Walker, Georgetown.	Benj. A. Ward, Lynn.
Everett K. Brown, Ipswich.	Ebenezer Beckford, Lynn.
Walter F. Gould, Ipswich.	Fred H. Bates, Lynn.
James W. Joyee, Lawrence.	H. S. Nichols, Lynn.
Amos F. Breed, Lynn.	A. P. Aldrich, Lynn.
Joseph A. Lamper, Lynn.	Q. A. Townes, Lynn.
Joseph E. Butman, Lynn.	B. Frank Phillips, Lynn.
James W. Ingalls, Lynn.	George H. Breed, Lynn.
Frank W. Mace, Lynn.	Charles H. Ramsdell, Lynn.
Jacob M. Lewis, Lynn.	Edward F. Dyer, Lynn.
Joseph E. Mockett, Lynn.	Richard McBride, Lynn.
Walter B. Allen, Lynn.	Fred I. Hopkins, Lynn.
James L. Willey, Lynn.	John H. McKenney, Lynn.
Jacob A. Johnson, Lynn.	A. W. Clough, Marblehead.
Henry A. Heath, Lynn.	Benj. H. Taylor, Peabody.
Herbert L. Rounds, Lynn.	Amos L. Ames, Peabody.
James Heath, Lynn.	Wm. E. Sheen, Peabody.
John Sheehan, Lynn.	George H. King, Peabody.
Wm. W. Butman, Lynn.	Robert H. Wilson, Peabody.
A. A. Mower, Lynn.	E. L. Blake, Peabody.
Wm. A. Bray, Lynn.	Arthur C. Buxton, Peabody.

C. B. Haven, Peabody.	Nathan R. Morse, Salem.
R. F. Morris, Peabody.	*John Flye, Saugus.
John Mahoney, Rowley.	Geo. J. Peirce, W. Newbury.
George W. Creesy, Salem.	Mrs. C. W. Gowen, W. Newb'y.
George Chase, Salem.	Henry H. Johnson, W. Newb'y

*Added to list by Trustees.

CHANGES REPORTED IN 1888.

Andover—Francis Gulliver to Binghampton, N. Y.

Beverly—William Lord to Salem, Mass.

Danvers—Henry C. Allen to Keene, N. H.

Henry Bodge to Peabody (West), Mass.

George E. Johnson to Ipswich.

Wm. B. Morgan to Wenham.

Groveland—Walter S. Peabody to Bradford.

George S. Walker to Newburyport.

William F. Whitmore to Salem.

Lawrence—Virgil Dow to Methuen.

Charles W. Shattuck to Winchester.

Lynn—E. H. Merrill to Salem.

Methuen—Frank J. Bradley to Haverhill.

Middleton—O. Loring Carlton to Danvers.

Newburyport—George F. Merrill to North Hampton, N. H.

North Andover—Loring B. Rea to Mills City, Mont.

Peabody—Henry Gardner to Salem.

Winsor M. Ward to Wakefield

Rockport—R. P. Mills to Abbott, Colorado.

Beaman C. Smith to Charlestown.

Salem—Randall Andrews to Lynn.

Francis W. Lyford to Danvers.

Topsfield—Joseph T. Stanwood to Malden.

Wenham—Charles O. Putnam to Hamilton.

F. A. Whitman to Lexington.

CORRECTIONS OF 1886—LIST.

Essex—Grover Dodge died in 1885.

Groveland—J. B. B. Ladd should be J. B. P. Ladd.

Haverhill—D. F. Fitts died in 1883.

Ipswich—Isaiah H. Rogers should be Isaiah A.

Lawrence—Charles Shattuck should be Charles W.

George Hills should be George W.

Lynn—Charles E. Fry should be Charles C.

H. C. Whippen died April 2, 1885.

Manchester—Arthur M. Merriman should be Arthur M.
Merriam.

North Andover—J. Ralph Farnham died Aug. 31, 1885.

Members of Essex Agricultural Society,

DECEMBER, 1888.

Previous printed list was in 1886, errors in which have been corrected in 1887 and 1888 Reports. If any errors are discovered in the following list, please report them to the Secretary. Trustees are requested to report deaths of members as soon as they occur, with printed notice, when convenient.

AMESBURY—22.

Bailey, O. S.	Gale, Foster	Morse, Daniel L.
Burbank, C. U.	Goodwin, E. A.	Osborne, Jona. H.
Cammet, Samuel	Hill, Albert C.	Sawyer, Aaron
Chesley, M. B.	Hill, J. Henry	Tibbets, William B.
Chesley, John F.	Hollander, Lambert	True, Eben
Currier, W. H. B.	Huntington, B. F.	Vining, William F.
Feltch, Elbridge S.	Little, J. P.	
Gale, Edmund	Lane, T. W.	

ANDOVER—48.

Abbott, James J.	Callahan, Robert	Holt, Ballard
Abbott, Nathan F.	Carter, Charles L.	Jenkins, John B.
Abbott, Moses B.	Carruth, Isaac	Jenkins, E. Kendall
Abbott, Hartwell B.	Chandler, Joshua H.	Johnson, Francis H.
Abbott, John B.	Cheever, James O.	Johnson, S. K.
Andrews, M. C.	Cummings, C. O.	Mason, George F.
Barnard, Edwin H.	Downing, J. J.	Morton, Marcus
Bailey, Moses A.	Flint, John H.	Noyes, Henry P.
Bailey, Samuel H.	Foster, George W.	Rea, Jasper
Bean, Samuel G.	Foster, Moses	Ripley, George
Blunt, Charles C.	Foster, George C.	Smith, James B.
Blunt, J. H.	Harriman, Thos. P.	Smith, John L.
Bodwell, H. A.	Hayward, Henry A.	Smith, Peter D.
Buchan, George	Hidden, David I. C.	Smith, Benjamin F.
Buchan, George W.	Holt, E. F.	Thayer, Samuel
Butterfield, J. P.	Holt, Joseph S.	Upton, Edward C.

BEVERLY—60.

Appleton, Nathan D.	Foster, David L.	Mayo, Josiah
Appleton, Isaac	Foster, Henry W.	Mitchell, John
Avery, Mark B.	Foster, William A.	Morse, John T.
Baker, John I.	Foster, William B.	Munsey, John G.
Bennett, Robert G.	Friend, Seth	Paine, Charles C.
Bliss, Edgar J.	Giles, Benjamin V.	Phillips, Mrs. J. C.
Burnham, O. B.	Gould, Thomas	Pickett, Charles
Carter, John W.	Haven, Franklin	Pitman, Mark
Clark, George	Herrick, Joseph H.	Pope, Jasper
Clark Peter E.	Hill, Hugh	Porter, Adoniram
Connelley, Stephen	Lee, Asa F.	Preston, Ezra
Cressy, Joseph	Lord, Cyrus W.	Raymond, John W.
Danforth, E. F.	Lawrence, C. A.	Stephens, Augustus
Dodge, Andrew	Loring, Augustus P.	Swasey, E.
Dodge, Benjamin N.	Lovett, Francis S.	Trask, J. G.
Dodge, Benjamin S.	Lovett, John W.	Trask, Joseph W.
Dodge, Joshua S.	Lummas, E. E.	Walker, Lawson
Dodge, Forest C.	Mason, Alfred A.	Waters, William C.
Dodge, Walter F.	Mason, George	Whitcomb, Austin
Elliot, John T.	Mason, Lyman	Woodbury, Luther jr.

BOXFORD—26.

Anderson, Chas. R.	Cleveland, James P.	Day, Mrs. John
Andrew, Isaac W.	Cole, David M.	Herrick, Israel
Austin, George B.	Cole, John K.	Killam, Oliver P.
Barnes, B. S.	Cole, Warren M.	Ladd, John I.
Chadwick, Geo. W.	Cole, Wm. Kimball	Nason, James H.
Chadwick, James W.	Day, Isaac C.	Sawyer, Thomas
Parkhurst, John	Pearl, John M.	Styles, Charles F.
Parkhurst, John W.	Pearl, John	Wood, John T.
Pearl, Edw. E.	Perley, Charles	

BRADFORD—38.

Bradstreet, Justin E.	Hazeltine, Charles	Kimball W. Eustace
Burpee, Hiram L.	Hazeltine, John	Kimball, M. Tenney
Cogswell, Doane	Hilton, William	Kingsbury, John D.
Cogswell, George	Hopkinson, Sam'l W.	Knight, Albert H.
Cogswell, William	Johnson, Charles G.	Ladd, B. G.
Day, Albert J.	Johnson, Laburton	Ladd, George W.
Ellis, John A.	Kimball, Albert	Little, Mrs. M. P.
Emerson, Charles B.	Kimball, A. Laburton	Ordway, Alfred
Gage, Edwin V.	Kimball, Leverett	Peabody, Walter S.
Hale, H. H.	Kimball, Wm. B.	Peabody, Frank

Peabody, Daniel	Poor, Charles H.	Wales, Herbert E.
Perley, John	Tewksbury, John B.	Webster, Charles E.
Phillips, G. Franklin	Thornton, William	

DANVERS—110.

Armitage, John S.	Kirby, Patrick	Putnam, John A.
Bartlett, James A.	Langley, J. R.	Putnam, Joel
Berry, Allen A.	Learoyd, A. P.	Putnam, Otis F.
Berry, Eben G.	Lefavour, Mrs.	Pratt, George
Batchelder, J. Q. A.	Legro, Edmund	Pratt, Samuel S.
Bradstreet, Elijah	Legro, John C. P.	Porter, John W.
Bodge, Horatio	Lyford, Francis W.	Pope, Daniel P.
Bradstreet, William	Massey, Dudley A.	Proctor, Nathan P.
Brown, William H.	Martin George B.	Richardson, James
Boardman, I. P.	McCrillis, Ransom F.	Richards, C. S.
Butler, J. C.	Merrill, Walter S.	Richards, George D.
Clark, N. J.	Morrison, L. L.	Roberts, Oliver
Carlton, O. Loring	Mudge, Edwin	Rollins, Jonas
Carlton, Wm. B.	Mudge, Augustus	Ropes, Joseph E.
Day, Clarence	Nichols, Andrew	Rice, Chas. B.
Dempsey, L. P.	Nichols, Andrew jr.	Sears, John A.
Dodge, El Nathan	Newhall, Benj. E.	Spaulding, Sam'l W.
Dodge, Francis	O'Neal, T. H.	Swinerton, John
Eaton, Winslow W.	Patch, Abraham	Smart, John L.
Fellows, Alfred	Peabody, George H.	Spring, Jacob E.
Fisher, Franklin W.	Peart, William B.	Tapley, George
Fowler, Augustus	Perley, Dean A.	Tapley, Gilbert A.
Fuller, Solomon	Perley, Edward P.	Trask, Alfred M.
Gould, Charles H.	Perkins, Henry A.	Upton, Franklin W.
Grosvenor, David A.	Perkins, Warren G.	Verry, Augustus
Grout, John	Perkins, William P.	Verry, Henry
Gustin, John H.	Perry, George S.	Walcott, Wm. H.
Hill, Edward L.	Pettingill, David A.	Waldron, E. T.
Hood, R. B.	Pillsbury, H. H.	Warren, Aaron W.
Hood, Joseph E.	Pope, Ira P.	Weston, Wm. L.
Hutchinson, Edward	Porter, Benjamin F.	Weston, Mrs. L. P.
Hutchinson, W. P.	Pratt, Amos	White, Henry A.
Jacobs, Wm. A.	Preston, Charles H.	Woodis, Alden B.
Jackson, Eben	Putnam, Ansel W.	Woodman, Edw. E.
Juul, Conrad	Putnam, Edwin F.	Whipple, John F.
Kimball, Francis O.	Putnam, Israel H.	Wilkins, Fred'k A.
Kimball, Joel jr.	Putnam, Joseph C.	

ESSEX—18.

Andrews, Elias	Burnham, D. Brain'rd	Burnham, Wm. Howe
Andrews, Joseph	Burnham, Wash.	Choate, Rufus

Cogswell, Chas. B.	Knowlton, Moses	Low, Aaron
Haskell, David L.	Knowlton, Herbert A.	Low, Josiah
Haskell, George	Knowlton, Perry B.	Lufkin, A. E.
Knowlton, Aaron	Lee, Edward K.	McDonald, Daniel

GEORGETOWN—26.

Bateman, A. P.	Nelson, Sherman	Spofford, Sumner P.
Butler, Oliver S.	Nelson, William	Tenney, George J.
Chapman, Jonathan	Osgood, Stephen	Tenney, Gorham D.
Harriman, Hiram N.	Perley, David E.	Tenney, Moses
Hoyt, John A.	Pettingill, Henry	Tenney, Orlando B.
Hoyt, Martin L.	Pillsbury, J.	Tidd, Luther P.
Huse, Ralph C.	Poor, Samuel T.	Weston, George S.
Illsley, J. Adams	Preston, John	Wheeler, William S.
Marble, Nathaniel	Ridley, Amos	

GLOUCESTER—81.

Babson, Fitz J.	Dolliver, William C.	Plumer, David
Babson, Horatio	Dolliver, William P.	Presson, David S.
Babson, Osman	Fears, Robert R.	Presson, Alfred
Barrett, Charles P.	Ferguson, Thos. B.	Price, Augustus E.
Bennett, Charles	Foster, Jeremiah	Procter, Joseph O.
Bradford, George R.	Friend, Elbridge G.	Procter, Wilbur F.
Brown, Edward H.	Garland, Joseph	Ricker, Richard W.
Burnham, A. M.	Griffin, Bennett	Roberts, Joshua
Burnham, H. A.	Grover, Charles E.	Rogers, Allan
Burnham, S. A.	Harvey, Alonzo F.	Rogers, John S.
Calef, John C.	Haskell, H. C. L.	Rust, William P.
Carter, John S.	Haskell, William H.	Sanford, H. G.
Carter, Sherman J.	Herrick, Gardner W.	Sawyer, Samuel E.
Clark, John	Knowles, Thomas J.	Shepherd, Joseph C.
Cole, Israel H.	Lane, Andrew	Somes, John E.
Conant, Thomas	Lane, George	Stacy, John H.
Cook, Benjamin F.	Lawrence, R. C.	Stanwood, Barnard
Corliss, Benjamin H.	Lovett, John H.	Story, Cyrus
Corliss, John	Low, David W.	Thompson, Chas. P.
Cromin, John	Low, Frederic F.	Webster, Nathaniel
Curtis, Samuel jr.	Marr, Chester jr.	Wetherell, M. L.
Dale, Eben	Mayo, Israel C.	Wilson, John J.
Davis, James	Norwood, George	Witham, Addison
Davis, William P.	Parsons, W. Frank	Wonson, Augustus H.
Dennen, George	Pattillo, Alexander	Wonson, F. G.
Dodd, Stephen	Pew, William A.	Wonson, George M.
Dolliver, John S.	Phillips, N. H.	Wonson, J. W.

GROVELAND—25.

Atwood, Moses P.	Hopkinson, W. H.	Pemberton, L. K.
Baleh, Thomas H.	Ladd, J. B. P.	Savary, Charles P.
Curtis, Edwin T.	Ladd, Nathaniel E.	Spofford, Henry H.
Fegan, Henry C.	Longfellow, N.	Stacy, Edward M.
George, Edwin B.	Longfellow, Samuel	Stickney, Abel
George, Samuel B.	Martino, Philip H.	Tenney, George H.
Harrington, Edward	Merrill, Burton E.	Wardwell, Z. C.
Harriman, Moses H.	Parker, Eldred S.	Woodbury, Louis A.
Harriman, Abel S.		

HAMILTON—28.

Abbott, Joseph B.	Dodge, George B.	Norris, George
Allen, Francis R.	Dunnels, Ira A.	Norwood, C. J.
Brown, William A.	Ellis, George W.	Patch, Mrs. Oliver
Creamer, George G.	Gibney, George H.	Putnam, Charles O.
Dane, Ephraim A.	Kimball, Isaac W.	Rankin, Eli C.
Dane, George E. F.	Knowlton, Franklin	Robinson, E. P.
Dane, John jr.	Knowlton, Isaac F.	Safford, Daniel E.
Dane, William A.	Knowlton, Joseph	Smith, Alvin
Dane, Sylvester	Lamson, Jarvis	Whipple, Em. A.
Dodge, Emerson P.		

HAVERHILL—80.

Barnes, B. Frank	Emerson, E. A.	Mitchell, Seth K.
Berry, J. M.	Emery, Benjamin E.	Moody, H. L.
Blake, J. Albert	Farnsworth, J. H.	Morse, John H.
Bodwell, Stephen	Fellows, Samuel	Morse, C. E.
Brickett, Barnard	Fellows, C. H.	Merrill, Giles
Brickett, Daniel	Flanders, Daniel D.	Nichols, John B.
Butters, Charles	Frost, Henry	Nichols, J. B.
Caldwell, William	Gale, John E.	Ordway, Joshua H.
Chase, Abel W.	Goodwin, Rufus	Peabody, Stephen
Chase, C. W.	Hale, Edward	Peters, Daniel
Cheever, H. W.	Hanson, M. W.	Poore, F. W.
Cook, Justin T.	Haseltine, Amos jr.	Porter, Dudley
Corliss, Charles	Heath, Albert	Quinby, T. W.
Currier, Samuel M.	Hooke, Daniel	Randall, John P.
Davis, James	Howe, Moses	Richardson, John B.
Dewhurst, James	Ingalls, E. T.	Ridgeway, Jos. N.
Eaton, B. F.	Lackey, Andrew	Rhodes, C. N.
Eaton, Harrison	Little, E. C.	Sanders, Thomas
Elliott, Samuel	Little, J. G. S.	Smith, Geo. S.
Elliott, Samuel H.	Marsh, John J.	Sprague, W. W.
Emerson, Albert	Mitchell, E.	Stewart, John

Swett, Jackson B.	Webster, Ebenezer	Wheeler, Allison
Taylor, Levi	Webster, E. F.	White, James D.
Taylor, Martin	Webster, Richard	Whittier, Alvah
Taylor, Oliver	West, H. K.	Whittier, Warner R.
Titcomb, Beniah	West, James F.	Winchell, James H.
Wadleigh, Levi C.	West, Thomas	

IPSWICH—44.

Appleton, Francis R.	Green, George H.	Perkins, Isaac E. B.
Appleton, Daniel F.	Haggerty, D. L.	Perley, David T.
Baker, S. N. jr.	Haskell, George	Reddy, Michael
Bond, James W.	Hobbs, John	Rogers, Isaiah A.
Brown, Everett K.	Hodgdon, George	Ross, Joseph
Brown, S. Albert	Hodgkins, Augustine	Rutherford, Aaron A.
Brown, John	Horton, Joseph	Shatswell, Nathaniel
Brown, William G.	Johnson, George E.	Smith, Webster
Caldwell, Abraham	Jordan, Mrs. Robert	Stone, Augustine
Clark, Erastus	Kimball, Daniel	Story, Alden
Fall, Tristram B.	Kimear, James	Treadwell, William
Fellows, Alonzo B.	Kinsman, Joseph F.	Underhill, J. C.
Gould, John J.	Kinsman, William H.	Wade, Asa
Gould, Walter F.	Kinsman, Willard F.	Whittier, Maynard
Grant, Joshua B.	Marshall, Joseph	

LAWRENCE—36.

Ames, M. B.	Goodwin, Francis J.	Page, E. F.
Bodwell, Asa M.	Halley, T. D.	Patterson, D. H.
Cabot, George D.	Herrick, H. G.	Richardson, E. P.
Currier, Eben B.	Hills, George W.	Robinson, P. B.
Currier, J. Merrill	Hood, Gilbert E.	Rollins, John R.
Drew, J. D.	Holt, Lewis G.	Russell, George W.
Durant, W. A.	Hubbard, Leavitt	Russell, W. A.
Flynn, Edward	Joyce, James W.	Saunders, Daniel
French, A. J.	Keleher, W. A.	Small, Henry
Gilman, Frederick	Lewis, S. T.	Victor, F. M.
Goodwin, John	McAllister, J. G.	Wellman, John R.
Goodwin, Patrick	Merrill, George S.	Wright, W. H. P.

LYNN—92.

Aldrich, A. P.	Bates, Fred H.	Berry, Benj. J.
Allen, Walter B.	Bates, Wallace	Bray, E. E.
Andrews, Randall	Beckford, Ebenezer	Bray, Wm. A.
Baker, Ezra	Beede, C. O.	Breed, Amos F.
Bates Edwin	Berry, Henry N.	Breed, George H.

Breed, Henry H.	Kimball, Rufus	Parsons, Charles E.
Breed, Richard	King, W. P.	Pevear, G. K.
Butman, Joseph E.	Lamphier, Joseph A.	Pevear, H. A.
Butman, Wm. W.	Lamphier, W. L.	Phillips, B. Frank
Chase, L. H.	Mace, Frank W.	Potter, Edward P.
Chase, Amos F.	Marsh, George E.	Preble, J. H.
Cross, Alfred	Marsh, S. E.	Ramsdell, Charles H.
Cressey, John S.	May, Lyman A.	Rogers, Ira D.
Dwyer, Edward F.	McBrien, Richard	Roney, Simon J.
Emery, George E.	McKenney, John H.	Rounds, Herbert L.
Farrar, Jos. E.	Merritt, Timothy	Rowell, B. W.
Foster, George	Mockett, Joseph E.	Sargent, George D.
Fry, Charles C.	Mower, A. A.	Sheehan, John
Goodell, J. W.	Mower, M. V. B.	Shorey, John L.
Harnden, Henry C.	Mudge, John	Shorey, George L.
Harris, N. S.	Neal, Peter M.	Sawyer, J. A. J.
Hawkes, Nathan M.	Newhall, Asa T.	Townes, Q. A.
Heath, Henry A.	Newhall, G. A.	Tyler, Thaddeus W.
Heath, James	Newhall, Hiram L.	Usher, Roland G.
Hill, E. L.	Newhall, George T.	Ward, Benj. A.
Hopkins, Fred I.	Nichols, H. S.	Whipple, Geo. H.
Hovey, Rufus P.	Nichols, Otis	Willey, James L.
Ingalls, James W.	Nichols, Thomas P.	Wilson, J. C.
Ireson, S. S.	Norris, George jr.	Winslow, Aaron
Johnson, Jacob A.	Noyes, Geo. C.	Winslow, G. W.
Jepson, Eli	Oliver, John E.	

 LYNNFIELD—16.

Bancroft, J. K.	Herrick, George E.	Perkins, John
Brown, Joseph	Mansfield, Andrew	Perkins, John H.
Cox, Thomas E. jr.	Monroe, Harry W.	Roundy, George M.
Cooper, C. A.	Monroe, Wilbur J.	Roundy, W. R.
Danforth, John M.	Newhall, Frank	Smith, Henry E.
Hawkes, George L.		

 MANCHESTER—13.

Allen, Luther	Cheever, William M.	Merriam, Arthur M.
Allen, Wm. H.	Coolidge, T.	Jefferson Price, John
Baker, John	Friend, Daniel W.	Rabardy, Julius F.
Burnham, Frederick	Lee, Allen	Sturgis, Russell
Cheever, John H.		

MARBLEHEAD—15.

Alley, Amos P.	Cronin, Michael	Hathaway, Seth W.
Appleton, Thomas	Dennis, W. John	Paine, Thomas W.
Childs, Caleb	Gregory, J. J. H.	Phillips, Wm. S. jr.
Clough, A. W.	Hathaway, Amos C.	Ware, Benjamin P.
Cloutman, B. Henry	Hathaway, Joseph B.	Ware, Horace

MERRIMAC—14.

Adams, George	Loud, L. C.	Sargent, Geo. W.
Chase, William	Nichols, Chas. H.	Sargent, P. Willis
Clement, M. G.	Pike, James D.	Sawyer, Thomas C.
England, John J.	Sargent, M. Perry	Tewksbury, D. M.
Haskell, Wm. H.	Sargent, Bailey	

METHUEN—28.

Bradley, George B.	George, John H.	Pedlar, S. J.
Buswell, Joseph E.	Gutterson, B. G.	Phippen, G. S.
Butters, George A.	Goss, Chas. E.	Parker, Jas. O.
Butters, W. H.	How, Joseph	Rogers, William M.
Currier, Daniel	How, Joseph S.	Sargent, S. G.
Crosby, John S.	Mann, C. W.	Sleeper, Wm. C.
Dow, Virgil	Morrison, D. T.	Smith, Walter
Emerson, Jacob jr.	Nevins, Henry C.	ThurLOW, J. E.
Frederick, John W.	Noyes, David W.	Tozier, C. L.
Gage, George W.		

MIDDLETON—14.

Berry, William	Phelps, William A.	Stewart, Mrs. S. A.
Christopher, Wm. P.	Stiles, David	Weston, Solomon W.
Currier, George A.	Stiles, Farnum	Wilkins, George P.
Flint, James	Stiles, Mrs. Farnum	Wilkins, Lyman S.
Hutchinson, J. A.	Stiles, Hiram A.	

NAHANT—1.

Goodale, Byron

NEWBURY—55.

Adams, Charles W.	Kent, John N.	Noyes, Justin
Adams, Daniel D.	Kent, Edward	Noyes, Horace P.
Adams, George W.	Knight, Edward S.	Noyes, James
Adams, James K.	Little, Carleton	Noyes, Luther
Bray, Richard S.	Little, Edward F.	Noyes, Moses K.
Bray, George W.	Little, George	Perkins, Wm. W.
Boynton, Charles	Little, Joseph	Perkins, Frank
Coffin, Wm. P.	Little, Nathaniel jr.	Perkins, Paul A.
Colman, Moses	Little, William	Plummer, Daniel
Dole, Nathaniel	Little, Wm. Burke	Plummer, George H.
Hale, Stephen P.	Longfellow, Horace F.	Randall, George A.
Howard, Horatio M.	Longfellow, Joseph	Rogers, Abial
Isley, Edwin	Longfellow, Jos. Mrs.	Rolfe, Joseph N.
Isley, Paul M.	Lucy, Gideon R.	Tenney, Henry L.
Isley, Joseph	Lunt, Charles M.	Tenney, Elbridge
Jaques, Richard	Moody, Nath'l W.	Tenney, Daniel G.
Jaques, Richard T.	Newman, Sidney F.	Toomey, Mathew H.
Jaques, William	Noyes, Edwin P.	Woods, Charles W.
Jones, William		

NEWBURYPORT—70.

Adams, Philip D.	Hamlet, Daniel	Northend, E. T.
Adams, J. Quincy	Hart, James S.	Noyes, Isaac P.
Adams, Rufus	Hewett, C. C.	Ordway, A. D.
Akerman, Joseph	Huff, William	Ordway, Parsons
Allen, John W.	Jackman, George W.	Perley, R. M.
Balch, John H.	Johnson, Wm. R.	Perkins, Charles
Ballou, C. N.	Kent, Otis L.	Plummer, Moses A.
Bartlett, Chas. S.	Knights, George W.	Plummer, Wm. C.
Bartlett, T. K.	Knight, Joseph	Rowe, D. T.
Batchelder, Dan'l C.	Lewis, Samuel W.	Sargent, John W.
Bayley, Wm. H.	Little, Hector	Smith, David
Cashman, Jeremiah	Little, John G.	Smith, Joseph B.
Capers, Thomas	Lunt, Charles	Smith, Robert A.
Colby, George J. L.	Maguire, C. N.	Stanley, B. F.
Currier, Warren	Merrill, Enoch	Stanley, J. C.
Colby, George W.	Morrison, Daniel T.	Titcomb, Albert
Colman, James C.	Moseley, Edward A.	Tilton, Enoch
Colman, William T.	Moseley, Edward S.	Titcomb, Paul
Cook, T. N.	Mosely, Fred'k S.	Toppan, Edward S.
Cutter, Eben P.	Moulton, Henry W.	Winkley, J. Otis
Delano, Otis	Moulton, Joseph	Winkley, Paul T.
Evans, Frank W.	Nelson, David O. jr.	Winkley, Paul T. jr.
Giffin, Eliphalet	Newhall, Asa T.	Walker, George S.
Hale, Joshua		

NO. ANDOVER—53.

Adams, Edward	Farnham, Mrs. B. H.	Loring, Geo. B. jr.
Berry, Albert	Farnham, Jacob	Manion, John
Blake, J. P.	Farnham, J. L.	Montgomery, Jas. A.
Bodwell, S. B.	Farnham, W. Benj.	Osgood, Isaac F.
Butterfield, Chas. A.	Foster, J. Frank	Peters, Nathaniel
Bassett, Leon H.	Foster, John P.	Phillips, Willard P.
Barker, John	Foster, Orrin	Poor, James C.
Carlton, Daniel	French, J. D. W.	Reynolds, James H.
Carlton, Daniel A.	Fuller, Abijah P.	Riley, Henry
Crosby, Josiah	Goodhue, Hiram P.	Robinson, Addison M.
Chever, William J.	Greene, E. W.	Stevens, Moses T.
Davis, George G.	Goodwin, John O.	Stevens, Oliver
Davis, George E.	Holt, Peter jr.	Sutton, Eben
Davis, George L.	Jenkins, Benj. F.	Symonds, Frederick
Dale, William J.	Jenkins, Milon S.	Wilson, Abiel
Dale, William J. jr.	Johnson, James T.	Wardwell, T. O.
Farnham, B. H.	Johnson, Charles F.	Wiley, John A.
Farnham, Byron K.	Kittredge, Hannah E.	

PEABODY—53.

Appleton, Francis H.	Foster, Ira	Nourse, Samuel W.
Ames, Amos L.	Foster, George M.	Osborne, Abraham C.
Bancroft, Sidney C.	Goodale, Jacob O.	Osborn, Lyman
Barrett, E. Pope	Goodale, J. P.	Osgood, William E.
Barrett, Edward P.	Hayes, Andrew J.	O'Keefe, Timothy
Bodge, Henry	Haven, C. B.	Pepper, George W.
Buxton, Henry V.	Hills, Benjamin M.	Preston, Levi
Brown, Rufus H.	Herrick, John E.	Quint, Nicholas M.
Brown, Lewis	Hoag, Charles E.	Raddin, Alonzo
Bushby, N. A.	Hubbard, A. J.	Richardson, W. B.
Batchelder, Cyrus T.	Hutchinson, Samuel	Rogers, Jacob C.
Brown, W. H.	Hutchinson, C. K.	Saltonstall, Henry
Brown, R. S.	King, George H.	Sheen, William E.
Blake, E. L.	King, J. Augustus	Southwick, Sumner
Blaney, Stephen	King, James P.	Swett, Samuel
Buxton, Arthur C.	King, Jonathan	Taylor, Benjamin H.
Buxton, Robert G.	Linehan, John	Taylor, George W.
Buxton, Simon P.	Little, William H.	Thomas, Josiah B.
Carroll, Thomas	Marsh, Fred.	Twiss, Everett M.
Chadwick, Orville B.	Mansfield, E.	Viles, Bowman
Clark, A. B.	Mansfield, Arthur W.	Walcott, John G.
Cody, James F.	Marsh, Frank	Wallace, David B.
Colcord, J. L.	Marsh, James	Walton, George D.
Cummings, Daniel	Merrill, Amos	Wheeler, Benj. S.
Curtis, Andrew	Morris, R. F.	Whipple, Horace P.
Dole, William T.	Needham, George A.	Wiley, William F.
Durkee, T. C.	Needham, Joseph S.	Wilson, Robert H.
Emerton, C. S.	Newhall, Orlando F.	

ROCKPORT—17.

Blatchford, Eben	Low, Mrs. Martha J.	Norwood, Gorham
Estes, Alden C.	Low, William	Patch, William H.
Gott, Daniel S.	Manning, James	Smith, Allen
Lane, Andrew	Manning, John J.	Smith, William H.
Lane, Andrew jr.	Manning, William N.	Smith, Solomon
Lane, Horace	Marshall, John W.	

ROWLEY—22.

Bartlett, B. W.	Hale, T. P.	Potter, Edward H.
Blodgett, George B.	Keyes, Eben S.	Stockbridge, Seth
Daniels, George E.	Lambert, Mary G.	Stockbridge, A. J.
Dodge, Joseph D.	Mahoney, John	Tenney, John H.
Dummer, Nath'l N.	Mighill, Charles P.	Todd, Frank P.
Hale, Clara A.	Pike, John	Todd, John F.
Hale, Daniel H.	Prime, Daniel B.	Todd, J. Scott
Hale, Thomas		

SALEM—73.

Andrews, Samuel P.	Hale, Henry	Pingree, David
Almy, James F.	Hale, Henry A.	Pettingell, George
Abbott, Nathaniel	Horton, N. A.	Pickering, Wm., jr.
Barton, Gardner	Ives, John S.	Page, John G.
Curwen, James B.	Jones, Samuel G.	Page, James E.
Chamberlain, James	Kinsman, John	Pickering, Benjamin
Chase, George	Kemble, Arthur	Robinson, John
Curwen, Samuel H.	Lamson, Frederick	Ropes, Charles A.
Clark, Charles S.	Lord, William	Rogers, A. D.
Collins, Wm. F. M.	Loring, George B.	Reynolds, Henry E.
Creesy, George W.	Lander, William A.	Rowell, E. F.
Daland, John	Mack, William	Ropes, John C.
Endicott, William C.	Manning, Robert	Saunders, Robert J.
Felt, John	Merrill, E. H.	Shreve, O. B.
Foote, Caleb	Merritt, David	Spencer, Charles P.
Foster, Joseph C.	Morse, E. Henry	Swasey, John A.
Foster, William H.	Newcomb, Caleb	Streeter, Gilbert L.
Foster, William J.	Northend, Wm. D.	Tracey, Patrick
Goodhue, William P.	Peabody, John P.	Ware, Horace C.
Gray, Benjamin A.	Perkins, E. R.	Wheatland, Henry
Gibney, John	Putnam, Henry W.	White, Frank W.
Gardner, D. B.	Phippen, George D.	Whitmore, Wm. F.
Gardner, Henry	Potter, Daniel	Waters, David P.
Hathaway, John	Potter, William	Wyman, Isaac C.
Hanson, Clement R.		

SALISBURY—15.

Bartlett, Moses J.	Getchell, N. Tracy	Pettengill, Wesley
Dole, Edward G.	Greeley, Farmer H.	Pettengill, John Q. A.
Dow, George A.	Greenleaf, Wm. H.	Smith, John F.
Eaton, John H.	Littlefield, Hiram	Thornton, Robert
Evans, John Q.	Morrill, Abram L.	True, P. Albert

SAUGUS—12.

Blodgett, J. W.	Hawkes, Samuel	Newhall, Joseph
Faxon, M. B.	Hawkes, Louis P.	Noble, William
Flye, John	Hill, Alfred C.	Penney, George H.
George, Henry M.	Newhall, Herbert B.	Whitehead, Joseph

SWAMPSCOTT—9.

Crosman, S. F.	Pettingell, S. J.	Warren, David
Holden, Philander	Rowe, Allen	Warren, Mrs. N. J.
Pettingell, L. D.	Washburne, John	

TOPSFIELD—20.

Averill, George F.	Leach, Charles H.	Towne, Frank H.
Butenelder, F. Wilson	Leach, Thomas K.	Ward, Richard
Billings, Augustus T.	Manning, James	Wildes, Moses
Bratstreet, Dudley	Mason, Alphonso	Wildes, Eugene L.
Herrick, Charles	Peabody, Charles J.	Wilson, James
Holt, Simon D.	Pike, Baxter P.	Woodbury, Isaac M.
Lawson, J. Arthur	Poole, Benjamin	

WENHAM—19.

Alley, Henry	Dodge, William P.	Pingree, David
Cole, Zacariah	Edwards, Francis R.	Peabody, George
Conant, John P.	Hobbs, A. F.	Parsons, George W.
Day, Everett K.	Hobbs, Henry	Patch, Henry
Demsey, H. H.	Kavanagh, J.	Perkins, Nathan'l P.
Dodge, Robert F.	Morgan, William B.	Tilton, George H.
Dodge, George F.		

WEST NEWBURY—46.

Bailey, William P.	Boynton, Eben M.	Carr, E. Dole
Bailey, Lawrence H.	Brown, Hayden	Carr, Samuel
Bartlett, M. Walsh	Bryant, William	Follansbee, B. A.

Flook, George L.	Merrill, William	Ordway, Charles W.
Goodridge, David L.	Merrill, William E.	Peirce, George J.
Goodridge, H. M.	Merrill, Henry	Peirce, Henry J.
Gordon, J. R.	Moore, Alfred L.	Poore, Moses H.
Gowen, Mrs. C. W.	Nason, Ezekiel G.	Poore, Moses
Gowen, Francis H.	Nason, Henry F.	Poore, George H.
Gowen, Oscar	Nelson, Daniel P.	Rogers, Calvin
Jacques, Romulus	Newell, Richard	Rogers, George C.
Jacques, Stephen A.	Noyes, Stephen E.	Stanwood, Moses P.
Johnson, Henry H.	Ordway, Cyrus D.	Talton, John C.
King, T. J.	Ordway, Cyrus K.	Thurlow, Thomas C.
Lane, Isaac N.	Ordway, Thomas G.	Titcomb, Silas M. C.

NON-RESIDENTS—129.

Allen, Henry C.	Keene, N. H.	Farrell, Edwin C.	Reading
Alley, James E.		Felton, Wm. H.	Sherborn
Babson, Gustavus, Jr.	Seward, Fernald, Henry B.	Washington	
Neb.		Flint, Charles L.	Boston
Balch, Eustis,	California	Flint, Horace P.	Boston
Balch, William H.,	Malden	Foster, James B.	Melrose
Barker, John G.,	Boston	Fowler, W. W.	Plymouth
Beckford, C. H.,	Boston	French, Charles,	Davenport, O.
Black, James D.,	Harvard	French, Geo. H.,	Davenport, O.
Blunt, J. Milton,	Springfield	Gannett, W. W.,	Boston
Bodwell, Henry A.,	Keene, N. H.	Gaffney, Cornelius, So.	Boston.
Bodwell, Jos. R.,	Hallowell, Me.	Gilman, S. E.,	Kingston, N. H.
Brackett, H. Clarke,	Virginia	Gookin, Samuel F.,	Boston
Burnham, Choate,	Boston	Green, John A.,	New York
Burnham, Ira T.,	Lexington	Greene, Arthur M.,	Philadelphia
Butler, Benjamin F.,	Lowell	Gulliver, Francis,	Binghampton;
Caldwell, L.,	Jacksonville, Fla.	N. Y.	
Campbell, Charles H.,	New Rochdale,	William,	Boston
chelle, N. Y.		Hale, Joseph S.,	Lugonia, San
Carey, James, Quincy		Bernadino Co.,	Cal.
Carey, James, New York		Hayes, J. F. C.,	Iowa
Chapin, W. C., Providence, R.I.		Hiscock, S. S.,	Rochester, N. H.
Chase, Joseph S., Malden		Hill, Mark F.,	Derry, N. H.
Clarke, Joseph F., Boston		Holt, H. E.,	Lexington
Cleveland, H. W. S., Chicago		Hubbard, J. G.,	Hampstead, N. H.
Colby, Charles A., New York		Hutchinson, C. H.,	Rhinebeck.
Currier, William A., Boston		N. Y.	
Day, Abraham, Boston		Kent, Albert S.,	Colorado
Davis, Phineas E., Chicago		Kimball, Jonathan,	Boston
Dodge, Albert W., Brighton		Kimball, W. F.,	Providence, R.I.
Dodge, John S., Chicopee		King, D. Webster,	Boston
Dole, Francis F., Chicopee		Knight, J. M.,	Maine
Drew, Charles R., Medford		Lamb, Wm. D.,	Southbridge
Eaton, Thos., Harristown, Ill.		Lake, Chas. H.,	Churchill, Md.
Emanuel, Henry, New York		Lovering, John H.	Marlborough

Low, Sidney, Groton	Rea, Loring B., Miles City, Mont.
Lyford, Geo. H., New York	Reynolds, W. B., Derry, N. H.
Mann, Otis, Springfield	Robinson, John L., Manchester, N. H.
Martin, Walter T., Dover, N.H.	Rogers, Benjamin, Malden
McFarland, L., Maine	Rogers, William, Illinois
Merrill, George F. North Hampton, N. H.	Safford, N. T., Dunbarton, N.H.
Merrill, Hayden A., Dedham	Sargent, Elmer P., Malden
Mills, R. P., Abbott, Col.	Sargent, G. P., Philadelphia, Pa.
Mitchell, Charles, Milton	Shattuck, Chas. W., Winchester
Moulton, Beverly S., Boston	Shattuck, L. P., Boston
Nelson, D. Oscar, Portsmouth, O.	Sleeper, S. C., Plaistow, N. H.
Nichols, Albert, Chicago, Ill.	Smith, Beaman C., Charlestown
Nichols, D. P., Boston	Smith, George J., Boston
Noyes, A. P., Lowell	Snow, Jesse W., Boston
Ordway, G. W., Manchester, N.H.	Spofford, Farnham, Washington
Page, Adino, Metamora, Ill.	Stanley, Samuel S., Boston
Page, Nathan jr., Wakefield	Stanwood, Joseph T., Malden
Palmer, Charles L., Cottonwood, Idaho Co., Idaho	Stickney, Charles., Fon du Lac, Wis.
Palmer, Frank H., N. Weymouth, Mass.	Stickney, Niles T., Chicago, Ill.
Patch, A. H., Clarkville, Tenn.	Stone, Edwin M., Providence, R.I.
Payson, Samuel, F., New York	Tappan, S. B., Arlington
Phelps, N. L., Iowa	Taylor, George H., Everett
Phillips, A. P., Medfield	Titcomb, Charles A., Boston
Phillips, Samuel, Brighton	Walker, Dexter M., Boston
Pierce, William, Boston	Ward, Winsor M., Wakefield
Poor, Henry, New York	Ware, Darwin E., Boston
Porter, Dudley H., Saratoga	Webb, Michael jr., Cambridge
Putnam, Benjamin C., Chelsea	Wentzel, David, Amherst
Putnam, Moses W., Philadelphia	Wheeler, H. T., Worcester
N. Y.	Whitman, F. A., Lexington
Putnam, Wm. R., Red Wing, Minn.	Whittemore, Chas. A., Boston
Raymond, Samuel, New York	Whittemore, J. R., Chicopee
	Wilder, S. W., Lowell

Total number, December, 1888—1329 resident members.

129 non-resident members. Grand Total, 1458 members.

1889.

PREMIUM LIST OF
Essex Agricultural Society,

FOR THE

Sixty-Ninth Annual Cattle Show and Fair,

To be held September 24th and 25th, 1889, in Beverly.

Duties of Trustees.

The Trustee of each town is instructed to see the several members of Committees in his town previous to the Show, and urge upon them the importance of attending to their duties. Also impress upon exhibitors from localities near to the Exhibition, the importance of entering their exhibits the afternoon and evening of Monday, in fairness to those from a distance, who are obliged to come Tuesday.

To be prompt at the meeting in June for filling Committees and at the meeting of the society for filling vacancies in committees on the first day of the Exhibition, making sure that the names proposed at those meetings are of persons who will serve.

Duties of Committees.

Committees on live stock and articles exhibited on the Fair Grounds should appear at the Secretary's office on the grounds, at one o'clock, punctually, on the first day of the Exhibition, and there organize, take the books of entry, and proceed at once to business. Committees in Hall should take the books of entry from the Superintendent as soon after the entries close as the exhibits are arranged for judging.

Full reports of awards by Committees, on the blanks furnished by the Secretary, to be signed by all the members acting on the same, are required of each committee.

Three members of any committee consisting of more than that number are authorized to act.

The Diploma of the Society being considered the highest premium that can be awarded, no committee is authorized to

award it, except for animals and articles of *special merit*, deserving of endorsement and recommendation by the Society.

No committee is authorized to award gratuities, except the committee on agricultural implements, carriages, bread, honey, and canned fruits, domestic manufactures, fruits, vegetables in Hall, and flowers: or any premium, unless the rules of the Society have been strictly complied with. Neither shall they award premiums or gratuities in excess of the amount appropriated.

No gratuity is to be awarded of less than fifty cents.

The several committees are requested to affix premium cards, and also on animals, blue, white, and red printed premium ribbons (which may be had of the Secretary or assistant on the grounds and at the hall), for the several animals or articles, designating the grade of premium awarded each, and the name of the person to whom awarded, and special care should be taken that the cards issued correspond with the awards in their report to the Society.

No claimant for a premium can be a member of the committee upon the subject on which he makes his claim.

The reports of award of premiums on ploughing and on animals and articles exhibited at the Show, will be delivered to the Secretary and announced on Wednesday.

The Society offers liberal premiums for the best reports of committees; and the chairmen of the several committees are requested to present to the Secretary a full report explanatory of the opinions of the committee on the matter referred to them, within two weeks after the awards are made at the Show, for publication in the Transactions.*

Reports on farms, crops, etc., to be presented previous to the meeting of the Trustees in November.

Any member of a committee who cannot serve on the same, is requested to give notice to the Secretary, before the Show, so that the vacancy may be filled.

Each member of the several committees will receive a ticket of admission to the hall of exhibition, on application to the Secretary.

* Chairmen of committees will please notice this request.

General Rules.

Competitors are requested to carefully read the rules and premium list, before making entries.

Claims (entries) for premiums to be awarded at the Exhibition on the Fair Grounds, must be entered with the Secretary of the Society, or his agent, on or before **9** o'clock, A. M., and in the Exhibition Hall, on or before **11** A. M., of the first day thereof.

All claims (entries) for premiums on Fair Grounds, must be handed or forwarded to the Secretary or his agent, in writing, previous to the day of the Fair, if possible, or on or before 9 o'clock, A. M., of the first day thereof.

Any person *not a member of the Society*, awarded seven dollars and upwards, shall receive a certificate of membership, for which three dollars of his award will be taken to increase the funds of the Society.

Diplomas awarded will be delivered and premiums paid, to the person to whom the premium or gratuity is awarded, or an agent duly authorized, on application to the Treasurer, at First National Bank, Salem.

All premiums and gratuities awarded, the payment of which is not demanded of the Treasurer on or before the first day of September next succeeding the Exhibition, will be considered as given to increase the funds of the Society.

In all cases the reports of award of premiums and gratuities made by the several committees and adopted by the Society shall be final. Committees should see that the premium cards issued correspond with the premiums and gratuities awarded in their reports.

No person shall be entitled to receive a premium, unless he complies with the conditions on which the premiums are offered, and by proper entry as required, gives notice of his intention to compete for the same; and committees are instructed to award no premium unless the animal or article offered is worthy.

No animal or object that is entered in one class, with one committee shall be entered in another class, except town teams, fat cattle, working oxen, working steers, and farm horses, which may be entered for ploughing, and milch cows, which may be entered with a herd.

In regard to all subjects for which premiums are offered it is to be distinctly understood that the Trustees reserve to themselves the right of judging the quality of the animal or article offered; and that no premium will be awarded unless the objects of them are of decidedly superior quality.

Pure Bred Animals, defined by the State Board of Agriculture.

The *proof* that an animal is so bred should be a record of the animal or its ancestors, as recorded in some herd book, recognized by leading breeders and the public generally, as complete and authentic.

Standards adopted:—American Jersey C. C. Register and American Jersey Herd Book, Ayrshire Record and Holstein Herd Book.

Premiums to be Awarded at the Show.

The Committees will take notice that no premium will be

awarded unless the animals or objects are of a decidedly superior quality.

DIPLOMAS may be awarded for ANIMALS OR ARTICLES of *special* merit, in all departments of the Fair.

Cattle and Other Farm Stock.

TO BE ENTERED IN THE NAME OF THEIR REAL OWNER.

All animals, to be eligible to a premium, shall have been raised by the owner within the County, or owned by the exhibitor within the County, for four months previous to the date of the Exhibition, except Working Oxen, and Working Steers.

All animals, whether teams for ploughing, or animals entered for premium or exhibition, will be fed during the Exhibition, and longer when they are of necessity prevented from leaving, at the expense of the Society.

FAT CATTLE.

Fat Cattle, fatted within the County, regard being had to manner of feeding and the expense thereof, all of which shall be stated by the exhibitor in writing and returned to the Secretary, with committee's report.

For Pairs of Fat Cattle, premiums, each,	\$8. 6. 3
For Fat Cows, premiums, each,	\$7. 5

BULLS.

*Ayrshire, Jersey, Short Horn, Devon, Holstein, or of any other recognized breed, for each breed.

Two years old and upwards, premiums,	\$8. 4
Under two years, premiums, for each breed,	\$4. 3
Bull Calves under one year old, premium for each breed,	\$2

BULLS OF ANY AGE OR BREED.

*For the best Bull of any age or breed, with five of his stock not less than one year old, quality and condition to be taken into account, and especially the adaptability of the animal to the agriculture of the County, premium, \$10

NOTE.—*Competitors are required to give a written statement of pedigree, and committees are requested to be particular in this respect, and return them to the Secretary with report.

MILCH COWS.

For the best Milch Cow any age or breed, with satisfactory record in quarts or pounds of her daily yield of milk for one or more years, premium, \$15

For Milch Cows, either Foreign, Native or Grade, not less than four nor more than ten years old, with satisfactory evidence as to quantity and quality of milk, either by weight

or measure. during the evening and morning of the first and last ten days of any month, premiums, \$10. 4

Milch Cows, Ayrshire, Jersey, Devon, Short Horn, Holstein, or any other recognized breed, four years old and upwards. premiums, for each breed, \$10. 4

For Native or Grade Cows, four years old and upwards, premiums. \$10. 4

For the Cows that make the most butter in any single week from June 1st to September 15th, premiums, \$10. 4

NOTE.—A written statement will be required of the age and breed of all Milch Cows entered, and time they dropped their last calf, and when they will next calve, the kind, quality and quantity of their food during the season, and the manner of their feeding, which statement is to be returned to the Secretary with Committee's report.

HERDS OF MILCH COWS.

For herds of Milch Cows. not less than five in number, to be exhibited at the Show, and a correct statement of manner of keeping and yield for one year preceding the Show, premiums, \$18. 12

For the greatest produce of milk on any farm. in proportion to the number of cows producing it, not less than four, from April 1, 1888, to April 1, 1889, statement to be made of the exchanges made, manner and expense of food, use made of milk, and such other facts as will illustrate the entire management, special regard being had to the mode in which the account is kept, premium, Diploma, and \$15

NOTE.—The above mentioned statement is to be returned to the Secretary, with Committee's report. The Committee can accept statements dating from January 1st. preceding Show.

HEIFERS.

FIRST CLASS.—Ayrshire, Jersey, Short Horn, Devon, Holstein. or any other recognized breed, under four years old, in milk, premiums, for each breed. \$8. 5

Two year olds of each breed, that have never calved, premiums. \$4. 3

One year olds of each breed, premiums. \$4. 3

Heifer Calves. under one year, premiums for each breed. \$4. 3

SECOND CLASS.—Native or Grade Milch. under four years old, premiums, \$8. 5

Two year olds, that have never calved, premiums, \$4. 3

One year olds and less than two, premiums, \$4. 3

Heifer calves, Native or Grade, under one year old, premiums. \$4. 3

WORKING OXEN AND STEERS.

Stags excluded. For pairs of Working Oxen under eight and not less than five years old, taking into view their size, power, quality, and training, premiums, \$12. 10. 8

For pairs of Working Steers four years old, to be entered in the name of the owner, premiums. \$10, 6

NOTE.—The Committee are required to consider the quality and shape of the cattle as well as their working capacity. The training of working oxen and steers will be tested by trial on a cart or wagon containing a load weighing two tons for oxen, and 3000 pounds for steers. At the time of entry a certificate of the weight of the cattle must be filed with the Secretary.

TOWN TEAMS.

For Town Teams of Oxen, ten yoke or more in a team, premiums. \$20, 12

For Town Teams of Horses, ten or more pairs in a team, premiums, \$20, 12

STEERS.

For pairs of three year old Steers, broken to the yoke, premiums, \$8, 6

For pairs of two year old Steers, premiums, \$6, 5

For pairs of yearling Steers, premiums, \$5, 4

For pairs of Steer Calves, premiums, \$4, 2

STALLIONS.

FIRST CLASS.—*For Stallions for Farm and Draft purposes, four years old and upwards, diploma or premiums, \$10, 6, 4

*For Stallions for Farm and Draft purposes, three years old, premiums, \$8, 5

*For best Stallion of any age, and five colts of his stock, not less than one year old, quality and condition to be taken into account, premium. \$15

SECOND CLASS.—*For Stallions for Driving purposes, four years old and upwards, premiums, \$10, 6, 4

For Stallions for Driving purposes, three years old, premiums, \$8, 5

*For best Stallion of any age and five colts of his stock, not less than one year old, quality and condition to be taken into account, premium. \$15

NOTE.—No stallion will be entitled to a premium unless free from all apparent defects capable of being transmitted. All stallions entered in either class must have been owned by the exhibitor four months previous to the exhibition.

BROOD MARES.

FIRST CLASS.—*For Brood Mares for Farm and Draft Purposes, with their foal not more than eight months old, by their side, premiums, \$10, 6, 4

SECOND CLASS.—*For Brood Mares for Driving Purposes, with their foal not more than eight months old by their side, premiums, \$10, 6, 4

*NOTE.—No brood mare will be entitled to a premium unless free from all apparent defects capable of being transmitted.

FAMILY HORSES.

For Family Horses, premiums, \$10, 6, 4

NOTE.—No horse will receive a premium unless free from all unsoundness.

GENTLEMEN'S DRIVING HORSES.

For Driving Horses, premiums, \$10, 6, 4

FARM HORSES.

For Farm Horses, premiums, \$10, 6, 4

NOTE.—No horse will be allowed except those actually used on farms, whether the owner has a farm or not, and in no case will competitors be allowed to take more than a specified load, 2000 pounds. No obstruction shall be placed either before or behind the wheels in trials of Draft horses of either class. If this rule is not complied with the premiums shall be withheld.

PAIRS OF FARM HORSES.

FIRST CLASS.—For pairs of Farm Horses, weighing 2500 pounds and upwards (see above note), premiums,

\$10, 8, 4

SECOND CLASS.—For pairs of Farm Horses, weighing 2500 pounds, premiums,

\$10, 8, 4

COLTS FOR DRAFT PURPOSES.

FIRST CLASS.—For Mare or Gelding four year old colts, premiums,

\$8, 5, 3

For Mare or Gelding three year old Colts, premiums, \$6, 3

SECOND CLASS.—For two year old Stallion, Gelding, or Mare Colts, premiums,

\$8, 5, 3

For yearling Stallion, Gelding or Mare Colts, premiums,

\$5, 3

COLTS FOR GENERAL PURPOSES.

FIRST CLASS.—For Mare or Gelding four year old Colts, premiums,

\$8, 5, 3

For Mare or Gelding three year old Colts, premiums, \$6, 3

SECOND CLASS.—For two year old Stallion, Gelding or Mare Colts, premiums,

\$8, 5, 3

For yearling Stallion, Gelding or Mare Colts, premiums,

\$5, 3

SWINE.

FIRST CLASS.—Large breeds, viz.: Cheshire, Berkshire, Chester County, Whites, Poland China, Large Yorkshire, and any other breed or grade weighing more than 300 pounds at maturity.

For Boars, premiums, \$8, 5

For Breeding Sows, premiums, \$8, 5

For Litters of Weaned Pigs, premiums, \$8, 5

NOTE.—Litters of Weaned Pigs must be not less than four in number, between two and four months old.

SECOND CLASS.—Small breeds, such as Suffolk, Essex, Small Yorkshire, China, and any other breed or grade weighing less than 300 pounds at maturity, same premiums as in First Class.

SHEEP.

For flocks not less than ten in number, premiums, \$10. 6
 For best Buck, premium, \$8
 For best lot of Lambs, not less than four in number, between four and twelve months old, premium, \$4

POULTRY.

For pairs of Light Brahmas, Dark Brahmas, Buff Cochins, Partridge Cochins, Black Cochins, White Cochins, Plymouth Rocks, Dominiques, White Leghorns, Brown Leghorns, Dominique Leghorns, Black Spanish, Hamburgs, Polish, Games, Dorking, Bantams, Black, White, and Mottled Javas, Wyandottes, White Wyandottes, Andalusian, Erminet, Langshangs, and Frizzle, and other recognized varieties, each variety, premiums, \$2. 1

For pairs of Chickens of above varieties, premiums, \$2. 1

For the best breeding pen of each variety—Diploma of the Society.

Pairs can be exhibited in "breeding pens," by marking the competing female (with a ribbon or colored string), which, with the male will form the pair.

Premiums shall be awarded on a score of not less than 176 points for first premium and 166 points for second premium.

For lots of Turkeys, and Aylesbury, Rouen, Caouga, Pekin, White and Colored Muscovy, and Brazilian Ducks, and Toulouse, Emden, Brown China, and African Geese, premiums, \$2. 1

For the coop of 10 or more Fowls exhibited, whether thoroughbreds, crossed or mixed, with an account for one year, showing cost of keeping, production and profit, premium, \$5

For the best pair of *dressed* Fowls, Chickens, Ducks, and Geese, premium for each, \$2

For the best 12 Eggs from Asiatic, American, Game, French and Spanish classes (Hamburgs, Polish, Dorkings to compete in the Spanish class), premium for each class, \$1

Any exhibitor interfering with the Judges in the discharge of their duties or interfering with, or handling any specimen on exhibition, other than his own, shall forfeit all claim he may have in the premium list.

All breeds exhibited separately and to be judged by the rules of the "American Standard of Excellence."

For best exhibit of Poultry Appliances, \$5

PLOUGHING.

GENERAL NOTE ON PLOUGHING.—Stags are excluded. Teams must be entered in the names of their owners, and only double ox-teams to have drivers. A team consisting of one pair of oxen and a horse will be considered a double team. The owners of separate teams may unite the same and be allowed to compete for premiums. The ploughmen and drivers must have been residents of the County at least three months before the exhibition. Those who intend to be competitors must give notice to reach the Secretary on or before Saturday previous to the show. The lands will be staked, but each ploughman will be required to strike out his own land in the presence of the "Committee on Striking out Grounds for Ploughing," after half-past nine o'clock on the morning of the trial. Ploughmen with land-slide ploughs are to back furrow three furrows on each side of the stakes set, the last furrow to be of the depth required in the class. Ploughmen with swivel ploughs to turn the outside of their furrows to the stakes on one side, and to finish one foot from the stake on the other. Committees to note and report the kind of plough used.

PLOUGHING WITH DOUBLE TEAMS.—One-sixth of an acre, at least eight inches deep, premiums, \$10, 8, 6

PLOUGHING WITH SINGLE TEAMS.—One-sixth of an acre, at least six inches deep, premiums, \$10, 8, 5

PLOUGHING WITH HORSES.—With any form of Plough, except Swivel, one sixth of an acre, at least six inches deep, premiums, \$10, 7, 5

PLOUGHING WITH THREE HORSES.—One-sixth of an acre, eight inches deep, without driver, premium, \$10

Same with four horses, with driver, premium, \$10

PLOUGHING WITH SWIVEL PLOUGH.—One-sixth of an acre, either with double or single ox-team, double teams at least eight inches deep, single teams six inches, premiums, \$10, 8, 6

Same with Horse teams, consisting of two horses, ploughing at least six inches deep, premiums, \$10, 6

PLOUGHING—SULKY PLOUGH.—For the best performance, taking into account ease of draft, amount and quality of work, premiums, \$10, 8

HARROWS.

For the best Harrow exhibited and its merits shown by actual test upon the ploughed ground, premium, \$10

NOTE.—Entry must be made with the Secretary before the day of the trial with description of Harrow.

AGRICULTURAL IMPLEMENTS.

For the best collection of Implements and Machines (no article offered in *collection* will be entitled to a separate premium), Diploma and \$10

Best Market Wagon, premium, \$5

Best Farm Wagon for one or two horses, premium, \$3

Best Horse Cart, premium, \$5

Best Hay, Straw, or Corn Cutter, premium, \$1.50

Best Ox Yoke, complete, premium, \$1.50

Best Fruit Evaporator, with sample of work, premium, \$5

Best set of Horse Shoes, including those for over-reaching, interfering, and stumbling horses, premium, \$5

For implements not specified above the Committee may at their discretion award \$40

No premium or gratuity will be awarded for any Mower, Horse Rake, Tedder, or other Machine or Implement, the merit of which can be known only by actual trial in the field ; but manufacturers are invited to offer the same for exhibition and inspection.

CARRIAGES.

For carriages built in the County, and exhibited by the manufacturer, diploma, and thirty dollars in gratuities, may be awarded by the Committee.

In Exhibition Hall.

Committees on articles exhibited in the hall should be especially careful that the premium or gratuity cards issued correspond with the names, and sums awarded them, in their reports to the Society.

Committees and Exhibitors will be governed by instructions under heading of "Duties of Committees," "General Rules," "Premiums to be awarded at the Show," see first pages, and under "Fruit," "Domestic Manufactures" and "Flowers."

DAIRY.

For specimens of Butter made on any farm within the County the present year, samples not less than five pounds to be exhibited, with a full account of the process of making and management of the Butter, premiums, \$8, 6, 4

For specimens of New Milk Cheese, made on any farm in the County the present year, samples of not less than fifty pounds to be exhibited, with statement in writing of the method of making and preserving the same, premiums, \$8, 6, 4

NOTE.—Each lot presented for premium and the statement accompanying it, must be numbered, but not marked so as to indicate the claimant : any public or known mark must be completely concealed : nor must the competitors be present at the examination.

To the person who shall furnish to the Society satisfactory evidence of the greatest amount of Butter made from any quantity of milk, being the whole produce of any single cow, for the first week of June, July, August and September next, stating the whole amount of Butter produced in each week, also the time when the cow dropped her last calf, and her feed and management all to be taken into account in making the award, premiums, Diploma and \$10, 5

NOTE.—The object in offering these last premiums is to elicit inquiry as to the value and quality of milk for the production of butter. As far as practicable it is desirable that the race and pedigree of the cow should be given.

BREAD, HONEY, AND CANNED FRUIT.

For White Bread made of wheat flour, premiums, \$3. 2. 1

For bread made from Graham flour, premiums, \$2, 1

For bread made from other grains, or other grains mixed with wheat, premiums, \$1.50, 1

All bread, entered for premiums, to be in loaves weighing not less than one pound each, and to be not less than twenty-four hours old, with a full written statement over the signature and address of the maker, stating the kind of flour used, quantity of each ingredient, how mixed, and length of time kneaded and raised, and how long baked, *which statements on all premium bread are to be sent to the Secretary with report of the Committee for publication.*

For first and second best display of Bees, Hives, and Apiarian Implements, to be accompanied with the description of the bees, hives, etc., number of hives in use and amount of surplus honey taken from them during the season, premiums, \$5, 3

First and second best Honey, ten pounds in comb and one pound of same extracted, made in the County, with statement signed of kind of bees and hive, and time of year when honey was made, premiums, \$3, 2

For first and second best collection of Pickles. Preserved Fruits and Jellies, made from products of the County, *when premiums are awarded, the method of making to be sent to the Secretary, by the Committee, for publication,* premiums. \$3, 2

For the first and second best five pounds of Dried Apples, grown and dried within the County, with statements of process used and amount of labor and time required in preparing and drying, *such statement on premium fruit to be given to the Secretary for publication,* premiums, \$3. 2

In addition to the above, are placed in the hands of the Committee for gratuities on other articles entered in this department, products of this County deemed worthy, \$5

Fruit.

All fruit must be entered in the name of the grower before 11 o'clock on the first day of the exhibition. and each exhibitor must certify to the same on the Entry Book, or lists of the varieties of each class of fruit. to be filed when entry is made. (Committees are not authorized to make awards to those who do not comply with this rule).

Tables will be labelled in a *conspicuous manner* by the hall committee, *before the entry of Exhibitors*, with the names of fruit, for which premiums are offered. all others of same class of fruit to be labelled miscellaneous. Exhibitors must place their several varieties of each class of fruit where indicated by such labels, or be considered by the committee as not competing for premium.

Plates of collections of fruit, when premiums are offered therefor, must be entered and placed by the exhibitor on the table assigned for the exhibit of collections of fruit.

To entitle exhibitors to receive premiums and gratuities awarded, they are required (when requested by the committee) to give information in regard to the culture of their fruit.

PEARS.

For best twelve specimens of the following varieties, which are recommended for cultivation in Essex County: Bartlett, Belle Lucrative, Bose, Anjou, Angouleme, Dana's Hovey, Lawrence, Louise Bonne, Maria Louise, Onondaga, Paradise d'Automne, Seckle, Sheldon, Urbaniste, Vicar, Comice, Howell, Hardy and Clairgeau, each, premium \$3

Doyenne d'Ete, Gifford and Clapp's Favorite (ripening early), are recommended for cultivation, but no premium is offered.

For each dish of twelve best specimens of any other varieties, deemed worthy by the committee, premium \$1.50

For best collection of Pears, recommended for cultivation, premium. \$6

In addition to the above, are placed at the disposal of the committee, to be awarded in gratuities of not less than \$1 each, \$20

APPLES.

For best twelve specimens of the following varieties, which are recommended for cultivation in Essex County: Baldwin, Danvers Sweet, Tompkins King, Granite Beauty, Red Russet, Tolman's Sweet, Bailey Sweet, Drap d'Or, Hubbardston, Hurlburt, Porter, Pickman Pippin, Roxbury Russet, Rhode Island Greening, Sweet Baldwin, Gravenstein, Hunt Russet, Smith's Cider, Snow, premium for each, \$3

Red Astrachan, William's Favorite, Tetofsky and Sweet Bough are recommended for cultivation, but no premium is offered (ripening early).

For best twelve specimens of any other varieties deemed worthy by the committee, premium for each variety, \$1.50

For best collection of Apples, recommended for cultivation, premium, \$6

For best twenty-four specimens of any variety of Crab Apple deemed worthy by the committee, \$1.50

In addition, are placed at the disposal of the committee, to be awarded in gratuities of not less than \$1 each, \$20

PEACHES, GRAPES AND ASSORTED FRUITS.

For best nine specimens of Freestone, White Flesh, Yellow Flesh, Essex County Seedling, each variety, \$2

For best collection of Peaches, premium, \$3

For best four bunches of Concord, Worden's Seedling,

Brighton, Hartford Prolific, Delaware, Martha, Moore's Early, Niagara, Grapes, each variety, premium \$3

For Cold House Grapes, produced with not over one month's artificial heat, premiums, \$4.3

For best collection of ten varieties, not less than ten pounds in all, premium, \$7

For best specimens of four bunches of Grapes, varieties other than above, deemed worthy by the committee, premium, \$1.50

For baskets of Assorted Fruit, premiums, \$4.3

In addition, are placed at the disposal of the committee, to be awarded in gratuities of not less than 50 cents each, \$25

PLANTS AND FLOWERS.

RULES AND REGULATIONS.

1. All Plants and Flowers for competition and exhibition must be entered for examination by the Committee on or before eleven o'clock, on the first day of the Fair, and all such Plants and Flowers must have been grown by the competitor, except native plants and flowers, and flowers used in bouquets and baskets of flowers and floral designs, all of which (plants and flowers), must have been grown within the County.

2. When a certain number or quantity of Plants and Flowers is designated in the schedule, there must be neither more nor less than that number or quantity of specimens shown.

3. When only one premium from each exhibitor is offered for any article, only a single specimen or collection can compete, but when a second or third premium is offered, one, two or three specimens or collections may be exhibited for competition, but no variety can be duplicated.

4. No premium shall be awarded unless the specimens exhibited are of superior excellence, possessing points of superiority and worthy of such premium, not even if they are the only ones of their kind on exhibition.

5. No specimen entered for one premium shall be admitted in competition for another different premium.

6. Competitors will be required to furnish information (if the committee so request), as to their modes of cultivation, or in the case of Native Plants and Flowers, where such were found.

7. All Plants exhibited for premiums must have the name legibly and correctly written on stiff card, wood or some other permanent and suitable substance, and so attached to same as to be easily seen. Flowers when specified to be named to comply also with above rule.

8. Plants in Pots to be entitled to premiums must show skilful culture in the profusion of bloom and in the beauty, symmetry and vigor of the specimens; also Bouquets, Baskets.

Design work, etc., must show taste, skill, and harmony in arrangement, both as to colors and the material they are made of, and purposes for which they are intended.

9. All flowers exhibited must be shown upon their *own stems*, flowers in "Design" work alone excepted; and this exception if overcome and avoided, to be taken into account by the committee in awarding the premiums.

10. The Committee are authorized to award gratuities for any new and rare plants and flowers, or "Designs" of merit for which no premium is offered, but in no case shall the total sum (premiums and gratuities together), exceed the amount, \$150.00, limited by the Society for this department.

11. No member of the Committee for awarding premiums or gratuities shall in any case vote or decide respecting an award for which such member may be a competitor, or in which he may have an interest, but in such case such member shall *temporarily* vacate his place upon the Committee, and such vacancy for the time being may be filled by the remaining members of the Committee, or they may act without.

12. Attention is again called to above Rules and Regulations for Plants and Flowers, and General Rules of the Society, and all articles not entered in conformity therewith will be disqualified, and premiums will be awarded only to exhibitors who have complied with said Rules, etc.

PLANTS.

Plants competing for these premiums must have been grown in pots, Native Plants excepted, named, etc. See Rules.

For collections Flowering and Ornamental Foliage Plants, at least 25 specimens, premiums, \$10. 5

For coll. Palms, at least 5 spec., 5 varieties, premium, \$1

For collection Ferns (cultivated), at least 5 specimens, 5 varieties, premium, \$1

For coll. Dracenas, at least 5 spec., 5 varieties, prem., \$1

For coll. Crotons, at least 5 spec., 5 varieties, premium, \$1

For collection Fancy Caladiums, at least 5 specimens, 5 varieties, premium, \$1

For coll. Gloxinias, at least 5 spec., 5 varieties, prem., \$1

For collection Begonias, tuberous rooted, at least 5 specimens, 5 varieties, premium, \$1

For coll. Begonias, 5 specimens, 5 varieties, premium, \$1

For coll. Coleus, 10 specimens, 10 varieties, premium, \$1

For coll. Fuchsias, 5 specimens, 5 varieties, premium, \$1

For coll. Cyclamen, 5 specimens, 5 varieties, premium, \$1

For coll. Geraniums, double, 10 spec., 10 varieties. pre., \$1

For coll. Geraniums, single, 10 spec., 10 varieties, pre., \$1

For collection Geraniums, fancy, 10 specimens, at least 5 varieties, premium, \$1

For coll. Hibiscus, 5 specimens, 5 varieties, premium, \$1

- For collection Carnation Pinks, 10 specimens, at least 5 varieties, premium, \$1
 For collection Calla Lilies, 5 specimens, premium, \$1
 For specimen English Ivy, premium, \$1
 For collections of wood of native trees in sections, suitable for exhibition, showing bark and the grain of the wood, all correctly named with botanical and common name, at least 50 varieties, each variety to be shown in two sections, one of which to be a cross section and neither to be more than four inches in length or diameter, premiums, \$5, 3

FLOWERS.

- For collections of Cut Flowers, cultivated, 100 specimens, at least 50 varieties, named, \$5, 3
 For collections of Cut Flowers, native, 100 specimens, at least 50 varieties, named, \$5, 3
 For pair of Bouquets, for vases, green-house flowers, pre. \$2, 1
 For pair of Hand Bouquets, green-house flowers, prems. \$2, 1
 For pair of Bouquets, for vases, of native flowers, pre. \$2, 1
 For pair of Bouquets, for vases, of garden flowers, pre. \$2, 1
 For Basket of green-house flowers, premiums, \$2, 1
 For Basket of native flowers, premiums, \$2, 1
 For Basket of garden flowers, premiums, \$2, 1
 For arrangement of Native Flowers and Autumn Leaves, premiums, \$3, 2
 For Floral Designs, choice cultivated flowers, prems., \$5, 3
 For Floral Designs, native flowers, premiums, \$3, 2
 For collections Japan Lilies, hardy, named, premiums, \$3, 2
 For collections Phlox, hardy perennial, named, prems., \$2, 1
 For collections Pansies, at least 50 specimens, neatly and artistically arranged, premiums, \$2, 1
 For collections of Native and Introduced Weeds, with common and botanical name attached, premiums, \$3, 2
 For twelve Dahlias, large flowering, at least six varieties, named, premium, \$1
 For twelve Dahlias, Pompom or lilliputian, at least six varieties, named, premium, \$1
 For twelve Dahlias, single, at least six var's, named, pre., \$1
 For twelve Petunias, double, at least six var's, named, pre., \$1
 For twelve Gladiolus (spikes), at least six varieties, named, premium, \$1
 For twelve Japan Lilies, at least six var's, named, pre., \$1
 For twelve Geraniums, double, at least six varieties, named, premium, \$1
 For twelve Geraniums, single, at least six varieties, named, premium, \$1
 For twelve Phlox, hardy perennial, at least six varieties, named, premium, \$1
 For twelve Cannas, at least six varieties, named, prem., \$1

For twenty-four Carnation Pinks, at least six varieties, named, premium,	\$1
For twenty-four Verbenas, at least six var's, named, pre.,	\$1
For twenty-four Roses, at least six varieties, named, pre.,	\$1
For twenty-four Garden Annuals, at least twelve varieties, named, premium,	\$1
For twelve Calendulas, at least two var's, named, pre.,	\$1
For twelve Asters, Double Victoria, premium,	\$1
For twelve Asters, Double, Truffaut's Peony flowered, pre.,	\$1
For twelve Asters, Pompone, premium,	\$1
For twelve Phlox, Drummondii, in variety, premium,	\$1
For twelve Nasturtiums, at least six varieties, premium,	\$1
For twenty-four Pansies, in variety, premium,	\$1
For twenty-four Zinnias, double, in variety, premium,	\$1
For twenty-four Marigolds, African, in variety, premium,	\$1
For twenty-four Marigolds, Dwarf French, in variety, pre.,	\$1
For twenty-four Petunias, single, in variety, premium,	\$1
For Display of Coxcombs, in variety, premium,	\$1
For twelve Scabiosas, in variety, premium,	\$1
For twelve Delphiniums, in variety, premium,	\$1
For twelve Dianthus (double, annual), in variety, prem.,	\$1
For twelve Salpiglossis, in variety, premium,	\$1
SPECIAL PREMIUMS OFFERED BY M. B. FAXON, OF SAUGUS.	
For the best bouquet of Garden Flowers, One year's subscription to the "American Garden."	
For the best dish of Pansies, One year's subscription to "Popular Gardening and Fruit Growing."	
For the best display of Asters filling twenty-five bottles,	\$5.00


NOTE.—The above publications are well worth competing for.

VEGETABLES.

The Rules for Fruit apply to Vegetables.

Beets—For best twelve specimens, Eclipse, Dewing, and Edmonds, premiums, each variety,	\$3
Carrots—For best twelve, short top, long Orange and Danvers Intermediate, premium, each variety,	\$3
For best twelve, Short Horn Orange Carrots, premium,	\$3
Mangold Wurtzels—For best six specimens, premium,	\$3
Flat Turnips—Twelve specimens. For best Purple Top and White Flat, premium, each variety,	\$3
Ruta Bagas—Twelve specimens. For best Yellow and White, premium, each variety,	\$3
Parsnips—For the best twelve specimens, premium,	\$3
Onions—One peck. For best Danvers, Yellow Flat, and Red, premium, each variety,	\$3
Potatoes—One peck. For best Early Rose, Beauty of Hebron, Clark's No. 1, Pearl of Savoy, Early Maine, premium, each variety,	\$3

Cabbages—For best three specimens Savoy, Fötter's Drum-head, Stone Mason Drumhead, Red Cabbage, each variety, premium,	\$3
For next best, each variety, premium,	\$2
Cauliflowers—For best three specimens, premium,	\$3
For next best, premium,	\$2
Celery—For best four roots, premium,	\$2
Sweet Corn—For twelve ears ripest and best Early, premium,	\$3
For best twelve ears in milk, Late, premium,	\$3
Squashes—For best three specimens, Marrow, American Turban, Hubbard, Marblehead, Essex Hybrid, Bay State, each variety, premium,	\$3
Melons—For best three specimens Nutmeg, Musk, Cassaba, each variety, premium,	\$2
For best two specimens Watermelons, premium,	\$2
Tomatoes—For best twelve specimens Acme, Emery, Cardinal, Essex Hybrid, Livingston, or any other variety, each variety, premium,	\$3
For exhibition of greatest variety, premium,	\$3
Cranberries—For pecks of cultivated, premiums,	\$3, 2, 1
For collection of vegetables, premiums,	\$8, 6, 4, 2
Placed at the disposal of the committee for whatever appears meritorious,	\$30

 No competitor for premium to exhibit more or less number of specimens of any vegetables than the premiums are offered for.

SPECIAL PREMIUM OFFERED BY F. B. FAXON, OF SAUGUS.

For the best collection of potatoes, twelve of each variety exhibited, One year's subscription to the "American Agriculturist."

Collections of Vegetables, where premiums are offered for a number of varieties, must be entered and placed by themselves on the tables assigned for collections. No collection shall receive but one premium. Specimens of any variety in such collections are not to compete with specimens of the same variety placed elsewhere. Exhibitors of such collections, however, are not prevented from exhibiting *additional* specimens of any variety, with and in competition with like variety. All vegetables must be entered in the name of the grower of them.

Size of Vegetables.—Turnip Beets to be from 3 to 5 inches in diameter; Onions, 2 1-2 to 4 inches in largest diameter; Potatoes to be of good size for family use; Squashes to be pure and well ripened—Turban, Marrow, Hubbard, Marblehead, each to weigh 8 to 16 lbs.

GRAIN AND SEED.

For best peck of Shelled Corn, Wheat, Oats, Barley, Rye and Buckwheat, each, premium,	\$1
For 25 ears of Field Corn, premiums,	\$5, 3, 2
For 25 ears of Pop Corn, premiums,	\$3, 2
For collections of Field and Garden Seeds, premiums,	\$8, 6, 4, 2

All grain or seed must have been grown by the exhibitor in the County to receive premium.

Domestic Manufactures.

Contributors must deposit their articles at the Hall before 11 o'clock on the first day of the Exhibition. Articles not thus deposited will not be entitled to a premium. Gratuities will be awarded for articles of special merit for which no premium is offered; but no premium or gratuity will be awarded for any article manufactured out of the County, or previous to the last exhibition of the Society.

COUNTERPANES AND AFGHANS.

For Wrought Counterpanes having regard to the quality and expense of the material, premiums, \$4, 2

Gratuities will be awarded for articles belonging to this department, the whole amount of gratuities not to exceed \$25.

CARPETINGS AND RUGS.

For Carpets, having regard to the quality and expense of the material, premiums, \$4, 2

For Wrought Hearth Rug, having regard both to the quality of the work and expense of the materials, premiums, \$3, 2

Gratuities will be awarded for articles belonging to this department, the whole amount not to exceed \$25

ARTICLES MANUFACTURED FROM LEATHER.

For best pair hand made and machine made Men's Boots, Women's do., Children's do., each, premium, \$2

Best Team, Carriage, and Express Harness, each, prem., \$5

\$10 are placed at the disposal of this committee, to be awarded in gratuities.

For the best exhibitions of Boots, and Shoes, manufactured in the County, each, premium, Diploma of Society.

MANUFACTURES AND GENERAL MERCHANDISE.

For displays of Bonnets, premiums, \$4, 2

For Horn Combs, not less than one dozen, premium, \$3

At the disposal of the committee in this department, to be awarded in gratuities not exceeding \$3 in any one gratuity, \$20

FANCY WORK

of Domestic Manufacture not included in the above.

At the disposal of the committee in this department, to be awarded in gratuities not exceeding \$3 in any one gratuity, \$30

WORKS OF ART.

At the disposal of the committee in this department, to be awarded in gratuities not exceeding \$3 in any one gratuity, \$30

WORK BY CHILDREN.

For specimens of work performed by children under 12 years of age, exhibiting industry and ingenuity, premiums, \$3, 2
 At disposal of committee to be awarded in gratuities, \$10

List of Premiums to be Awarded by the Trustees in November.

FARMS.

Competitors for this premium must give notice of their intention to the Secretary on or before June 15th, and the farms entered for premium will be viewed by the committee twice during the year. Crops growing on farms that are entered for premium, cannot be entered with another committee for separate premiums—except specimens exhibited at the Fair.

Any person desirous of having *his farm inspected, without entering it for premium*, may make application to the Secretary, and it will be viewed and reported upon by the committee.

For the best conducted and most improved farm, taking into view the entire management and cultivation, including lands, buildings, fences, orchards, crops, stock, and all other appendages, with statements in detail, relating thereto, premium, \$30

IMPROVING WET MEADOW AND SWAMP LANDS.

For best conducted experiments relating to wet meadow or swamp lands, on not less than one acre, the course of management, and the produce, etc., for a period of two years at least, to be detailed, with a statement of all the incidental expenses, premiums, \$15, 10

NOTE.—The Committee is instructed to ascertain how many, if any, reclaimed swamps in this County have been abandoned or have returned to natural grasses. Persons knowing of such are requested to notify the Secretary or Committee.

IMPROVING PASTURE AND WASTE LANDS.

For best conducted experiments in renovating and improving pasture land, other than by ploughing, so as to add to their value for pasturage, with a statement of the same, premiums, \$15, 10

For best conducted experiments renovating and improving waste lands, so as to add to their agricultural value, with statement of the same, premiums, \$15, 10

No premium to be awarded to any person for a repetition of an experiment in meadow, swamp or pasture lands, for which he has already received a premium.

UNDER-DRAINING LAND.

For best conducted experiments in under-draining land, regard being had to the variety of soil, sub-soil, and other local circumstances, premiums, \$15, 10

NOTE.—The same instructions under “Improving Wet Meadow and Swamp Lands” apply to this Committee.

Committee—George B. Loring, Salem; William Cogswell, Bradford; Andrew Nichols, Danvers; Charles S. Spofford, Georgetown; James B. Smith, Andover.

MANURES.

For most exact and satisfactory experiments, in the preparation and application of manures, whether animal, vegetable or mineral, premiums, \$15, 10

COMPARATIVE VALUE OF CROPS AS FOOD FOR CATTLE.

For most satisfactory experiment upon a stock of cattle, not less than four in number, in ascertaining the relative value of different kinds of fodder used in feeding stock for milk and other purposes, with a statement in detail of the quantity and value of the same, as compared with English hay, premium, \$25

FATTENING CATTLE AND SWINE.

For most satisfactory experiments in Fattening Cattle or Swine, with a statement in detail of the process and result, premiums, \$10, 5

GRAIN AND OTHER CROPS.

Claimants on Grain and Root Crops will be required to state the size of the piece of land, when they enter, and conform to the following rules: Entries of Grain Crops to be made on or before September 10th: Root Crops on or before October 10; giving ample time for the crops to be examined by the committee before harvesting. Statement to be made in conformity with the following form, must be forwarded to the Committee previous to November 1st.

All calculations and figures given in reports of, and statements of Crops are to be made on the *basis of an acre*, results in all cases, to be given at the rate per acre.

In pursuance of authority delegated to the Board of Agriculture by Chap. 24 of Acts of 1862. Agricultural Societies receiving the bounty of the State are required to make use of the following form, and be governed by its conditions in the mode of ascertaining the amount of crops entered for premium.

ESSEX AGRICULTURAL SOCIETY.—Statement concerning a crop of——, raised by Mr.——, in the town of——, ——. 1889.

What was the crop of 1887? What manure was used and how much? What was the crop of 1888? What manure was

used and how much? What is the nature of the soil? When, and how many times ploughed, and how deep? What other preparation for the seed? Cost of ploughing and other preparation? Amount of manure, in loads of thirty bushels, and how applied? Value of manure upon the ground? (What amount of Commercial Fertilizer used? How used? Value of same when applied?) When and how planted? The amount and kind of seed? Cost of seed and planting? How cultivated, and how many times? Cost of cultivation, including weeding and thinning? Time and manner of harvesting? Cost of harvesting, including the storing and husking or threshing? Amount of crop. etc. Signed by——, Competitor.

The committee, to whom is entrusted the award of the premiums on field crops, may award them according to their judgment, but for the purpose of furnishing accurate statistics for the benefit of agriculture, shall select certain of the crops, and require the owners thereof to measure the land and weigh the crops accurately, giving to the committee a certificate of the same, and give all possible information thereon over their own signatures, and return the same to the Secretary of the Society, to be published in the annual transactions.

In ascertaining the amount of crop, any vessel may be used and the weight of its contents once, multiplied by the number of times it is filled by the crop.

In measuring the land or weighing crops, any competent person may be employed, whether a sworn surveyor or not, and must give certificate.

The certificate shall state the weight of all crops only in a merchantable state.

In ascertaining the amount of a hay crop entered for premium, the measurement of the hay in the barn may be employed.

RULES OF MEASURE PRACTICED AND ADOPTED BY THE STATE BOARD OF AGRICULTURE.

Wheat, Potatoes, Sugar Beets, Ruta Bagas, Mangold Wurtzels,	60 lbs. to bush.
White Beans and Peas,	62 " "
Corn, Rye,	56 " "
Oats,	32 " "
Barley, Buckwheat,	48 " "
Cracked Corn, Corn and Rye, and other meal. except Oats,	50 lbs. to bush.
Parsnips, Carrots,	55 " "
Onions,	52 " "

1. For the best conducted experiments of Rye, not less than twenty bushels to the acre, fifty-six pounds to the bushel, on not less than one acre, premiums, \$10, 5
2. For best conducted experiments of Wheat, not less than thirty bushels to the acre, sixty pounds to the bushel, on not less than one acre, premiums, \$10, 5
3. For best conducted experiments of Oats, not less than fifty bushels to the acre, thirty-two pounds to the bushel, on not less than one acre, premiums, \$10, 5
4. For best conducted experiments of Barley, not less than forty bushels to the acre, forty-eight pounds to the bushel, on not less than one acre, premiums, \$10, 5
5. For best conducted experiments of Indian Corn, not less than one acre, premiums, \$10, 5
6. For largest quantity and best quality of English Hay, on not less than one acre, regard being had to the mode and cost of cultivation, premiums, \$10, 5
7. For best yield of Field Beans, on not less than half acre, and not less than twenty-five bushels per acre, premiums, \$10, 5

ROOT CROPS.

1. For best conducted experiments in raising Carrots, fifty-five pounds to the bushel, premiums, \$10, 5
2. For best conducted experiments in raising Parsnips, fifty-five pounds to the bushel, premiums, \$10, 5
3. For best conducted experiments in raising Ruta Bagas, sixty pounds to the bushel, premiums, \$10, 5
4. For best conducted experiments in raising Mangold Wurtzels, sixty pounds to the bushel, premiums, \$10, 5
5. For best conducted experiments in raising Sugar Beets, sixty pounds to the bushel, premiums, \$10, 5
6. For best conducted experiments in raising Onions, fifty-two pounds to the bushel, premiums, \$10, 5
7. For best conducted experiments in raising Potatoes, sixty pounds to the bushel, premiums, \$10, 5
8. For best conducted experiments in raising Cabbages, premiums, \$10, 5
9. For best conducted experiments in raising Squashes, premiums, \$10, 5
10. For best conducted experiments in raising Summer English Turnips for the market, premiums, \$10, 5

Raised on not less than half an acre, and the quantity of crop to be ascertained by weight; so far as practicable the crop to be free from dirt, without tops, and in a merchantable condition at the time of measurement.

Claimants for premiums on Grain or Root Crops must forward statement to chairman of committee *before Nov. 1st.*

FOREST TREES.

1. For plantation of either of the following species of forest trees, viz.:—White Oak, Yellow Oak, Locust, Birch, White Ash, Maple, Walnut, or White Pine, not less than three years old, and not less than 1000 trees, premium, \$20
2. For plantation of not less than 600 trees, premium, \$10
3. For ornamental trees, ten or more set on any street, road or farm, and cared for five years, premium, \$10

CRANBERRIES.

For best conducted experiment in the cultivation of the Cranberry, at least two summers, on not less than twenty rods of land, with written statement of the quantity and quality of land, expense of planting, weeding and culture, and amount of crops produced. Premium to be paid in 1889 or 1890, \$15

For best experiment do., on not less than ten rods of land, premium, \$10

For best do., on not less than five rods of land, premium, \$5

STRAWBERRIES AND OTHER SMALL FRUITS.

For best crop of Strawberries, on not less than twenty rods of land, expense of planting, culture, crop, etc., stated in writing, premium, \$10

For best crop Currants, Raspberries and Blackberries, with statement as above, premiums, each, \$10

NEW WINTER APPLES.

For a new variety of Winter Apple, originated in this County, equal or superior to the Baldwin, premium, \$100

For a new variety of like character originating elsewhere, provided it has been cultivated in the County sufficiently to prove it equal or superior to the Baldwin for general purposes, premium, \$20

For a successful experiment in destroying the codling moth and other worms destructive to the apple, premium, \$25

NOTE.—Persons who, Jan. 1, 1889, consider themselves competitors will send Post Office address to Secretary, and others in the County wishing to compete for above must notify Secretary, and furnish a full statement of their apple, and also scions when called for under his directions, to be tested by the Society.

SEEDLING POTATOES AND EXPERIMENTS.

For best Seedling Potato, originating in Essex County, to equal in yield, earliness and quality, the Early Rose, and to surpass it in one or more of these particulars, premium paid after three years' trial, \$25

In testing the value of a Seedling Potato, the committee are instructed to take the sworn testimony of the cultivator with regard to the yield, after having inspected the crop.

For the most satisfactory experiment to extend through five consecutive years, to settle the following facts relative to raising potatoes :—premium, \$50

1st. Will whole, medium sized Potatoes, yield better results than pieces cut to two eyes?

2nd. What will be the result of continuously planting small-sized potatoes of the same strain a series of years?

3rd. Difference between hilling and flat cultivation.

4th. Effect, if any, of cutting off seed ends before planting.

5th. Effects of deep and shallow planting.

6th. Raising from sprouts alone from same strain.

7th. Can potatoes having dwarf vines be planted nearer than others?

8th. Best distances apart for seed in the drill.

9th. To show the effect of covering the top with earth at several times after they had come up.

To be raised on not less than a half acre of land, uniform in character, and all to receive the same kind and quality of manure and cultivation, and to be inspected by the committee at the time of gathering the crops.

ESSAYS AND FARM ACCOUNTS.

The Essays must be transmitted to the Secretary by the 1st of November, with sealed envelopes containing the names of their authors, respectively, which shall not be opened by the committee, nor shall the names be known to the committee until they shall have decided upon the merits of the Essay.

For original Essays on any subject connected with Agriculture, in a form worthy of publication, premiums, \$15, 10, 8

For best statement of Actual Farm Accounts, drawn from the experience of the claimant, in a form worthy of publication, premium, \$10

For Reports of Committees upon subjects for which premiums are offered, premiums, \$10, 8, 6

LIBRARY.

Committee—Henry Wheatland, George M. Whipple.

Special Committee—Benj. P. Ware, David W. Low.

ENCOURAGING AGRICULTURAL LIBRARIES.

It shall be the duty of the Committee to communicate with such persons in the several cities and towns in the County, as, in their judgment, will best encourage the establishment of, or improvement of, collections of books, pamphlets, reports, essays, newspapers, etc., relating to agriculture, and request their aid in thus advancing the cause of agriculture, and co-operate with such persons in promoting the object herein referred to.

Committee—Francis H. Appleton, Peabody; Henry Wheatland, Salem; James J. H. Gregory, Marblehead.

NEW MEMBERS.

For the person who obtains the largest number of new members for the Society from any Town or City before the first day of November next, \$6

NOTE.—Names of new members, with name of person procuring them, can be sent as fast as obtained, to the Secretary of the Society, who will make a record of them.

Persons paying three dollars will receive a "Certificate of Membership," which is for life. No fines or assessments are ever imposed and members are entitled to vote in all its transactions, with the free use of the Library and a copy of the publication of the Society each year.

Committee—Secretary, David W. Low, Gloucester.

TREADWELL FARM.

Committee—Benj. P. Ware, Marblehead; C. C. Blunt, Andover; B. P. Pike, Topsfield; Wm. Cogswell, Bradford; David W. Low, Gloucester.

AUDITORS.

Committee—J. Hardy Phippen, Salem; Benj. P. Ware, Marblehead; E. Pope Barrett, Peabody.

FARMERS' INSTITUTES.

Committee—Benjamin P. Ware, James P. King, C. C. Blunt, O. S. Butler, D. W. Low.

DELEGATES.

From the Essex Agricultural Society to attend Exhibitions of Societies, Farmers' Clubs and Fruit Growers' Associations in Essex County, and report any information that shall seem valuable for publication.

Secretary to be notified of time of holding their exhibition when the chairman of Committee will be notified to assign Delegates.

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TRANSACTIONS
FOR THE YEAR 1889,
OF THE
ESSEX AGRICULTURAL SOCIETY,
(ORGANIZED, 1818.)
FOR THE
COUNTY OF ESSEX,
IN MASSACHUSETTS,
AND ITS
Sixty-seventh Annual Address,
BY
CHARLES J. PEABODY,
OF TOPSFIELD,
WITH THE PREMIUM LIST FOR 1890.

Published by Order of the Society.

BEVERLY, MASS. :
TIMES STEAM BOOK AND JOB PRINT.
1889.

ADDRESS.

Mr. President and Gentlemen of the Society:—

I thank you for the honor conferred on me, by the appointment to address you on this occasion. When I recall the long list of able men who, in the sixty-nine years of the life of the society, have at its annual meetings, laid before it the results of extensive research, scientific study and practical knowledge, I regard it as the highest mark of confidence and esteem, on the part of the society that I should be asked to stand before you to-day and deliver the address.

The selection of a subject is somewhat difficult, both because the address should be of interest to those not directly engaged in farming, differing in this respect from the essays read at our Institutes, and also because so many interesting themes have been already presented on former occasions. I have concluded therefore not to give instruction in growing corn, cabbages or cattle; neither shall I engage in a political discussion. My subject is "Agriculture in History." I ask your attention to some facts gleaned from ancient and modern authors showing the advantage that agriculture confers upon a nation, not only by producing the materials that make commerce possible, but also in developing a noble type of manhood capable of enjoying the privilege of citizenship and upholding the prosperity of their country.

We shall see the great progress made in our calling since early times to the best advantage, if we glance at the primitive method of producing farm crops. Take grain for example. The oldest known way of raising this crop was that used in Egypt, where the seed was sown on the mud left by the over-

flow of the Nile, and trampled in by a herd of swine, nothing more being done to it until harvest.

Egypt, Chaldia and China were the first nations to apply animal power to agriculture. To Egypt we are indebted for the discovery of artificial incubation, the account of which we find in Rollins' Ancient History. Probably the oldest farm tool is one resembling a pick, sculptured on the Egyptian tombs. It was used to dig over the land before planting.

After the discovery of the use of draft animals for farm work, the plow was invented, and one is described as in use in Greece, where it had been brought from Egypt a thousand years before the Christian era; it consisted of beam, share and handles. We have from the bible the account of a Chaldian farmer who did such a large business that his ploughing team consisted of five hundred yoke of oxen, while seven thousand sheep grazed on his farm. From the same source we learn of Gideon, the young thresher, the resounding blows of whose flail come down to us through the ages as a stimulus to earnest effort under adverse circumstances, which thrilling story has doubtless nerved many a man since his day to mighty deeds of valor.

From incidental mention we learn much about the farm productions of Judea in the time of the kings and prophets. Onions, cucumbers, wheat, barley, grapes and several orchard fruits are mentioned, with comment and instruction concerning their cultivation in many places. At a time of rejoicing, because of abundant harvests, we are told that *corn* made the young men cheerful and new *wine* the maids, clearly showing that a subtle influence is required to convince a young lady of the pleasures of farm life than satisfies a man.

The cultivation of our common fruits may be also traced to ancient Greece, where the apple, pear, cherry and peach were cultivated and many improved varieties developed to supply the tables and fill the market of that people. Agriculture however, in any of its branches, was not a source of pride with them as

it afterward became with the Romans. The Greeks regarded the cultivation of the soil as the occupation of captives and slaves, while the ruling race builded cities.

It is held by some writers that the growth and power of the Roman empire was largely due to the great importance attached to land ownership. A tract of land was allotted to each citizen by the state itself, and every man was restricted by law to the seven acres so granted, the object being, as the area of farm land controlled by the state was limited, that no one should own enough to deprive his neighbor of a portion. Later in history, as the size of the empire increased by conquest, fifty acres were allowed, and in the height of the nation's power five hundred could be held by law. The ownership of land was made a requisite for citizenship, that the man might learn industry, economy and frugality, the necessity of producing something for his own support and that of others, and also that owning a home and having a personal interest in the land he should be wise in government, brave in repelling invasion, and eager to confer upon others the benefits he enjoyed.

The planting of trees to protect fields, orchards and buildings from wind and storm was commonly practised. Pliny says that men should plant trees while young and not build houses till the fields were planted. A maxim much like Solomon's "Prepare thy work without and make it fit for thyself in the field and afterward build thy house." Pliny tells of a great grain crop, four hundred stalks of wheat, all grown from a single seed, were sent to the Emperor Augustus.

The plow, harrow, spade, hoe, rake and perhaps other tools familiar to us, were used by the Romans, though in a ruder form than at present. A day's work plowing was one-third of an acre. At the time of which we now speak, numerous colonies of the empire were established in countries more or less distant from Rome, and the next marked advance in agriculture was caused by the opening of a trade in farm produce sent from the colonies to Italy to supply food to that densely popu-

lated country. Roads were built and regular methods of communication formed, the distant farmer found a market, the trader a staple commodity to deal in. We doubt not the crop reports were read then as eagerly as now, but whether a corner was ever formed in wheat or a tariff laid on raw material, history saith not.

The Romans not only developed agriculture but highly honored the pursuit. The highest title possible to confer upon a citizen was to call him a good husbandman. Cato, an author, a general, and a statesman, added to his already famous name by writing a book upon farming. They believe that

Ill fares that land to hast'ning ills a prey,
What wealth accumulates and men decay,
Princes and kings may flourish or may fade;
A breath can make them as a breath has made,
But a brave yeomanry, a country's pride,
If once they're lost can never be supplied.

The Roman senate ordered the twenty-eight books of Mays of Carthage translated into Latin for the benefit of the common people, forming probably the first agricultural library in the world. A century before the Christian era Rome possessed an extensive and valuable agricultural literature; many of the directions given in the book of that time cannot be improved to-day. As an example we may cite the rule given in a treatise on gardening, to prepare the seed-bed thoroughly, making it fine and deep; cultivate the crop with care and allow nothing except the crop to hold possession of the soil. A maxim among them was, "The farmer may praise large estates, but let him cultivate a small one.

While the Romans held possession of Britain, important progress in its agriculture was made, confined however to a small section of the island. They were succeeded by the Saxons, who were nomadic in habit, owning cattle but raising no hoed crops. Barley was the only crop raised, and the people frequently changed their residence, as pasturage for their cattle required. The occupants of the soil had no security for prop-

erty till after the middle of the fifteenth century. The crusades improved the condition of the English farmer somewhat, by withdrawing many of the nobles from the country, making the acquisition of land easier to the common people. The sixteenth century was the time when the progress of the middle classes began, and since then it has been uninterrupted and agriculture has steadily advanced.

The first book on farming published in England, bears the date of 1523, and was called the "Book of Husbandry;" it was written by Sir Anthony Fitz-Herbert, a farmer of forty-one years experience. He advocated mixed farming and says, "a farmer cannot thrive by his corn without cattle, nor by his cattle without corn, hence he should raise both." The name of Jethrow Trull appears in the early part of the eighteenth century, as a progressive farmer, a part of whose experience will be of interest to us. He visited Spain and found the method of cultivating hoed crops in drills was in common use in that country, though at that time unknown elsewhere. It had been introduced to Spain by the Saracens, who practised irrigation, and found that a supply of water could be applied to a crop more evenly and with less expense when grown in rows; the better appearance of fields thus planted, favorably impressed Mr. Trull and on his return home he determined to introduce the method to England. But when he told his workmen to plow straight furrows for planting, instead of digging out the hills with bog-hoes, as they had always done, they refused, on the ground that the use of the plow would deprive them of work. In vain Mr. Trull told them that he could plant more land and would keep them employed. They would have nothing to do with foreign ways. Whereupon he took the plow and did the work himself. "We'll be even with him yet," said the men, "he can't hoe his field alone and not one of us will do a day's work for him." By this time Mr. Trull was determined to win in the contest, and being a man of inventive capacity, at hoeing time he appeared in the field with a horse-hoe of his own

invention and manufacture, and astonished every body by hoeing all his crops with his horse and no other help, while the men sat on the fence. Thus ended the first strike of farm laborers of which I find any record. A little later he invented a threshing machine which was successfully used and remained as he constructed it for many years. These two inventions greatly advanced farming interests by reducing the cost of producing and preparing crops for market.

The next great movement after Trull was made by Bakewell and his associates in improving the stock of the country. By careful selection of the best cattle and sheep from many herds and flocks, putting together those that resembled each other and breeding to secure definite points, he succeeded in establishing breeds, some of which exist to this day. For instance the black face on white sheep is said to date from his time. It is also claimed that the Durham cattle are a breed which he founded. He professed to have a secret power over animals to produce such results as he chose; this claim increased his popularity and aided him in selling for high prices the results of his skill in breeding, the explanation of this fact being that he was a natural judge of cattle and could tell at a glance of what they were capable. An amusing story is told of an attempt to impose upon him and his skill in detecting the fraud.

At the time he was establishing his breed of black face sheep, he was very anxious to obtain a large black face ram that should yield a certain amount of wool, weigh so many pounds, and possess the vigor and power desirable. His search had been for a long time fruitless; at length a man came with a sheep that appeared to fill the bill. Mr. Bakewell was delighted till he noticed that although the ram's face was as black as a coal, his legs were perfectly white. He however said nothing of his suspicions to the owner, but asking him to mark the sheep so it could be identified, it was turned into the flock, and the owner told to call the next day for his pay. Immediately the sheep were let into wet grass. The ram, feeding with the

others, lost the black from nose and cheek. In consequence, the following day the famous black face was white. When the owner called, Mr. Bakewell told him he wanted a different kind of black, and advised him next time to dye in the wool.

We next notice the researches of Arthur Young, who was born in 1741. This work gave valuable information upon the sources of fertility in soils. Previous to his time ammonia was considered injurious to plants. He proved it beneficial.

In 1768 the defects in Scotch farming were pointed out in an article by Lord Karnes, viz: small oxen, poor horses, no swine, ridges left in fields, etc. Forty years later these defects were remedied, says John Sinclair, largely by the habit of reading that had grown up among farmers and through the influence of agricultural addresses.

The experiments of Lawes and Gilbert, and other recent English authorities in the various departments of agriculture, are too widely known to require more than a passing reference.

The obligation of agricultural science and chemistry to the great Baron Liebig of Germany, are admitted by all, he having laid the foundations on which many others have builded wisely and well.

Thus having hastily glanced at some prominent points in the development of agricultural interests through the history of various nations, let us turn our attention to our own country and see what has been the progress of the fine art of farming among us. On the arrival of our forefathers to these shores they found a new cereal of priceless value to them in the severity of the long winter, the Indian corn, which saved the lives of that little company, and introduced to the world an article of food for man and beast that has enriched our farmers and filled many a ship to supply the wants of other countries. Corn, not cotton, is king of American farming, adapted as it is to all our variations of climate, thriving on almost any soil, repaying care with golden grain, and enduring neglect and hardship as bravely as the Indian whose name it bears.

Well does Whittier, the poet, whom farmers delight to honor, sing,

“Heap high the farmer’s wintry hoard!
 Heap high the golden corn!
 No richer gift has Autumn poured
 From out her lavish horn!
 Still let the good old crop adorn
 The hills our fathers trod;
 Still let us, for his golden corn,
 Send up our thanks to God.”

Yet another use for this plant has been found within recent years. Our honored friend, Francis H. Appleton, has made known to the country through an article written for the Essex Agricultural Society the art of preserving ensilage and constructing pits or silos that the benefits of green fodder might be enjoyed through one long winter. There is also some hope that a practical method is being perfected for making syrup and a good article of sugar from the stalk. If it succeeds the Yankee farmer will not care a continental for the sugar trust. He can now raise his bread, his beef, pork and poultry from the grain and fodder of the corn-plant, and if he gets sugar also, he will guess that it was lucky for him when his ancestors got so hungry and hunted up the original supply.

The potato, too, is an American vegetable, our market reports quoting “Irish potatoes” to the contrary, notwithstanding. It is a native of South America, where it is still growing wild among the Andes, and it is also found in Colorado.

These two American gifts to the world go far to reciprocate the benefits we receive from the wheat and onions of Egypt, the beets of Spain, and the cabbage of Holland.

At this time, amid many books on agriculture, it is interesting to know that the first work on the subject published in America was written by Jared Elliot of Connecticut in 1747. The first agricultural society in the country was that of South Carolina in 1784 followed by New York in 1791, Massachusetts in 1792, and numerous others at later dates. It is largely in consequence of the influence of such societies that the American farmer is

the intelligent thinking man he has ever been, nor has his thinking failed to ripen into practical effort for the improvement of his condition.

The inventive English farmer, Mr. Trull, has been followed by many among ourselves who, feeling the want of some implement of better construction than could be found, have succeeded in producing it. Mr. Nourse, of the old firm of Ruggles, Nourse & Mason, modelled his famous plow in potatoes. Feeling sure some better plow could be made than he had, he set to work to make a pattern. A basket of large potatoes and his jack-knife were the means by which he secured the model of the plow that the older men among us often speak of as the standard by which all other plows came to be judged.

Scientific experiments have given some curious results. For instance, the exhibition by Prof. Mapes at the fair of the American Institute in 1834 of samples of sugar made from the juice of the corn stalk, starch, linen rags and wood fibre.

Looking for the great inventions which in recent years have improved the condition of the farmer by increasing his power to do work by animal strength, instead of human muscle, the mowing machine stands first in our local agriculture with its associates the tedder and rake. The sulky plow, the various disk and smoothing harrows which the operator rides, give a rest from some of the severer labor which formerly was required in the several lines of farm work.

The great increase in the milk business within the last twenty years confers a much appreciated blessing upon us by giving a constant source of ready money. Though the profits are small, yet were the sale of milk stopped or reduced to the amount of twenty-five years ago, many men would be unable to continue their business. Creameries afford the same advantage to those too far from market to sell milk with certainty. To the country at large, the development of the grain trade with Europe has been of immense advantage. While the foreign trade in cattle and dressed meats have contributed greatly to the prosperity

and success of the producers of these staples; we notice other improvements in the farmer's condition in the more careful attention given to vegetable, fruit and flower culture, both for market and home use. This society has done much to encourage an increased interest in these productions by its liberal premiums. While the able essays of Pres. Ware on the cabbage and corn crops, with the agricultural pamphlets of J. J. H. Gregory inform the beginner and stimulate the experienced farmer to acquire better methods and results. Nor is the wise method of the day, to devote attention to specialties, overlooked by our officers. The recent reorganization of the poultry department of the show, and Mr. E. C. Woodman's management of the flower exhibit attest the value of such arrangement. Who doubts that the hen-yards and flower gardens of the country are made more productive and beautiful by what is learned at the show to-day.

Let us inquire what our government is doing to show its appreciation of the farmers of our nation. First, we have the department of agriculture which sends its annual reports of investigation carried on at public expense, to all farmers who desire it and will apply to the congressmen of their districts for a copy. These reports are made by men skilled in accurate, careful research and are well worth thoughtful study. We have also the public seed distribution, ridiculed by some but I am indebted to it for several choice varieties of vegetables. This seed distribution is specially valuable in the western country at a distance from seedsmen, and many a garden affords greater variety and improved quality of food because of the kindly gift of rare seed.

The nation further recognizes its obligation to the tiller of the soil by furnishing funds to establish State Agricultural Colleges, The recent munificent appropriation for State experiment stations puts within the power of every one of us to secure free of expense, the best scientific knowledge and skill in solving any problem we meet in our work as farmers. I have twice sent to

the Experiment Station at Amherst for aid in deciding disputed points and found a ready, helpful response. Let us realize that the station exists to help us and use its help freely. The state cattle commission affords veterinary aid of high order in time of need. The State Board of Agriculture through its excellent reports gives the best fresh information about our calling; its record of what is done by the farmers of the State is inspiring and in the last report that for 1888, Sec'y. Session fills the ideal of what such a report should be. Our County Society does its part well in the great work of education. Hon. John E. Russell when secretary of the State Board of Agriculture, said that Essex County had contributed more to agricultural literature than all the other counties of the State. Hon. Geo. B. Loring told me that in the reports of our county society could be found the best practical guides to success in farming that were ever written, because they were not what somebody thought could be done, but what had been done, often a very different thing. He said that when as commissioner of agriculture he received a letter from some distant state asking information about a crop, or breed of cattle, he often turned to his file of Essex County Agricultural reports to obtain the desired information. I know that a New York gentleman looking for the best practical barn that could be built at reasonable expense, secured the plan and working drawings with details of construction of the barn on this society's farm at Topsfield.

Thus it will be seen that county, state and nation extend abundant aid to the man who will give his life to the cultivation of the soil. Nor need we look to ancient nations for examples of men called from the plow to public life. One of our Essex county farmers is Asa T. Newhall, recently in the State Senate, and the same gentleman is now Mayor of Lynn. I doubt not that the skill that induced a squash to grow engraved with his name and address, will make some mark of ability and success in whatever field he finds himself. Our genial secretary too has been called from farming the rocky ways of Cape Ann, to a po-

sition as county commissioner. Long may he hold that office. We of the seventh representative district, have a long Pike whom we were proud to show in the House of Representatives last winter, and the list might be prolonged for among us to-day, merit is recognized and as Dr. Loring once put it, "the farmer's boy need not take the Governor's dust if he has a horse that can pass him." Though the farmer may not have so much ready tact and promptness as the business man, he yet is wise.

"In secrets Nature taught him
The wisdom which the fields and brooks
And toiling men have brought him."

The man educated from these sources, sees the fallacy of many of the proposed remedies for dull times, inequality of wages and the discontent that would "burn the barn to destroy the hornet's nest." He has firm faith that the nation will hold its equal way, notwithstanding the shock of anarchy at the West, or the theories of agitators at the East, who would impose all taxation upon the land. The farmers of the country are its great conservative force, not easily swayed by transient movements, standing in their might as the powerful dispensers of the rich bounty of Nature, drawing from the soil their support, constantly using skill to unlock some new store-house of fertility. The increase of population but stimulates production so the myriad toilers in all other occupations may look to them to be fed. For

"Honor waits o'er all the earth
Through endless generations,
The art that calls the harvest forth
And feeds expectant nations."

SIXTY-NINTH

Annual Cattle Show and Fair.

The Cattle Show and Fair of this Society opened Tuesday, Sept. 24th, 1889, in Beverly, for the first time in its history, and Dame Nature vied with its citizens in giving it a kindly greeting, making it throughout a complete success.

The general excellence of its exhibits in its well arranged Hall and Annex, and Fair Grounds, with the great attendance at both, and what is often remarked at our Fairs, the good order and good nature of the crowds of people in attendance, are all sources of pride.

The Ploughing Match of this year (a failure last year on account of the storm,) was one of the most attractive and interesting features, and excellent work was done.

The exhibits on the Show Grounds exceed in number that of last year, in Milch Cows, Farm Horses, Colts, Agricultural Implements and Carriages, the latter having a special tent, provided adjoining the Town Hall, (Exhibition Hall,) which was free to all as usual.

In the Exhibition Hall, the show of fruit fell short of previous years in quality and quantity, there were, however, exhibits of some fruits of exceptional and unusual merit. The exhibits of Domestic Manufacture were very large and of improved rank. For a better description of that department of the Fair, reference may be had to the reports of the Superintendent of Hall and Committee, which are to be found under the head of Exhibition Hall.

On Sept. 25th, the Annual Address was delivered by Mr. Charles J. Peabody, of Topsfield, before a large gathering of members and others, in the First Baptist Church, and was very interesting and instructive. The scripture reading and prayer by the Pastor, Rev. R. D. Grant, was peculiarly appropriate for the occasion, as was also the singing by the choir. After the conclusion of the services in the Church, Dinner was served in the vestry in a very satisfactory manner, after which the President made a short speech, and introduced Mr. D. M. Howe, of Charlton, Delegate from the State Board of Agriculture, followed by Hon. Warren Brown, of Hampton Falls, N. H., President of the New Hampshire Agricultural Society, Mr. B. M. Bean, of Grassrange, Montana, Rev. R. D. Grant, of Beverly, Dr. Goodale, President of the Houghton Horticultural Society of Lynn, Hon. John I. Baker, of Beverly, Rev. O. S. Butler, of Georgetown, Mr. C. J. Peabody, of Topsfield, all of whom contributed with praise, advice, criticism, instruction or wit, to a greater or less extent, in to the entertainment.

Letters of regret were announced from invited guests unable to be present. After the speeches, the remaining business of the Society was transacted, among which a resolution of thanks was passed.

To the Town Officers and Board of Trade, of Beverly, the Chief Marshal and Aids, and all others who had aided to make the gathering of the Society in Beverly a success.

To the Officers of the First Baptist Church, for the use of their Church and Vestry so generously tendered.

To Mr. Charles J. Peabody, of Topsfield, for his able address, requesting a copy for publication.

To Mr. Peabody, of Salem, for his generous offer to the Society for holding the Fair upon his grounds in Beverly.

To Mr. John H. Lovett, of Gloucester, for the use of his land in Beverly for ploughing, which he so freely tendered.

To the Boston & Maine Railroad, for its free transportation of the Society's effects from Peabody and other facilities for freight and passage to and from the Fair.

The entries in the several departments of the Fair for 1889 in Beverly, and 1888 in Peabody, are tabulated for comparison as follows :—

STOCK, IMPLEMENTS, ETC., ON FREE SHOW GROUNDS.

Class.	Entries in 1889.	From Dif- ferent places in 1889.	Entries in 1888.	From Dif- ferent places in 1888.
Fat Cattle,	5	3	4	4
Bulls,	10	6	10	5
Milch Cows,	22	7	9	3
Herds of Milch Cows,	4	3	1	1
Heifers, First Class,	10	3	6	2
Heifer Calves, First Class,	4	3	4	3
Heifers, Second Class,	11	4	18	6
Heifer Calves, Sec. Class,	4	2	5	3
Working Oxen & Steers,	7	5	10	2
Town Teams,	0	0	3	3
Steers,	4	3	2	1
Stallions, First Class,	0	0	4	4
Stallions, Second Class,	3	3	4	3
Brood Mares, First Class,	6	4	} 10	5
Brood Mares, Second Class,	9	7		
Family Horses,	10	9	8	6
Gents' Driving Horses,	1	1	7	6
Farm Horses,	10	7	10	7
Pairs of Farm Horses, weigh- ing 2,500 lbs. and over,	3	2	} 8	6
Pairs of Farm Horses, weigh- ing less than 2,500,	2	2		
Colts for Draft Purposes,	12	7	2	2
Colts for Gen'l Purposes,	21	12	16	7
Swine, First Class,	13	3	14	5
Swine, Second Class,	7	3	5	3
Sheep,	5	2	5	3
Poultry,	92	7	123	11
Harrows for trial,	3	2	3*	2*
Agricultural Implements,	120	5	63	4
Carriages,	28	5	10	2
Ploughing,	14	9	17*	9*
Total on Free Show—				
Grounds,	440	25	381	26

*Storm prevented trial.

EXHIBITS IN HALL AND ANNEX.

Class,	Entries in 1889.	From Dif- ferent Towns and Cities in 1889.	Entries in 1888.	From Dif- ferent Towns and Cities in 1888.
Dairy,	8	5	8	6
Bread, honey and Preserves,	60	8	96	12
Pears,	207	16	236	18
Apples,	125	17	246	23
Peaches, Grapes and Assorted Fruits,	105	13	86	6
Flowers,	70	13	84	11
Vegetables,	317	21	399	22
Grain and Seed,	25	12	18	10
Counterpanes and Afghans,	111	14	105	10
Carpetings and Rugs,	68	8	51	10
Articles manufactured from Leather,	18	4	13	5
Manufactures and General Mdse.,	22	8	29	7
Fancy Work,	306	16	} 257	17
Art Work,	153	9		
Work of children under 12 years	38	10	45	9
	<hr/> 1633	<hr/> 29	<hr/> 1673	<hr/> 31

Grand Total, 2073 entries from 30, out of 35 towns and cities in Essex County, against 2054 entries from 32 towns and cities, at Peabody, last year. Haverhill, Methuen, Nahant, Salisbury, and Saugus did not have exhibits this year. The entries were from Amesbury, 31; Andover, 6; Beverly, 740; Boxford, 26; Bradford, 50; Danvers, 203; Essex, 27; Georgetown, 4; Gloucester, 5; Groveland, 11; Hamilton, 11; Ipswich, 14; Lawrence 16; Lynn, 95; Lynnfield, 10; Manchester, 6; Marblehead, 24; Merrimac, 1; Middleton, 26; Newbury, 44; Newburyport, 4; North Andover, 19; Peabody, 247; Rockport, 4; Rowley, 18; Salem, 311; Swampscott, 14; Topsfield, 23; Wenham, 58; West Newbury, 23; Concord, N. H., 1.

REPORT OF THE DELEGATE OF THE STATE BOARD
OF AGRICULTURE TO THAT BOARD OF HIS
VISIT TO THE ESSEX SOCIETY'S
FAIR IN 1888.

Mr. Chairman and Gentlemen: I visited the Essex County Fair, which was held at Peabody on the 25th day of September, and the weather of the first day was one of the lovely days of this month, and the exhibition of cattle and horses was more than an average in numbers, and one feature of this cattle show as it may be called such, is that the society offer no premiums for trotting horses, perhaps one reason of this is, the society own no grounds to have a track, and hold their fairs in different parts of the county. There was a fine exhibition of fifteen head of full blood Holstein by Mr. Russell, also some fine Durhams and a larger number of Jerseys and a few Swiss cattle, and nearly all of the bulls and cows had a printed pedigree tacked on the fence in which they were enclosed.

I wish to say here, the society have a moveable fence which I think other societies might take pattern from and save expense of building new every few years. The show of sheep was small, only three flocks were shown, one of Schropshire and two of South Downs, but were very fine, especially the South Downs owned by the Island stock farm from Bedford Place. The show of swine was quite large, seventeen pens and all breeds represented and worthy of attention, and many of these were pure blood breeds. There were twenty-five yoke of oxen and twenty-one pair of horses, which were made to show their training and ability to work, by each pair drawing a certain load of stone on a wagon or cart, a certatn distance up hill and down and turning it around twice, which must have needed a

committee of very good judgment to decide which to make the awards to, as they all performed their work so well.

There were several Percheron stallions on exhibition and one very fine one, bred by L. S. Burnham, whose weight tipped the scales at 1680 lbs. The exhibition of agricultural and mechanical productions were on the grounds under cover of large tents, rented by the society for this purpose. A fine display of most all improved agricultural implements, also fine carriages and fire engine and hose cart. At the close of the first day's programme there was a parade of all oxen, steers and horses, headed by the band through the principal streets of Peabody, which I learned was a new feature of the fair, and was enjoyed by all. The exhibition of household manufactures, and the floral department, and fruits, and shoe and leather manufactures were shown in Peabody Town Hall. The vegetables were in basement of the same hall, and was most equal to the show of the Bay State Fair at Springfield. Over 300 plates of apples of all varieties and sizes, from large Pippin down to the small crab, and about 300 plates of pears, and plums numbered 30 plates, all of which should have 12 of each, and 50 plates and baskets of grapes, all nicely arranged on separate tables across the hall. There was also a very large and beautiful arrangement of vegetables and seeds by Aaron Low and Mr. Gregory, the great seedsmen of Essex County, and several others. I was shown what great improvement had been made in Essex County in the quantity per acre, and quality of the Danvers onion and orange, carrot, cabbages and squashes, and other varieties of vegetables.

The Ladies department was full of all kinds of their needle work and painting, and great taste was shown in arranging them. The Exhibition Hall was kept open to the public in the evenings of both days, which gave a great many a chance to visit the show in the evening that could not be present in the day time, but the second day dawned with wind and rain, and such a storm I don't remember of witnessing. Some call it a second equinoctial, which of course put a stop to fulfilling the pro-

gramme, the wind tearing the branches from the shade trees, so as to stop the street cars, but for all this the society had their annual address and dinner, but the attendance was very small. I saw nothing but what the society are worthy of their money from the State, and I wish, through the delegate of the Essex County Society, to thank the officers for their attention and kind hospitality during my stay in Peabody.

Respectfully,

WM. H. SNOW, Delegate.

REPORT OF COMMITTEES.

1889.

FAT CATTLE.

The Committee on Fat Cattle have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

§8. First premium, to James C. Poor, North Andover, for 1 pair of Holstein oxen, 6 years old, weight 3900 lbs.

§6. Second premium, to Jas. P. Little, Amesbury, for 1 pair Devon oxen, 7 years old, weight 3775 lbs.

§3. Third premium, to Jas. P. Little, Amesbury, for 1 pair of Durham Oxen, 7 years old, weight 4000 lbs.

Ephraim A. Dane, T. H. O'Neil, Allen Smith, James P. King—*Committee*.

STATEMENT OF J. P. LITTLE.

AMESBURY, Sept. 25, 1889.

These oxen which I enter for premium are seven years old, and weigh 4000 lbs. They worked all winter, and have done the work on the farm this summer, until within about four weeks, when I turned them to pasture.

Their feed during the winter was English hay, salt hay and ensilage, with four quarts of Indian meal each per day. When

at pasture they had no grain. I have owned these oxen since they were one year old.

Yours respectfully,

J. P. LITTLE.

BULLS.

The Committee on Bulls, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- §8. First premium, to Harry H. Hale, Bradford, for Guernsey Bulls, two years old and upward, "Sultan Jr," No. 1499, A. G. C. C. H. R., dropped, Jan 3, 1886. Bred by Col. Hale. Sire, "Sultan," No. 329 ; Dam, "Evelina," No. 867.
- §4. First premium, to Harry H. Hale, Bradford, for Ayrshire Bull, under two years old, "Athlone," No. 4332, (Vol. 7), A. A. H. B., dropped, Oct. 18, 1887. Bred by C. M. Winslow, Brandon, Vt. Sire, "Rhosus," No. 390, (Vol. 4,) A. A. H. B. Dam, "Roxanno," No. 5955, (Vol. 4,) A. A. H. B.
- §4. First premium, to Harry H. Hale, Bradford, for Short Horn Bull, under two years old, "Duke of Bradford," dropped, Dec. 15th, 1887. Bred by George Harding, Waukesha, Wis. Sire, "Noxubee Duke," 88,223 ; Dam, "Rose of Anoka," (Vol. 33, Page 606,) A. S. H. H. B.
- §4. Second premium, to Shattuck Brother, Lawrence, for two years old Holstein, "Roscoe D.," No. 8377, H. F. H. B. Sire, "White Nose Chief," No. 916.
- §2. First premium, to Shattuck Brothers, Lawrence, for Holstein Bull Calf, "Cornwall Prince," eligible for registry, sired by "Lord of Cornwall," No. 3429.
- §8. First premium, to Mrs. J. C. Phillips, Moraine Farm, Beverly, for Jersey Bull, "Ramapogis," No. 15,293, A. J.

C. C., dropped, June 28, 1885. Sire "Rioter Hugo Pogis," 13457, A. J. C. C., Dam, "Butterstamp Lass," 19,517, A. J. C. C.

- §8. First premium, to Wm. A. Russell, Lawrence, for Holstein Bull, "Royal Archer," No. 3263, H. H. B., 4 years old.
 - §4. First premium, to Arthur E. Clark, Beverly, for Yearling Jersey Bull, "Billy, eligible for registry.
- Doane Cogswell, L. H. Bailey, R. Jaques—*Committee*.

MILCH COWS.

The Committee on Milch Cows have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- §15. First premium, to Wm. A. Russell, Lawrence, for best milch cow, Holstein, "Lady Shepard."
- §10. First premium, to Wm. A. Russell, Lawrence, for best milch cow, Holstein.
- §10. First premium, to Wm. A. Russell, Lawrence, for best milch cow, of either native, foreign or grade.
- §4. Second premium, to Wm. A. Russell, Lawrence, for milch cow, foreign, native or grade.
- §10. First premium, to John S. Ives, Salem, for grade Ayshire.
- §10. First premium, to Mrs. J. C. Phillips, Beverly, for best Jersey.
- §4. Second premium, to Mrs. J. C. Phillips, Beverly, for 2d best Jersey.
- §4. Second premium to Shattuck Bros. Andover, for 2d best Holstein.

H. G. Herrick, J. F. Smith, Oscar Gowen—*Committee*.

STATEMENT OF WM. A. RUSSELL.

To Committee on Milch Cows:

I enter for best milch cow, of any age or breed, Holstein-Fre-

sian cow, "Lady Shepard," No. 1586, H. F. H. B., 7 years old, dropped last calf. Aug. 28, 1889. She has given 60 pounds per day for 20 days in September, and from September 1, 1888, to June 1, 1889, she gave 13,168 pounds of milk. As a 2 years old, with her first calf, she gave 10,000 pounds milk in one year.

For best milch cow, either foreign, native, or grade, Holstein-Fresian cows, "Lady Lyons," 8 years old, No. 6805, H. F. H. B. and "Lady Bess," No. 1051, H. F. H. B.

"Lady Lyons" calved Aug. 1, 1889, has not been served, from Aug. 10, to Sept. 20, she has given 2320 pounds milk, from Sept. 1, 1888, to June 1, 1889, her milk record is 13,316 pounds age 8 years.

"Lady Bess, 10 years old, calved April 25, 1889. Due in March, 1890. From May 1, to Sept. 1, she has given 6773 pounds milk, and she has not been dry for three years.

For Feed, and manner of feeding, see statement of Herd of Milch Cows.

For Holstein-Fresian cows 4 years old and upwards.

"Belle Fairfax," No. 1117, 10 years old, and "Madam Aberdare, No. 6803, 9 years old. "Belle Fairfax," calved Dec. 25, 1888, and is due in Jan., 1889, Her milk record from Jan. 1, 1889, to Sept. 1, is 12006 pounds. "Madam Aberdare," calved Aug. 17, 1888, is due in June, 1890. Her milk record from Sept. 1, 1888 to Sept. 1, 1889, is 15564 pounds.

Respectfully submitted,

WM. A. RUSSELL,

By J. C. POOR, *Manager.*

STATEMENT OF JOHN S. IVES, OF SALEM.

GRADE MILCH COW.

I enter for the consideration of your committee my Grade Ayrshire cow, (Daisy.) She is 6 years old last spring, calved March 15, and gave the first week in April, 16 qts. per day.

The last week in June she milked 19 qts. strained milk per day, and is now giving 14 qts. She is due to calve March 1; she has had no grain since May 20, (grass only) with fodder corn, since Sept. 1, (this month), she is a free milker, gives excellent milk, and a perfect cow in every respect.

Respectfully yours,

JOHN S. IVES.

STATEMENT OF SHATTUCK BROTHERS OF LAWRENCE.

To Committee on Milch Cows:

Holstein Milch cow, "Alemena," imported in 1884, from North Holland, No. 7489, H. F. H. B., has given over 60 lbs. milk in one day, twice milking, without any extra feed, giving now 45 and 50 lbs. per day. Calved July 30, 1889, feed, 2 qts. meal, 2 qts. oats, and 2 qts. bran, twice daily.

HERDS OF MILCH COWS.

The Committee on Herds of Milch Cows have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- \$18. First premium, to Wm. A. Russell, Lawrence, for herd of Holsteins.
- \$18. First premium, to Harry H. Hale, Bradford, for herd of Ayrshires.
- \$18. First premium, to Harry H. Hale, Bradford, for herd of Guernseys.
- \$18. First premium, to Mrs. J. C. Phillips, Beverly, for herd of Jerseys.

Moses K. Noyes, S. F. Crossman, G. B. Bradley, J. Henry Nason—*Committee*.

STATEMENT OF WM. A. RUSSELL.

To the Committee on Herds of Milch Cows:

I enter for herd of milch cows, Holstein-Fresian cows, "Lady Shepard," No. 1586; "Lady Bess," No. 1051; Lady Lyons, No. 6805; Belle Fairfax, No. 1117; Madam Aberdare, No. 6803.

"Lady Shepard" calved Aug. 28, 1889. "Lady Bess" calved April 25, 1889, is due March, 1890. "Lady Lyons" calved Aug. 1, 1889, has not been served. "Belle Fairfax" calved Dec. 25, 1888, is due in Jan. 1890. "Madam Aberdare" calved Aug 17, 1888, is due in June, 1890.

"Lady Shepard" milk record from Sept. 1st, to 20, 1200 lbs; from Sept. 1, 1888, to June 1, 1889, 13168 lbs. "Lady Bess" milk record from May 1, 1888, to Sept. 1, 1889, 6773 lbs; from Sept. 1, 1888, to Sept. 1, 1889, 11952. "Lady Lyons" milk record from Sept. 1, 1888, to Sept. 1, 1889, 1514. "Belle Fairfax" milk record from Jan, 1, 1889, to Sept. 1889, 12006 lbs. "Madam Aberdare" milk record from Sept. 1, 1888, to Sept. 1, 1889, 15564.

Care and Feed of Herd of Milch Cows.

The summer feed for these cows has been pasture, with two qts. bran, and two qts. meal each, twice a day, with hay, or corn fodder, fed morning and night.

The winter feed is ensilage from 30 to 45 lbs., fed in the morning, with from four to six qts. bran and two qts meal, each. After eating this they are watered.

At about 2.30 P. M., they are again fed with the same quantity of grain feed, dry, and after this with hay, and at about 4.30 they are again watered. The cows giving a large mess of milk, are milked three times a day.

Respectfully submitted,

WM. A. RUSSELL,

By JAS. C. POOR, *Manager*.

STATEMENT OF HARRY H. HALE, BRADFORD, MASS., HERD OF
AYRSHIRE COWS.

“Creamy” 2d, No. 6354, Vol. 4, A. A. H. B. dropped April 10, 1880, yield of milk for 1 year, 8260 lbs.

Manner of keeping through fall and winter, 4 quarts of shorts, 4 quarts of Brewer’s grain and 8 quarts of roots, per day, with one feed of salt hay or barley straw, and two feeds of English hay with sweet corn fed in in its season. Do not use ensilage. Run in pasture 4 months in year.

“Miss Mabel,” 2d, No. 8930, Vol. 6th, A. A. H. B. dropped March 13, 1885; yield of milk for 1 year, 7920 lbs. Manner of keeping same as above.

“Miss Flow,” 3d, No. 9151, Vol. 6th, A. A. H. B., dropped Mar. 14, 1886; yield of milk for 1 year, 8432 lbs. Manner of keeping same as above.

“Lady Belle,” No. 9575, Vol. 7, A. A. H. B., dropped March 1, 1887, yield of milk for 1 year, 6320 lbs. Manner of keeping same as above,

“Miss Mabel,” 3d, No. 9576, Vol. 7, A. A. H. B., dropped March 7, 1887, yield of milk for 1 year, 5733 lbs. Manner of keeping same as above.

HARRY H. HALE, ISLAND STOCK FARM, BRADFORD, MASS., OF HERD
OF PURE BRED GUERNSEY COWS.

“Helena,” No. 1440, Am. G. C. C. H. R., dropped Aug. 27, 1883. Yield of milk for one year, 4210 pounds. Manner of keeping through fall and winter, 4 qts. shorts, 4 qts. of Brewer’s grain, and 8 qts. of roots per day, with one feed of salt hay or barley straw, or two feeds of English hay with green sweet corn in its season. Do not use ensilage. Run in pasture four months in a year.

“Vara,” No. 1624, Am. G. C. C. H. R., dropped, Oct. 8, 1883. Yield of milk for 1 year, 4106 lbs. Manner of keeping, same as above.

“Topsy 4th of St. Peters,” No. 1577, Am. G. C. C. H. R., dropped, Dec. 15, 1883. Yield of milk for 1 year, 4432 lbs. Manner of keeping, the same as above.

“Oreold 2nd,” No. 1632, Am. G. C. C. H. R., dropped, Jan. 11, 1884. Yield of milk for 1 year, 4620 lbs. Manner of keeping, same as above.

“Pans Lavender,” No. 1669, Am. G. C. C. H. R., dropped, Feb. 3, 1884. Yield of milk for 1 year, 4370 lbs. Manner of keeping, same as above.

STATEMENT OF MRS. J. C. PHILLIPS, MORaine FARM, BEVERLY.

OF HERD OF JERSEY COWS.

No. 31,934, Clethra Pollen, dropped July 6, 1884, sire Lord Pollen, 2d, 14,517. Dam, Clethra 2d, 31,927, A. J. C. C. dropped calf, Feb. 23, 1889, due to calve again March, 1890, gave 3380 lbs. of milk from Feb. 23 to Sept. 1, 1889; from Feb. 23, to May 10, feed 3 quarts ground oats and middlings, equal parts, per day, the balance of time in pasture.

No. 31,931, Alyssum, dropped April 25, 1884, sire Royalty, 7210. Dam, Lady Eliza, 2d, 31,922, dropped calf, Feb. 22, 1889, due in Feb. 1890, gave 4178 lbs. milk from Feb. 22 to Sept. 1, 1889.

No. 31,930, Ilex, dropped April 20, 1884, sire Royalty, 7210. Dam, Lady Eliza 3d, 31,923, dropped calf, March 29, 1889, due again in March, 1890, gave 3262 lbs. milk from March 29, to Sept. 1, 1889; feed per day from March 29th to May 10th, 3 quarts ground oats and middlings, equal parts, balance of time in pasture.

No. 31,929, Clethra 3d, dropped April 3, 1884, sire Royalty, 7210. Dam, Clethra, 8427, dropped calf, April 15, 1889, due again in March, 1890, gave 3399 lbs. milk from April 15 to Sept. 1, 1889. Yield of milk from June 1 to June 10, 1889, 285 lbs. on pasture feed only; feed per day from April 15 to May 10, 3 quarts ground oats and middlings, equal parts, balance of time in pasture.

No. 52,351, Sabatia, dropped Feb. 28, 1886, sire Ramapoges, 15,293. Dam, Clethra 2d, 31,927, dropped calf, May 20, 1889, due again in May, 1890, gave 2086 lbs. milk from May 20 to Sept. 1, 1889 ; feed in pasture only.

HEIFERS FIRST CLASS.

The Committee on Heifers, first class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$8. First premium to W. A. Russell, Lawrence, for Holstein heifer, in milk.
- \$4. First premium to Harry H. Hale, Bradford, for short horn heifer, "Fifth Harriet," 2 years old.
- \$4. First premium to Harry H. Hale, Bradford, for short horn heifer, "Gabriella of Anokee," yearling.
- \$4. First premium to Harry H. Hale, Bradford, for short horn calf, "Mary Queen of Bradford."
- \$8. First premium to Harry H. Hale, Bradford, for 2 years old Ayrshire heifer, in milk, "Lady Belle," No. 9575.
- \$5. Second premium to Harry H. Hale, Bradford, for Ayrshire heifer, "Miss Flou," No. 9151.
- \$4. First premium to Mrs. J. C. Phillips, Beverly, for Yearling Jersey heifer.
- \$4. First premium to Mrs. J. C. Phillips, Beverly, for Jersey calf.
- \$4. First premium to James C. Poor, No. Andover, for Holstein calf, "Beth Lincoln."

John M. Danforth, Augustine Stone, E. F. Rankins, John S. Crosby.—*Committee.*

HEIFERS, SECOND CLASS.

The Committee on Heifers, second class, have attended to

their duty, and respectfully report to the Secretary that they have made the following awards :

\$8. First premium to John S. Ives, Salem, for 3 years old Grade Ayrshire, in milk.

\$4. First premium to City Farm, Salem, for 2 years old Grade Holstein.

\$3. Second premium to Francis O. Kimball, Danvers Centre, for 2 years old Grade Holstein.

\$4. First premium to City Farm, Salem, for 1 year old Grade Holstein.

\$3. Second premium to T. C. Durkee, Peabody, for 1 year old Grade Jersey.

\$4. First premium to City Farm, Salem, for 11 mos. old Grade Holstein.

\$3. Second premium to John S. Ives, Salem, for 15 weeks old Grade Ayrshire.

S. F. Newman, Walter H. Hopkinson, John Barker.—*Committee.*

WORKING OXEN AND STEERS.

The Committee on Working Oxen and Steers have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

\$12. First premium to B. H. Farnum, North Andover, for yoke of working oxen, 6 years old, weight 2930 lbs.

\$10. Second premium to L. S. Wilkins, Middleton, for yoke of oxen, 6 years old, weight 2625 lbs.

\$8. Third premium to Peter E. Clark, Beverly, for yoke of oxen, weight 3340 lbs.

\$6. Second premium to B. H. Farnum, North Andover, for Steers, 4 years old, weight 2345 lbs.

Andrew Mansfield, John A. Hoyt, J. P. Little, Charles Haseltine.—*Committee.*

STEERS.

The Committee on Steers have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- §8. First premium to J. P. Little, Amesbury, for 3 years old steers.
- §5. Second premium to B. W. Farnham, North Andover, for 2 years old steers.
- §4. Second premium to B. W. Farnham, North Andover, for 1 year old steers.
- §4. First premium to W. P. Christopher, Middleton, for steer calves.

John E. Herrick, Nathan Longfellow, Ephraim A. Dane—*Committee.*

STALLIONS, SECOND CLASS.

The Committee on Stallions, Second Class, 4 years old and upwards, (for Driving Purposes), have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- §10. First premium to A. B. Forbes, Byfield, Newbury, for "Lombardy," No. 4901, sire, "Clairmont," 2420 ; dam, "Ballot."
- §6. Second premium to John P. Conant, Wenham, for "Don Juan," sired by "Hampton," he by "Smuggler," "out of very fast mare."

No entries for 3 years old. Stallions of any age, and 5 colts of his stock. No entries.

Joshua H. Chandler, Isaac M. Woodbury, George M. Roundy—*Committee.*

BROOD MARES.

The Committee on Brood Mares have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- §10. First class for farm and draft purposes. First premium to H. H. Hale, Bradford, 6 years old, weight 1715 lbs., Percheron colt 3 mos. old.
- §6. Second premium to Calvin Putman, Danvers, for "Kit," 4 years old, weight 1390 lbs ; Percheron and Morgan colt, 3 1-2 mos. old.
- §4. Third premium to S. F. Newman, Newbury, for mare 7 years old. Colt 10 weeks old.
- §10. Second class for driving purposes. First premium to H. H. Hale, Bradford, for 6 years old mare, "Ada Wilkes," Colt by "Sultan," 5 mos. old.
- §6. Second premium to O. N. Fernald, Danvers, for 7 years old, Knox mare, "Stella Fawn." Hambletonian colt, "Mantelar," 5 mos. old.
- §4. Third premium to Michael Looney, Salem, for Hambletonian mare. Colt 4 mos old.

Wesley Pettingill, A. A. Rutherford—*For Committee.*

FAMILY HORSES.

The Committee on Family Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- §10. First premium to H. H. Hale, Bradford, for family horse, "St. Laura."
- §6. Second premium to H. H. Pillsbury, Danvers, for family horse, "General."
- §4. Third premium to Richard T. Jaques, Newbury, for family horse, "Bess."

*Diploma recommended for "War Horse Daisy," 32 1-2 years old, for her services at Gettysburg, and long life of usefulness.

Chas. H. Gould, Peter Holt, Albert Kimball—*Committee*.

Note—*Recommendation adopted by the Trustees. See statement of him following.

STATEMENT OF WM. A. HILL OF SALEM.

SALEM, October 22, 1889.

David W. Low, Sec'y Essex Agricultural Society, Gloucester, Mass.

DEAR SIR: Yours under date of 21 inst., inquiring in regard to the war horse "Daisy," on exhibition at the recent fair in Beverly, duly to hand. In reply I would state: The bay mare called "Daisy," now owned by Mr. J. H. Collier, of this city, was bought by me in the fall of '62 or the spring of '63, when I was Adjutant of the 19th Mass. In fantry, the date I have forgotten, but think I still have among my army papers somewhere, the original bill of sale. I bought her from the U. S. government, and took her out of a corral in Virginia. She was warranted to me at that time to be five years old, and was said to be from Morgan stock, she cannot at this moment be less than thirty two years old.

She was under fire at the battle of Chancellorsville, and in one or two skirmishes during the march into Pennsylvania. She was also through the second and third days' battle at Gettysburg, and in some minor encounters while following up the enemy back into Virginia; at Mine Run also her ladyship was present, and during all of the many times she was under fire, behaved like a veteran, and escaped without a scratch. In August '63, I was detached from my regiment for draft service, in this state, and leaving the mare in charge of the officer appointed acting adjutant, I came home. In the early part of '64, the regiment came home on a thirty days' veteran furlough, the mare coming too.

I then gave her to my father to keep for me (being then in service myself), but after a few months he tired of the care of her, and with my permission, sold her to Mr. Collier, who has continued to be her owner from that time to the present.

Except for her longevity and war record, she is in no way a remarkable horse, and while never a handsome animal, she was always gentle and tractable, a very indifferent trotter, but with an easy lope that made a seat on her back pleasant and enjoyable. I never knew her to be sick, but she was always "present and ready for duty," with the single exception of a few weeks immediately following the Gettysbury campaign, she had a little trouble with her hoofs, through having cast three shoes during the march, and being obliged to make the greater part of the campaign with but one shoe.

I rode her one evening a year ago, hoping to find her able to carry me in a torchlight parade, but being for so many years unused to the saddle, I felt it inhumane to ride her. Mr. Collier has until within a few months worked her regularly, and when I saw her on Sunday last, she was looking and feeling as well as she did ten years ago. She deserves to be considered with marked respect and consideration by your society.

Very truly yours,

W. A. HILL.

STATEMENT OF J. H. COLLIER.

SALEM, October 28, 1889.

Mr. Low,

DEAR SIR: Yours received, would thank you in Daisy's name, for the honor to be conferred upon her. Since Feb. 16, '64, I have used her partly in my business, (leather,) and for driving.

Have fed her on good hay, and a change of grain at times. Have not had to chop her feed. She has had a few attacks of colic, but have always been able to take it in season. Think her general health has been very good. I suppose she has

reached such an age by good care and not overwork. Capt. Hill will give you her war record I presume.

Yours truly,

J. H. COLLIER.

GENTS' DRIVING HORSES.

The Committee on Gents' Driving Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

\$10. First premium to Jacob Marston, Danvers, for Gentleman's Driving Horse.

Jas. P. Cleaveland, Chas. H. Walker, L. C. Loud—*Committee*.

FARM HORSES.

The Committee on Farm Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

\$10. First premium to A. F. Lee, Beverly, for bay horse "Jim," weight 1110 lbs.

\$6. Second premium to B. H. Farnum, North Andover, for bay horse, "Jim," weight 1050 lbs.

\$4. Third premium to J. H. Perkins, Lynnfield, for horse "Maud," weight 1200 lbs.

Eben S. Keyes, Hugh Hill, Nathan F. Abbott—*Committee*.

PAIRS OF FARM HORSES, FIRST CLASS.

The Committee on Pairs of Farm Horses have attended to

their duty, and respectfully report to the Secretary that they have made the following awards:

\$10. First premium to A. P. Gardiner, Hamilton, for gray team, weight 2700 lbs.

\$8. First premium to H. H. Hale, Bradford, for gray team, weight 2750 lbs.

Only two teams appeared.

J. H. Perkins, Joseph Whitehead, Benjamin N. Dodge—*Committee.*

PAIRS OF FARM HORSES, SECOND CLASS.

The Committee on Pairs of Farm Horses, Second Class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

\$10. First premium to Mrs. J. C. Phillips, Beverly, for pair horses, weight 2120 lbs.

\$8. Second premium to M. H. Poor, West Newbury, for pair horses, weight 2260 lbs.

Nathan A. Bushby, Edward Harrington, Walter F. Dodge—*Committee.*

COLTS FOR DRAFT PURPOSES, FIRST CLASS.

The Committee on Colts for Draft Purposes, First Class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

\$8. First premium to Cornelius Moynahan, Newbury, for colt for draft, 4 years old, weight 1260 lbs.

\$5. Second premium to James G. Abbott, Andover, for colt for draft, 4 years old, weight 1240 lbs.

Daniel D. Adams, Alden C. Estes, Moses H. Poor, Willard F. Kinsman, M. A. Plummer—*Committee.*

COLTS FOR DRAFT PURPOSES, SECOND CLASS.

The Committee on Colts for Draft Purposes, Second Class have attended to their duty, and respectfully report to the Secretary that they have made the following awards.

- \$8. First premium to H. H. Hale, Bradford, for black mare colt, "Beatrice," 2 years old.
- \$5. Second premium to A. P. Gardner, Hamilton, for bay gelding colt, "Robert," 2 years old.
- \$3. Third premium to Cornelius Moynahan, Newbury, for black roan, mare colt, "Bess," 2 years old.
- \$5. First premium to R. T. Jaques, Jr., Newbury, for bay mare, "Gypsy," one year old.

Second premium not awarded, as no colt coming under the head of a yearling colt for draft purposes, was considered worthy.

S. W. Hopkinson, Geo. H. Gibney—*For Committee.*

COLTS FOR GENERAL PURPOSES, FIRST CLASS.

The Committee on Colts for General Purposes, First Class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$8. First premium to Edwin Bates, Lynn, for 4 years old colt, "Eaton Wilkes."
- \$5. Second premium to H. H. Hale, Bradford, for 4 years old colt, "Silex."
- \$6. First premium to D. G. Tenny, Newbury, for 3 years old colt, "Spright."
- \$3. Second premium to F. H. Poor, West Newbury, for 3 years old colt, "Ned."

P. A. True, Ebenezer Webster, T. N. Cook, E. G. Nason—*Committee.*

COLTS FOR GENERAL PURPOSES, SECOND CLASS.

The Committee on Colts for General Purposes, Second Class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$3. Third premium to H. H. Hale, Island Stock Farm, Bradford, for 2 years old colt, "Thornless."
- \$5. Second premium to Edwin Bates, Lynn, for 2 years old Wilkes colt.
- \$8. First premium to W. McNeil, Rockport, for 2 years old colt, "Thomas."
- \$3. Second premium to H. H. Hale, Island Stock Farm, Bradford, for 1 year old colt, "Wasset."
- \$5. First premium to John Swinerton, Danvers, for 1 year old Wilkes colt.

Thos. W. Paine, David Warren, Bennett Griffin, D. Bradstreet—*Committee.*

SWINE, FIRST CLASS.

The Committee on Swine, First Class, Large Breeds, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$8. First premium to Simon P. Buxton, Peabody, for Yorkshire breeding sow.
- \$8. First premium to Simon P. Buxton, Peabody, for Yorkshire boar.
- \$8. First premium to Simon P. Buxton, Peabody, for Yorkshire litter of weaned pigs.
- \$8. First premium to H. H. Hale, Bradford, for Berkshire litter of pigs.
- \$5. Second premium to Harry H. Hale, Bradford, for Berkshire boar.
- \$8. First premium to John Mahoney, Rowley, for Berkshire boar, "Rowley."

§8. First premium to John Mahoney, Rowley, for Berkshire sow, "Mildred."

§5. Second premium to John Mahoney, Rowley, for Berkshire sow, "Margaret."

Geo. B. Blodgett, Geo. A. Dow, C. K. Ordway—*Committee*.

SWINE, SECOND CLASS.

The Committee on Swine, Second Class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

§8. First premium to H. H. Hale, Bradford, for pigs 12 weeks old.

§5. Second premium to James C. Poor, North Andover, for pigs 12 weeks old.

§8. First premium to Arthur C. Buxton, Peabody, for sow and ten pigs.

*§5. Second premium to Simon P. Buxton, Peabody, for breeding sow, 2 years old, weight 250 lbs.

*§8. First premium to Simon P. Buxton, Peabody, for 10 weaned pigs, 7 weeks old.

§5. Second premium to H. C. Strout, Peabody for sow and 5 pigs, 7 weeks old.

Your committee would respectfully recommend a separate premium list for pure bred pigs.

Daniel G. Tenney, Charles Lunt, Moses H. Poor—*Committee*.

*These awards were not confirmed as the weaned pigs were not as old as the rules require. Three premiums were awarded to breeding sows, and the one not having pigs was ruled out.

SHEEP.

The Committee on Sheep have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$10. First premium to Henry H. Hale, Bradford, for best flock Shropshire.
- \$8. First premium to Henry H. Hale, Bradford, for best buck Shropshire.
- \$4. First premium to Harry H. Hale, Bradford, for best lot of lambs, Shropshire.

Daniel A. Carleton, George Buchan, Thomas Hale—*Committee.*

POULTRY.

The Committee on Poultry have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$2.00. First premium to W. P. Perkins, Danvers, for pair Erminette fowls.
- 2.00. First premium to W. P. Perkins, Danvers, for pair Pekin Bantam fowls.
- 1.00. Second premium to W. P. Perkins, Danvers, for pair Pekin Bantam fowls.
- Diploma, to W. P. Perkins, Danvers, for pen Pekin Bantam fowls.
- 2.00. First premium to W. P. Perkins, Danvers, for pair Red Pile Bantam fowls.
- 2.00. First premium to W. P. Perkins, Danvers, for pair Aylesbury ducks.
- 1.00. Second premium to W. P. Perkins, Danvers, for pair Aylesbury ducks.
- 2.00. First premium to W. P. Perkins, Danvers, for pair Rouen ducks.

- 1.00. Second premium to W. P. Perkins, Danvers, for pair Rouen ducks.
- 1.00. Second premium to W. P. Perkins, Danvers, for pair Pekin ducks.
- 2.00. First premium to W. P. Perkins, Danvers, for pair Muscovy ducks.
- 1.00. Second premium to W. P. Perkins, Danvers, for pair Muscovy ducks.
- 2.00. First premium to W. P. Perkins, Danvers, for pair Brazilian ducks.
- 1.00. Second premium to W. P. Perkins, Danvers, for pair Brazilian ducks.
- 2.00. First premium to W. P. Perkins, Danvers, for pair Emden geese.
- 1.00. Second premium to W. P. Perkins, Danvers, for pair Emden geese.
- 2.00. First premium to W. P. Perkins, Danvers, for pair Toulouse geese.
- 1.00. Second premium to W. P. Perkins, Danvers, for pair Toulouse geese.
- 2.00. First premium to Sam Rogers, West Newbury, for pair of White Wyandotte chicks.
- 1.00. Second premium to Sam Rogers, West Newbury, for pair White Wyandotte chicks.
- Diploma, to Sam Rogers, West Newbury, for pen White Wyandotte chicks.
- 2.00. First premium to Sam Rogers, West Newbury, for pair White Wyandotte fowls.
- 2.00. First premium to R. W. Ropes, Salem, for pair White Leghorn fowls.
- 2.00. First premium to R. W. Ropes, Salem, for pair White Leghorn chicks.
- 2.00. First premium to Louis H. Elliott, Danvers, for Dark Brahma chicks.

- 2.00. First premium to Fannie M. Day, North Beverly, for pair White Plymouth Rock chicks.
- 2.00. First premium to D. L. Story, Beverly, for pair Light Brahma fowls.
- 1.00. Second premium to D. L. Story, Beverly, for pair Light Brahma fowls.
- Diploma, to D. L. Story, Beverly, for pen Light Brahma fowls.
- 2.00. First premium to D. L. Story, Beverly, for pair Light Brahma chicks.
- 2.00. First premium to C. M. Poor, Peabody, for pair Dark Brahma fowls.
- 1.00. First premium to W. B. Foster, Beverly, for pair White Leghorn chicks.
- 2.00. First premium to W. B. Foster, Beverly, for pair White Minorca chicks.
- 1.00. Second premium to W. B. Foster, Beverly, for pair White Minorca chicks.
- 1.00. Second premium to F. S. Lovett, Beverly, for pair White Leghorn fowls.
- 2.00. First premium to R. W. Ropes, Salem, for pair Pekin Ducks.
- Diploma to R. W. Ropes, Salem, for pen White Leghorn.
- 1.00. Second premium to R. W. Ropes, Salem, for pair Plymouth Rock fowls.
- 2.00. First premium to R. W. Ropes, Salem, for pair Plymouth Rock chicks.
- 2.00. First premium to W. P. Walton, Beverly, for pair Pekin Bantam chicks.
- 1.00. Second premium to W. P. Walton, Beverly, for pair Pekin Bantam fowls.
- Diploma, to T. C. Durkee, Peabody, for display of Light Brahmas.

The judge would recommend the exhibit of patent hen's nest,

of Mr. Frank A. Whitham, Middleton, Mass., for gratuity of one dollar.

W. F. BACON, *Judge*.

DRESSED POULTRY AND EGGS.

- §2.00. First premium to George D. Walton, Peabody, for pair Light Brahma fowls.
- 2.00. First premium to George D. Walton, Peabody, for pair Plymouth Rock chicks.
- 1.00. First premium to G. E. Fassett, Beverly, for eggs, S. L. Wyandotte.
- 1.00. First premium to M. J. Kane, Lynn, for eggs, Partridge Cochin.
- 1.00. First premium to M. J. Kane, Lynn, for eggs, White Leghorn.
- A. F. Harvey—*For Committee*.
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PLOUGHING WITH DOUBLE TEAMS.

The Committee on Ploughing, with Double Teams, have attended to their duty, and respectfully report to the Secretary that only two teams competed for premiums. They have made the following awards :

- §10. First premium to Benj. H. Farnham, of North Andover, with Hussy plough, No. 16.
- §8. Second premium to Edward Whipple, of Hamilton, and Geo. Brown, of Peabody, the plough made by G. W. Winslow, 55 years ago, and held by him he being in his 80th year. It was something remarkable, to see a man at his time of life, so strong and vigorous, handling a plough of his own make, a relic of "ye olden time," and

competing successfully with younger men, and more recent improvements and inventions.

Sherman Nelson, William H. Kinsman, Albert Berry, William A. Brown, G. S. Phippen.—*Committee.*

PLOUGHING WITH SINGLE TEAMS.

The Committee on Ploughing, with Single Teams, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

\$10. First premium to Peter E. Clark, Walter F. Dodge, ploughman, Beverly, with Hussey plough, No. 104.

\$8. Second premium to Samuel Thayer, Andover, with Hussy plough, No. 116.

Geo. L. Hawkes, Robert F. Dodge, J. N. Rolf—*Committee.*

PLOUGHING WITH HORSES.

The Committee on Ploughing, with Horses, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

\$10. First premium to Moses H. Poor, owner, West Newbury, Fred H. Poor, ploughman, with Hussy plough, No. 106.

\$7. Second premium to Wm. Bent, Danvers, Wm. A. Bent, ploughman, with Syracuse plough.

\$5. Third premium to Mrs. J. C. Phillips, Beverly, Arthur Kidder, ploughman, with Oliver Chilled Landside plough.

A. J. Stockbridge, J. W. Blodgett—*Committee.*

PLOUGHING WITH SWIVEL PLOUGHS.

The Committee on Ploughing with Swivel Plough have at-

tended to their duty, and respectfully report to the Secretary that they have made the following awards :

- §10. First premium to Robert F. Dodge, Wenham, with Yankee plough.
- §8. Second premium to Lyman S. Wilkins, Middleton, with North American plough.
- §6. Third premium to Solomon W. Weston, ploughman, Middleton, and William P. Christopher, driver, with Granger plough.

T. P. Harriman, M. B. Avery, A. S. Harriman, James K. Adams—*Committee*.

SULKY PLOUGHING.

The Committee on Sulky Ploughing have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- §10. First premium to S. R. Prince, Wenham, for sulky ploughing, with National Reversible plough.
- §8. Second premium to Lyman Holman, Salem, for sulky ploughing, with National Reversible plough.

A. B. Fellows, Thomas P. Hale, A. M. Bodwell—*Committee*.

HARROWS.

The Committee on Harrows have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- §10. First premium to Buxton & Co., Salem, for Yankee pulverizing harrow.

J. J. H. Gregory—*For Committee*.

AGRICULTURAL IMPLEMENTS.

The Committee on Agricultural Implements have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$10. First premium to Buxton & Co., Salem, for collection.
- \$5. First premium to H. P. Whipple, Peabody, for market wagon.
- \$2. Gratuity to H. P. Whipple, Peabody, for delivery wagon.
- \$3. Gratuity to Geo. E. Daniels, Rowley, for farm cart.
- \$2. Gratuity to Geo. E. Daniels, Rowley, for pair of cart wheels.
- \$3. Gratuity to E. L. Blake & Co., Peabody, for seed drills, wheel hoes, etc.
- \$5. First premium to Whitcomb & Carter, Beverly, for horse cart.
- \$10. Gratuity to Whitcomb & Carter, Beverly, for collection.

William S. Phillips, Jr., Benj. V. Giles, J. A. Ilsly—*Committee.*

CARRIAGES.

The Committee on Carriages have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$5. First gratuity, to Briggs Carriage Co., Amesbury, for 6 passenger park.
- \$1. Gratuity, to Briggs Carriage Co., Amesbury, for Kensington wagon.
- \$5. First gratuity, to Briggs Carriage Co., Amesbury, for best display of carriages.

- \$3. Second gratuity, to H. H. Pillsbury, Danvers, for top box buggy.
- \$1. Gratuity, to H. H. Pillsbury, Danvers, for collection of carriages.
- \$1. Gratuity, to John H. Clark, Amesbury, for two-spring Phaeton.
- \$3. Second gratuity, to Thos. W. Lane, Amesbury, for road wagon.
- \$1. Gratuity, to B. F. Lewis, Amesbury, for Amesbury road wagon.
- \$3. Second gratuity, to E. C. Sawyer, Beverly, for north-shore wagon.
- \$1. Gratuity, to E. C. Sawyer, Beverly, for Lawrence beach wagon.
- \$1. Gratuity, to E. C. Sawyer, Beverly, for collection of carriages.
- \$5. First gratuity, to Charles Rowell & Son, Amesbury, for extension Top Rockaway.

The Committee would award for special merit, a diploma to Briggs Carriage Co., of Amesbury, for a six passenger wagon ette, as being superior in workmanship and finish, the best carriage for the money, on the list exhibited.

Geo. T. Merrill, Wm. A. Bray, Geo. H. Plumer, James Wilson—*Committee*.

REPORT OF CARRIAGE COMMITTEE.

To the Secretary of the Essex Agricultural Society:

Where or when originated, or by whom the first wheeled vehicle was made belongs to the realm of mystical lore. Doubtless when the earlier inhabitants moved inland from the waterways they sought some method by which to transport, easily, their material; and then began the era of wheels for vehicles. History tells us that the Assyrians builded war chariots and

carts—both two-wheeled—the former for military use, and the latter for women and those unable to walk. With them we may safely assume began the evolution in wheeled vehicles. Strength and utility were considered of the first importance, and hence we find in all descriptions of them a largeness and crudeness. Four-spoke wheels, heavy, uncouth body, placed on an immense axle of wood succeeded the solid wheel. At a later period of this nation's life we discover an attempt at reduction of size, and prolific ornamentation—curved lines are shown in chariot bodies—the wheels have six or eight spokes with three rims and a metallic tire. Rome evidently copied from the Assyrians, and then improved the copy. From Rome the Western nations learned the art, if art it then was, of carriage building. For centuries all road vehicles were bulky in size, as compared with those of to-day, the lines were devoid of beauty, although richly and elaborately ornamented. It was not until comparatively recent years that one finds the light and beautiful lines evolved, although an advance in that direction was certainly being made. Each century passed through an evolutionary stage.

In this country carriage building was not a distinctive industry until nearly at the close of the first half of the present century; previous to that time one man made bodies, another made wheels, another gears, the blacksmith did the ironing, the trimmer or upholsterer stood on his own ground, as did the painter. Each man took his pay in carriages more or less finished, and disposed of them as best he could.

Essex County, noted for its skilled mechanics and brainy workmen, was early in the field assisting in developing this industry. It is generally conceded by all that Hon. J. R. Huntington of Amesbury, with a keen foresight of the probabilities in the carriage industry, took the initiative in the movement to build a carriage from the rough material under one roof and supervision. This was inaugurated by him some thirty-five or forty years ago. Then commenced a new era in an industry that

has enriched the manufacturer, given comfort to the farmer, pleasure to the wealthy and homes and happiness to the artisan. Rapid development ensued and its influence was felt at all points, West Virginia, Ohio, Indiana and other states were called upon to furnish white wood, hickory, bass, elm, oak and ash; Pennsylvania, Alabama, Norway and Sweden contributed iron and steel; New Jersey gives up its leather, and Germany, France and England their cloths, silks and laces. Capital and brains have evolved a class of carriages that for lightness and durability, elegant lines and beautiful finish, diversity of style and superior workmanship are not surpassed, if equalled, in the world. Excessive freights, first on the raw material, then on the finished production have somewhat hindered our manufacturers, but with their indomitable pluck they have produced and placed in distant markets goods that commend themselves to the consumers. In consulting the statistical tables of the last Report of the Bureau of Labor for Massachusetts one fails to find even to an approximation the number of carriage manufacturers, capital invested, value of production, number of skilled and unskilled workmen employed, amount of material consumed in the construction or the source of supply. In fact the Bureau appears to know but little of an industry that is estimated to stand the fifth in the industries of the State. One can hardly find an hypothesis on which to base an estimate of the financial position of this large industry. Of the capital invested in the building of carriages in Massachusetts the best attainable authority give to Essex County five-eighths of the total amount. Of the 35 towns and cities in the County, twelve reckon carriage and wagon building among their industries; these give employment to two thousand skilled workmen. "Amesbury is fast gaining a world wide fame as a great carriage producing centre," and its claim in conjunction with its sister town of Merrimac, "of employing the greatest percentage of skilled mechanics in the carriage industry, proportionate to the population, of any city or town in the world"

cannot be challenged. Of the towns in Essex County other than those above named, Beverly, Danvers, Georgetown, Haverhill, Lawrence, Lynn, Methuen, Newburyport, Peabody and Salem. Each have one or more factories which turn out many fine jobs, each having some specialty; but to Amesbury and Merrimac must be accorded the first position. In regard to the production in the former town we quote the following from a recent issue of the "Daily:" "We have twenty firms who do a business (carriage) of over \$100,000 per year each." Then there are left fifteen more firms whose production amounts to from \$15,000 to \$50,000 each. It is estimated that Merrimac, which builds a heavier grade of work and has fifteen firms, will show a higher average in the amount of production than Amesbury.

In view of the importance of this industry, in the county, the Agricultural Society decided, in their wisdom, to make an extra effort in bringing to their Fair of the current year, an exhibit of carriages and wagons manufactured in the county. An appeal was made to the builders not to "hide their light under a bushel." The committee were cordially received by all, and a favorable answer given, with the proviso that a suitable exhibition hall should be obtained for their costly productions. A properly and fully lighted frame building, easy of access, giving from 1200 to 1400 square feet of floorage, was the required desideratum. This the society were unable to obtain, but very good accommodations were provided by means of a large tent, while the exhibition of carriages was not so large in number, or variety of style, still the exhibit was very flattering to the society. Among the display of carriages exhibited, we consider the following as worthy of special notice:—

E. C. Sawyer, of Beverly, exhibited six jobs: This display was in keeping with the well-known reputation of the firm, and comprised Phaeton, Democrat wagon, and Business wagon. His North Shore beach wagons were especially attractive, of great utility, light and strong in construction, and of superior finish. Mr. Sawyer was awarded a second class gratuity for them.

H. H. Pillsbury, of Danvers, presented eight vehicles: Rockaway, Phaetons, Delivery wagons, and Buggies. A light Piano box buggy was accorded a second class gratuity, for its fine lines and finish, these being about the average.

B. F. Lewis, of Amesbury, displayed one of his celebrated Road wagons. This wagon was among the attractive vehicles, and received many flattering comments from the visitors. It was finished "in the wood," light weight, and thoroughly built as are all of his vehicles. A gratuity was awarded.

Chas. Rowell & Son, of Amesbury, exhibited a new and desirable style of an extension top Rockaway. In its construction, as well as all of their production, the best of material is used. Every part is built in a workmanlike manner, and for the money asked was one of the most elegant jobs exhibited. A first class gratuity was awarded.

John H. Clark & Co., of Amesbury, presented an elegant two spring Phaeton. This firm, which is second to none for producing fine work, makes a specialty of Surreys, Extension tops, Goddards and Phaetons of light and medium build, which for quality and price are unsurpassed. A gratuity was awarded.

Briggs Carriage Co., of Amesbury, exhibited in the estimation of the committee, the finest collection of vehicles. They displayed six jobs: Six passenger Park, six passenger Wagonette, Kensington wagon, Democrat wagon, Road wagon, and Buggy. Although this display did not give an adequate idea of the large number of styles this company build, still it was sufficient to attract the attention and commendation of visitors. The heavy jobs, *i e.* Park, Wagonette, and Kensington cart was of unusual interest. Large and convenient buildings, well supplied with improved machinery, and by employing skilled workmen, and using the best attainable materials, this concern produces as fine and stylish work as the best. For superior workmanship, elegance in design and finish, the committee awarded to this company the society's diploma, two first class gratuities and a gratuity of \$1.00.

T. W. Lane of Amesbury exhibited two jobs: Buggy and Road wagon. Mr. Lane makes a specialty of fine light carriages, and "Lane's Cross-Springs." This spring is somewhat similar to the "Lewis spring." Of the "Lane springs" it is perhaps sufficient to say that they have many good points, they are long and hence easy riding, are simple in construction, breakage reduced to the minimum and give great satisfaction. The material used, finish and diversity of styles in his carriages are fully up to the standard of the grade of carriages manufactured in Amesbury. Awarded a second-class gratuity.

It would afford your committee pleasure to mention in detail the productions of numerous other carriage manufacturers of Amesbury and Merrimac, but as they failed of displaying their jobs, it is assumed that the committee should be silent. That it pays to exhibit is manifest by the fact that one exhibitor in the Fair reported that he had received orders for \$1800 worth of work.

Doubtless in the future, there will be larger exhibits, embracing fashion and beauty on the one hand, and the highest attainment in the carriage builders art in the other, which, with a liberal inducement on the the part of the Society will tend to make the carriage exhibit a leading attraction.

Your committee who acted in great harmony are under obligations to the Beverly Board of Trade and to all exhibitors for courtesies extended to them.

Respectfully submitted,

G. T. MORRILL, Chairman.

IN EXHIBITION HALL.

REPORT OF SUPERINTENDANT OF HALL.

The exhibition of the society held in the Town Hall in Beverly, September 24th and 25th, 1889, was, in respect to the attendance of visitors, a decided success. The tickets of admission sold at the door indicated that 7800 persons purchased tickets and visited the hall on the two days. And as persons who furnished articles for exhibition received tickets of admission, the entire number who passed into the hall was not less than 8500.

The exhibit of Fancy Work, Work of Art, Afghans, Quilts and Rugs was quite large and required all of the space that could possibly be given to these departments and allow room for visitors. At times the hall was so crowded that it was impossible for visitors to examine the articles or even to see them.

In the department of Fancy Work there were 306 entries. A few articles may not have been of sufficient merit to be worthy of exhibition, but by far the larger portion were articles of decided merit and worthy of notice; and many articles exhibited excellent taste and skill on the part of the makers.

The amount of money at the disposal of the committee on awards was quite too small to properly notice the large number of articles worthy of a gratuity. The sum of fifty dollars recommended last year would be none too large a sum placed at the disposal of the committee.

The Works of Art exhibited were also worthy of especial mention, 153 entries were made. The paintings and sketches

of various kinds occupied one side and end of the hall above the gallery floor. The increasing interest in this department is worthy of appreciation by the society. An addition of ten dollars could have been worthily bestowed in gratuities.

The exhibits of Fancy Work and Works of Art always furnish the greatest attraction to visitors, the larger portion of whom are ladies, who desire to see and examine the articles in these departments. If the exhibition should be held in the same hall another year as is usual, more of the space in the gallery should be used for fancy work, and if possible, the space for visitors be made wider. This would in part relieve the crowded condition of the passage. It is important that all small articles of fancy work that cannot be hung on the walls, and all small articles in the art department not hung should be placed in glass cases, or in some way be protected from injury. Several cases were kindly loaned for that purpose, but it is difficult to find as many as are needed. It is recommended that a certain number of cases be made and covered with wire instead of glass. The cost would be much less than glass and the needed protection would be secured.

The entire front of the balcony was hung with Quilts and Afghans, and an equal space occupied in the exhibition of Rugs. Both of these departments were quite full; 68 Rugs and 111 Quilts and Afghans were entered. Most of the articles exhibited in each were well worthy of notice, with only a few exceptions, and it cannot be desired that articles should be exhibited unless they are in some respect more than commonplace articles made for home use, without any especial exhibition of taste or skill. This criticism will not apply to any considerable number of articles exhibited. Some were of excellent design and workmanship.

In the department of work by children under twelve years of age, 40 articles were exhibited.

In the Plant and Flower department quite a liberal amount is offered in gratuities, and a fine exhibit was made. The quantity

of Plants and Flowers was larger than was anticipated, and the room appropriated too small. Although the platform seemed to be the better place for the music, it would probably be better to use that for Plants and Flowers, and if more room was needed, use a part of the centre table on the lower floor.

The failure of the Apple crop for the year caused the exhibit of apples to be much smaller than usual. A better show was made of Pears and many fine specimens exhibited. In Grapes also, quite a good number of plates of excellent specimens were on exhibition. As a whole, the show of fruit was not up to the standard of former years.

In the Bread, Butter and Canned Fruit department a good variety of Canned Fruit was shown, but the number of competitors in Bread making was quite limited. A few packages of fine quality of Butter were shown, but the making of butter by the farmers of Essex County is greatly reduced from the quantity made a few years since.

The show of vegetables was made in tents at the rear of the hall. These were well filled and an excellent display of all the varieties was made. The larger portion were collections made by two or three contributors of one or more specimens each. There were 300 entries made by 74 contributors.

The number of entries in the hall were as follows:—

Fancy Work	entries 306	number of contributors	252
Works of Art	“ 153	“ “ “	132
Rugs	“ 68	“ “ “	62
Quilts and Afghans	“ 111	“ “ “	100
Work by Children	“ 40	“ “ “	35
Dairy	“ 8	“ “ “	7
Bread, Honey and			
Canned Fruit	“ 60	“ “ “	28
Articles made of Leather	“ 18	“ “ “	12
Manufactures	“ 22	“ “ “	22
Apples	“ 125	“ “ “	83

Pears	entries	207	number of contributors	106
Peaches, Grapes, and				
Assorted Fruit	“	105	“ “ “	66
Flowers	“	70	“ “ “	65
Vegetables	“	300	“ “ “	74
Grain and Seeds	“	25	“ “ “	19

The efficient and faithful service rendered by the assistant superintendent, and the ladies and gentlemen appointed on the committee to receive and arrange the articles for exhibition in several departments, and of those present appointed to act as clerks, all contributed largely to the success of the exhibition in the hall.

It is very important that all persons serving on committees to make awards should be in the hall at time appointed ready to attend to their duties. It is desirable that the hall should be opened to visitors by one o'clock in the afternoon of the first day of exhibition; but this cannot be done unless committees are prompt in beginning their work, as all of the time will be required between the closing to entries, and the time for opening to visitors, in making their awards. If committees would meet in the hall a half hour before the time for closing, and receive from the Superintendent the blanks and cards required, they would then be ready to begin promptly their examinations.

The serving on committees by those who are competing for prizes in the department in which they serve, even though they may take no part in any award they may receive, gives occasion for dissatisfaction.

Respectfully submitted,

AMOS MERRILL, *Superintendent of Hall.*

DAIRY.

The Committee on Dairy have attended to their duty, and

report to the Secretary that they have made the following awards :

- §8. First premium, to W. K. Cole, Boxford, for butter.
- §6. Second premium, to Mrs. Chas. W. Gowen, West Newbury, for butter.
- §4. Third premium, to Mrs. J. C. Phillips, Beverly, for butter.

D. Bradstreet, J. Ilsley, A. B. Fellows—*Committee*

STATEMENT OF W. K. COLE, OF WEST BOXFORD, OF BUTTER

Made from the milk of grade Jersey cows, set in shallow pans for 36 hours. Churned once a week. Butter rinsed twice in water, thoroughly worked, and immediately put up in packages for use. Salted, a trifle more than 1 oz. of salt to 1 lb. of butter. No coloring used. Feed: 1 qt. meal, 1 qt. shorts to each cow, with the run of an ordinary pasture.

STATEMENT OF MRS. C. W. GOWEN, OF WEST NEWBURY.

This butter was made from the milk of a Jersey cow. The milk was set in pans about one-half full, and skimmed after setting thirty-six hours. The cream was then churned, washed and salted at the rate of 3-4 oz. of salt to 1 lb. butter. After standing a few hours it was worked and put up in pound prints.

STATEMENT OF MRS. J. C. PHILLIPS, OF BEVERLY.

The milk when brought in is immediately set in a Cooley Creamer, temperature of water 45 degrees. After standing 12 hours the cream is taken off, set in a refrigerator (in warm weather) not allowed to sour. The cream being churned sweet at 58 degrees to 60 degrees Fahr, the churn is prepared by scalding and cooling to same temperature as the cream. (Stoddard Churn.) When the butter is brought to a granulated form, the butter-milk is drawn off, and the butter washed in water considerably cooler than the butter, until the water runs from the churn clear. The

butter is taken in a wooden bowl and all the water worked out with spatters ; it is then weighed and salted, allowing 1-4 oz. of salt to each pound of butter, then made immediately into lumps, or prints, with wooden spatters or stamps, being careful to work as little as possible.

BREAD, HONEY AND CANNED FRUITS.

The Committee on Bread, Honey and Canned Fruits have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$3. First premium, to Mrs. A. P. Reed, Peabody, for white bread.
- \$2. Second premium, to Winnefred C. Manning, Topsfield, for white bread.
- \$1. Third premium, to Mrs. Allen Smith, Rockport, for white bread.
- \$2. First premium, to Mrs. Lyman S. Wilkins, Middleton, for graham bread.
- \$1. Second premium, to Mrs. L. H. Berry, Danvers, for graham bread.
- 50c. Gratuity, to Hattie F. Pushee, Beverly, for fruit-cake.
- \$3. First premium, to Mrs. A. C. Wilson, North Beverly, for jellies and preserves.
- \$2. Second premium, to Mrs. A. B. Evans, Salem, for catsup and fruit juice.
- 50c. Gratuity, to Mrs. A. B. Goss, Salem, for six tumblers of jelly.
- \$5. First premium, to E. L. Blake & Co., Peabody, for bees, hives and apiarian implements.
- \$3. First premium, to E. L. Blake & Co., Peabody, for honey.

Clara A. Hale, Amanda F. Low, Mrs. Benj. H. Farnum, Mrs. David Warren, Mrs. Charles W. Gowen—*Committee*.

FIRST PREMIUM WHITE BREAD.

4 quarts of Haxall flour, 1 tablespoonful of salt, lard and sugar, 3 pints of water, Fleischmann yeast cake, mixed and kneaded 20 minutes, raised over night, kneaded 10 minutes, raised an hour, baked an hour and a half. This is one of four loaves which it makes.

Mrs. A. P. REED,

SECOND PREMIUM WHITE BREAD.

Process of making. To 3 quarts of Haxall flour, add 1-2 pint boiling water, mix thoroughly, and let stand 1-2 hour. Then add 1 pint each of milk and water, 1-2 yeast cake, 1 tablespoonful of salt. Knead one half hour, let raise over night. Knead again in morning and let rise. Mould into loaves and leave in pans one half hour. Then bake in a moderate oven one hour.

WINNEFRED E. MANNING,

Age 15 years.

Topsfield, Mass.

Peabody.

THIRD PREMIUM WHITE BREAD.

White Bread: 3 quarts of Haxall flour, 1 pint of milk that has been previously boiled, and 1 pint of water, 1 tablespoon of lard, rubbed into the flour, 1 teaspoon of salt, 1 tablespoon of sugar, 1 cake of compressed yeast, dissolved in a little warm water. Mix all thoroughly and knead ten minutes, let it rise over night, then knead it down and let it rise again about an hour. Then put in pans and rise an hour, or until light. Bake one hour, 1 1-2 lbs in each loaf.

Mrs. ALLEN SMITH,

Rockport, Mass.

FIRST PREMIUM GRAHAM BREAD.

Process of making: 2 quarts of graham flour, 1 quart of warm milk, 1 teaspoonful of salt, 1-2 cup of sugar, 1-2 cup of potato yeast, piece of butter size of an egg. Make a sponge in the

morning, let it rise 2 hours, knead up stiff, rise until noon, put in pan, rise 1 hour, bake 1 1-4 hours.

MRS. LYMAN S. WILKINS,
Middleton, Mass.

FIRST PREMIUM JELLIES.

To make nice clear jelly the fruit should be sound, if not, all spots should be removed; the fruit should be then washed and placed in a kettle with just enough water to cover it, and boiled fifteen minutes, then it should be strained through a sieve without pressing the fruit, then the juice should be strained through a flannel bag until it runs clear. Then put one pound of sugar to one pint of the juice and boil twenty minutes. Of coarse some fruits, such as currants and peach, need a little different treatment. In making currant jelly the juice should be boiling hot when the sugar is put in, and it should not be boiled but 8 minutes after the sugar is in, if it is, it will be spoiled. In making peach jelly, boil the fruit 30 minutes, then strain and boil the clear juice fifteen minutes before the sugar is put in, then boil 20 minutes after the sugar is in. When all jellies are cold put brandy papers on top of the jelly.

MRS. A. C. WILSON,
North Beverly Mass.

TOMATO KETCHUP.

Scald and peel one-half bushel of ripe red tomatoes and drain through a cloth or colander, without pressing. Cut six large red peppers in pieces, and stew with tomato till soft enough to put through a sieve to remove the seeds. Mix thoroughly together one pound white sugar, one cup salt and four heaping tablespoonfuls of mustard and add this with one quart sharp vinegar to the sifted juice. Boil till as thick as desired. Cool and bottle for use.

MRS. ALMIRA B. EVANS,
18 Orne St., Salem, Mass.

FRUIT JUICES.

To prepare grape or currant juices : Wash the fruit, and put it on the stove, with just a little water, and bring to a scald. Strain through a cloth, and add white sugar, in the proportion of a pound to one quart of juice. Let it boil ten minutes, removing the scum as it rises. Seal in air tight bottles.

Mrs. ALMIRA B. EVANS.

18 Orne St., Salem Mass.

GRAPE JELLY.

Pick the grapes from the stem ; wash them, mash a little, bring them to a scald and press through a cloth. Measure the juice and an equal quantity of white sugar ; boil the juice ten minutes, removing all the scum, have the sugar hot and add to it, boiling twenty minutes longer.

Mrs. A. B. GOSS.

3 Nursery St., Salem.

STATEMENT OF E. L. BLAKE & CO., OF PEABODY MASS.,

Concerning the exhibition of Bees, Hives and Aparian Implements at the fair of the Essex Agricultural Society held at Beverly Mass., Sept. 24 and 25 1889.

In regard to bee hives, we use three styles of our own manufacture. The hive we like best, and also think the best made, we call Blake's Improved American Hive. It is a double-walled chaff hive, that is, a space between the brood chamber and outside wall to be filled with chaff in the cold season. It is very simple in all its parts. The frames in the lower story rest upon a cleat upon the bottom board, and can easily be removed. It is complete with eight frames, but will hold twelve. The surplus is taken care of in a crate of twenty-four one-pound sections, in a crate placed directly over the brood frames. We use with this hive, and also with all our hives, a feeder made so

as to be placed inside of the hive, directly upon the frames, and by that means prevent all robbing, which is a great annoyance with outside feeders. It is made in a thorough and workman-like manner.

We use and make also, a hive called Blake's Eclipse Observatory Hive. This is a single walled hive, with glass door in back to insert the frames. It is designed for ladies and amateurs desiring to study the bees at work. The bees may be watched with safety as long as wished. The surplus is taken care of in a crate holding ten two-pound boxes.

Our box hive, is the same as was used by our forefathers in years gone by. It is still clung to by parties who are not progressive in their ways and ideas. It has two ten-pound boxes for the storing of surplus honey. We consider the use of a small quantity of comb foundation in the frames, a great benefit.

We sell and use Clark's Cold Blast Smokers, for smoking bees, and we believe there are none better made. We use for that purpose rotten apple tree as fuel for smokers.

We exhibit a large variety of Implements needed in the successful keeping of bees.

We must also mention Root's A. B. C., of Bee Culture, which we consider a valuable acquisition to the keeping and care of bees.

Hive No. 1. Italian Bees.

These bees are our Improved American Hive described in the foregoing. We consider that this kind of bees are the only bees that are the best for all purposes in this section. They are gentle and quiet at all times. They are remarkable honey-gatherers and are very prolific. A good Italian Queen has been known to lay 6,000 eggs in from two to three days. They also winter well and come forth strong and rigorous in the spring. One especial feature is that they are not likely to run away.

This swarm has gathered about forty pounds of honey this

season, which has been very poor. It has thrown two swarms. Our honey was taken up in September. We carry six swarms.

Hive No. 2. Hybrid Bees.

These bees are in the same kind of hives as the Italian. They are a cross between our native bees and the Italian's. They are a very good kind of bee, if a person does not mind their being a little cross. They are very fair workers and are fairly prolific. This swarm was hived about the 20th of June. They have produced about 25 lbs. of honey, and have also thrown one swarm. We carry 3 stands of this kind.

Hive No 3. Native Bees.

This swarm is shown in our box hive. They are very unprofitable bees to keep. Their greatest point being in their wintering well and also having an extremely sharp stinger which they use with slight provocation. They are great consumers of honey. We have not taken any honey from this hive. They have thrown two swarms. We carry one hive of this kind, which we retain for profit in one sense that of pleasure, but no other.

STATEMENT OF E. L. BLAKE & CO., OF PEABODY MASS., CONCERNING
THEIR EXHIBIT OF HONEY.

The comb honey is shown in one pound sections in our shipping crate. It is mostly linden honey and was gathered by Italian Bees. It has not been bleached, but is in its natural state; we do not believe in bleaching with sulphur, as practiced by some. Our extracted honey is shown in tumblers holding one pound. This is mainly clover and golden-rod honey, gathered in July and August. It was gathered by Italian and Hybrid Bees and has not been bleached. It is just as gathered. It has been kept in a dry room, which is best for keeping all kinds of honey, as dampness spoils it.

PEARS.

The Committee on Pears have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$3.00. First premium, to Edwin Bates, Lynn, for Bartletts.
- \$3.00. First premium, to Samuel S. Lee, Beverly, for Belle Lucrative.
- \$3.00. First premium, to H. P. Ives, Salem, for Bosc.
- \$3.00. First premium, to J. H. Hill, Amesbury, for Anjou.
- \$3.00. First premium, to Edwin Bates, Lynn, for Anjouleme.
- \$3.00. First premium, to Walter Hutchinson, Danvers, for Dana's Hovey.
- \$3.00. First premium, to Edwin Bates, Lynn, for Louise Bonne.
- \$3.00. First premium, to A. J. Hubbard, Peabody, for Maria Louise.
- \$3.00. First premium, to James Wilson, Topsfield, for Onondaga.
- \$3.00. First premium, to C. B. Haven, Peabody, for Paradise d'Automne.
- \$3.00. First premium, to Allen Barr, Lawrence, for Seekle.
- \$3.00. First premium, to B. R. Symonds, Salem, for Sheldon.
- \$3.00. First premium, to Stephen Fernald, Peabody, for Urbaniste.
- \$3.00. First premium, to John Perkins, Peabody, for Lawrence.
- \$3.00. First premium, to C. B. Haven, Peabody, for Vicar.
- \$3.00. First premium, to Edwin Bates, Lynn, for Howell.
- \$3.00. First premium, to W. Burke Little, Newbury, for Clairgeau.
- \$3.00. First premium, to Albert Perry, Beverly, for Comice.
- \$3.00. Gratuity, to Edwin Bates, Lynn, for collection of pears.

- \$1.50. Gratuity, to Aug. Williams, Beverly, for Bosc.
 - \$1.50. Gratuity, to John Osborn, Salem, for Anjou.
 - \$1.50. Gratuity, to Amos L. Ames, Peabody, for Anjouleme.
 - \$1.00. Gratuity, to A. J. Stetson, Danvers, for Dana's Hovey.
 - \$1.00. Gratuity, to Amos Evans, Marblehead, for Louise Bonne.
 - \$1.00. Gratuity, to A. J. Hubbard, Peabody, for Paradise d'Automne.
 - \$1.50. Gratuity, to Thomas Hale, Rowley, for Seckle.
 - \$1.50. Gratuity, to H. W. Balcomb, Salem, for Sheldon.
 - \$1.00. Gratuity, to J. H. Hill, Amesbury, for Urbaniste.
 - \$1.50. Gratuity, to Stephen Abbott, Beverly, for Lawrence.
 - \$1.00. Gratuity, to G. H. Thissell, Beverly, for Clairgeau.
 - \$1.00. Gratuity, to C. A. Ropes, Salem, for Comice.
 - \$1.00. Gratuity, to John Leprum, Beverly, for Sov. de Congress.
 - \$1.00. Gratuity to J. M. Ward, Peabody, for Goodell.
 - \$1.00. Gratuity, to Edward Burley., Beverly, for Maria Louise.
 - \$1.00. Gratuity, to John Osborn, Salem, for Bosc.
 - \$1.00. W. B. Ladd, Bradford, for Bosc.
 - \$1.00. Gratuity, to W. Burke Little, Newbury, for Anjou.
 - \$1.00. Gratuity, to J. M. Ward, Peabody, for Anjou.
 - \$1.00. Gratuity, to W. Foster, Beverly, for Anjouleme.
 - \$1.00. Gratuity, to A. W. Berry, Peabody, for Lawrence.
 - \$1.00. Gratuity, to H. P. Ives, Salem, for Seckle.
 - \$1.00. Gratuity, to Fred Lamson, Salem, for Seckle.
 - \$1.00. Gratuity, to D. A. Pettengill, Danvers, for Bosc.
 - \$1.00. Gratuity, to John Hamlin, Salem, for Seckle.
 - \$1.00. Gratuity, to G. S. Jeffrey, Peabody, for Sheldon.
 - \$1.00. Gratuity, to J. N. Estes, Peabody, for Anjou.
- P. M. Neal, W. A. Jacobs, A. C. Osborne, Thomas P. Hale,
George Pettingell—*Committee*.

APPLES.

The Committee on Apples have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$3.00. First premium, to S. B. George, Groveland, for Baldwin.
- \$1.00. Gratuity, to Geo. B. Austin, West Boxford, for Baldwin.
- \$3.00. First premium, to Paul M. Ilsley, Newbury, for Roxbury Russett.
- \$1.00. Gratuity, to John Barker, North Andover, for Roxbury Russett.
- \$3.00. First premium, to L. B. Nichols, Peabody, for Danvers Sweet.
- \$1.00. Gratuity, to N. Bushby, Peabody, for Danvers Sweet.
- \$3.00. First premium, to G. D. Walton, Peabody, for Tompkin's King.
- \$3.00. First premium, to J. Henry Hill, Amesbury, for Red Russett.
- \$3.00. First premium, to D. A. Pettengill, Danvers, for Hubbardston.
- \$1.00. Gratuity, to T. C. Durkee, Peabody, for Hubbardston.
- \$3.00. First premium, to Joel L. Southwick, Peabody, for Hurlburt.
- \$1.00. Gratuity, to Augustus Very, Danvers, for Porter.
- \$3.00. First premium, to Mrs. David Warren, Swampscott, for Pickman Pippin.
- \$3.00. First premium, to Chas. W. Gowen, West Newbury, for R. I. Greening.
- \$3.00. First premium, to H. Bushby, Peabody, for Gravenstein.
- \$3.00. First premium, to W. G. Perkins, Danvers, for Hunt's Russett.

- \$3.00. First premium, to J. Henry Hill, Amesbury, for Smith's Cider.
- \$1.50. Gratuity, to W. B. Little, Newbury, for Smith's Cider.
- \$1.00. Gratuity, to Charles A. Ropes, Salem, for B. Gilliflower.
- \$1.00. Gratuity, to G. D. Walton, Peabody, for Haas.
- \$1.00. Gratuity, to O. P. Killam, Boxford, for Golden Russett.
- \$1.00. Gratuity, to David Warren, Swampscott, for No Name.
- \$1.00. Gratuity, to J. Henry Hill, Amesbury, for Bailey Sweet.
- \$1.50. Gratuity, to John Swinerton, Danvers, for No Name.
- \$1.50. Gratuity, to Charles F. Bushby, Peabody, for Northern Spy.
- \$1.00. Gratuity, to John Barker, North Andover, for Heath.
- \$1 50. Gratuity, to Joseph Ilsley, Newbury, for Bradford Nonsuch.
- \$1.50. First premium, to L. S. Wilkins, Middleton, for Hyslop Crab.
- \$1.00. Gratuity, to A. C. Osborn, Peabody, for Hyslop Crab.
- \$3.00. First premium, to J. Henry Hill, Amesbury, for Granite Beauty.

Charles M. Lunt, J. W. Goodell, H. W. Munroe, E. A. Emerson—*Committee*.

NEWBURY, Oct. 29, 1889.

SECRETARY ESSEX AGRICULTURAL SOCIETY :—

As an annex to the report of the Committee on Apples the writer would further say that judging by the premium list the amateur would naturally come to the conclusion that any or all

the varieties recommended for cultivation in Essex County, would be comparatively safe to raise,—but in this we say,—go slow.

From our experience of 25 years in growing apples for the Boston market, more particularly as a money crop, the most satisfactory returns have been on sales of Roxbury Russett, Baldwin, R. I. Greening, and Hubbardston.

We recommend this list to the practical orchardist. Since the first mention, when Adam was tempted by the seductive apple—or the seductive Eve, Query, which (?) up to within 20 years it was a comparatively easy matter to grow any sort of sweet or sour apples, but with the introduction of the maggot, some of our most cherished fruits have become so riddled by their attacks, that it would require more than the wiles of a woman to induce the eating.

With all respect to the society, we beg leave to differ, as our experience with some varieties, however much their previous value, are at present, owing to local causes,—now worthless.

The Red Russett cracks as badly as the Flemish pear, while the Porter, Hunt Russett, and Tolman Sweet, are in some sections so infested by the maggot as to cause disappointment to the grower, dealer and consumer. Should we propose any change in the list, and certainly we would not add to it, we would mention the Red Canada, or Bradford Nonsuch,—an apple, though not taking kindly to all situations, is without doubt, when raised in perfection, the prince among apples. Lasting as it does as a dessert fruit from early autumn to the summer solstice, it commends itself to the consumer more highly than any other apple grown in this section.

This was an off year, consequently the exhibit was comparatively small, some varieties only a single plate.

We noticed an apple entered by Mr. Swinerton which seemed to embrace a number of good points, but in conversation with

that gentlemen he expressed himself as not fully satisfied with its keeping qualities, therefore we passed it with a gratuity.

Yours respectfully,

CHAS. M. LUNT.

PEACHES, GRAPES, AND ASSORTED FRUITS.

The Committee on Peaches, Grapes, and Assorted Fruit have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$1.00. First premium, to J. N. Barbeck, Peabody, for White Flesh peaches.
- \$2.00. First premium, to Edwin Bates, Lynn, for Yellow Flesh peaches.
- \$2.00. First premium, to Mrs. A. D. Gorham, Wenham, for Seedling peaches.
- \$1.00. Gratuity, to Mrs. Seth Norwood, Beverly, for Yellow Flesh peaches.
- \$3.00. First premium, to Frederick, Lamson, Salem, for best collection of peaches.
- \$3.00. First premium, to James N. Estes, Peabody, for Concord grapes.
- \$3.00. First premium, to W. P. Hutchinson, Danvers, for Brighton grapes.
- \$3.00. First premium, to W. P. Hutchinson, Danvers, for Hartford Prolific grapes.
- \$3.00. First premium, to W. P. Hutchinson, Danvers, for Delaware grapes.
- \$3.00. First premium, to Maria Ames, Peabody, for Martha grapes.
- \$3.00. First premium, to W. P. Hutchinson, Danvers, for Moore's Early grapes.
- \$3.00. First premium, to W. P. Hutchinson, Danvers, for Niagara grapes.

- \$3.00. First premium, to Geo. W. Stickney, Beverly, for Hamburg grapes.
- \$1.50. First premium, to W. P. Hutchinson, Danvers, for Best 4 bunches.
- \$4.00. First premium, to Edwin Bates, Lynn, for Basket of Assorted Fruit.
- \$2.00. Gratuity, to Geo. A. Waitt, Danvers, for Orange Quince.
- \$1.00. Gratuity, to J. Leverett Story, Essex, for Pear Quince.
- 50c. Gratuity, to Andrew Lane, Rockport, for Cranberries.
- \$1.00. Gratuity, to Otis Brown, Peabody, for Golden Drop Plum.

William S. Phillips, Jr., Leon H. Bassett, Walter F. Gould
—*Committee.*

PLANTS AND FLOWERS.

The Committee on Plants and Flowers have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- 50c. Gratuity, to C. W. Mitchell, Beverly, for 1 Begonia.
- \$1.00. First premium, to John E. Mitchell, Beverly, for 5 Dracenas.
- \$1.00. First premium, to John E. Mitchell, Beverly, for 5 Crotons.
- \$1.00. First premium, to John E. Mitchell, Beverly, for 5 Gloxinias.
- \$1.00. Gratuity, to Mrs. C. N. S. Horner, Georgetown, for Native Weeds.
- \$5.00. First premium, to Mrs. J. A. Cain, Lynn, (at least 50 specimens,) for 100 Cultivated flowers.
- 50c. Gratuity, to Lily Ward, Beverly, for 1 Basket Flowers.
- 50c. Gratuity, to Benj. Larcom, Beverly, for 12 Scabiosas.

- 50c. Gratuity, to Mrs. R. C. Patton, Beverly, for 1 Begonia.
- \$1.00. First premium, to Mrs. J. Henry Hill, Amesbury for 12 Dianthus.
- 50c. Gratuity, to Mrs. J. Henry Hill, Amesbury, for 12 Nasturtiums.
- 50c. Gratuity, to John E. Mitchell, Beverly, for Double Sunflower.
- \$1.00. Second premium, to Mrs. David Warren, Swampscott, for 1 pair Boquets of Garden Flowers.
- \$2.00. First premium, to Mrs. David Warren, Swampscott, for 1 pair Boquets Native Flowers.
- \$1.00. First premium, to Mrs. David Warren, Swampscott, for 12 Nasturtiums.
- 50c. Gratuity, to Mrs. C. M. Barker. Lynn, for Display Coxcombs.
- \$1.00. First premium, to Mrs. J. A. Cain, Lynn, for 12 Geraniums, double.
- \$1.00. First premium, to Mrs. J. A. Cain, Lynn, for 12 Geraniums, single.
- \$1.00. First premium, to Mamie Mitchell, Beverly, for 24 French Marigolds.
- \$10.00. First premium, to John E. Mitchell, Beverly, for 25 Flowering and Foliage Plants.
- 50c. Gratuity, to Mrs. A. S. Edwards, Beverly, for one Hydrangea.
- 50c. Gratuity, to George P. Low, Essex, for Collection of Gladiolus.
- 50c. Gratuity, to G. H. Batchelder, Lynn, for Collection of Dahlian Pompom.
- 50c. Gratuity, to F. N. Dodge, Beverly, for Collection of Dahlias Pompom.
- \$2.00. First premium, to Frederick Lamson, Salem, for Basket of Greenhouse Flowers.

- \$1.00. Second premium, to Mrs. J. C. Vickary, Lynn, for Basket Garden Flowers.
- \$1.00. First premium, to Mrs. Albert Eaton, Lynn, for 24 Petunias, single.
- 50c. Gratuity, to Mrs. M. E. Fuller, Middleton, for Collection of Wild Flowers.
- \$2.00. First premium, to J. C. Vickary, Lynn, for Collection of Pansies, Creseent Design.
- \$1.00. First premium, to J. C. Vickary, Lynn, for 12 Phlox Drommondii.
- \$1.00. Gratuity, to Miss Amelia Ropes, Salem, for Collection of Garden Flowers.
- \$1.00. First premium, to Miss Amelia Ropes, Salem, for Display of Coxcombs.
- \$1.00. First premium, to Mr. Gordon, gardener for Mr. Pickman, Beverly, for 5 Palms.
- \$2.50. Gratuity, to Mr. Gordon, gardener for Mr. Pickman, Beverly, for Collection of Flowering and Foliage Plants.
- \$1.00. First premium, to J. C. Vickary, Lynn, for 24 Zinnias.
- \$1.00. First premium, to J. C. Vickary, Lynn, for 12 Scabiosas.
- \$2.50. Gratuity, to David Weir, gardener to Gardner Estate, Beverly, for Collection of Flowering and Foliage Plants.
- Special Faxon premium, to Mrs. J. A. Cain, Lynn, for Collection of Pansies.

Many collections, worthy of the Society's Premiums, were necessarily thrown out by reason of not complying with the rules and regulations.

Your committee with the new and revised Premium list in hand entered upon their duties with considerable interest. The display in Plants and Flowers were arranged in the rear gallery of the Exhibition Hall under the efficient management of Mr.

John Mitchell, (whose own displays received a number of prizes,) Florist, of Beverly, as well as the space allotted, time and convenience would allow. It is becoming apparent in this department of our exhibition, as well as in others, that increased room and facilities are more and more required in the Exhibition Hall for proper and satisfactory display of articles exhibited. While it was to be regretted that no competitors appeared for a number of the premiums offered, it was yet the means, possibly, of saving considerable annoyance in providing proper space for them.

Of the \$150.00 assigned to this committee, but \$50.00 was all that we felt justified in awarding. A number as has frequently been the case in previous years, failing to comply with the printed regulations of the society, lost the full attention that otherwise their exhibits would have merited. Especially was this true in the exhibit of "Flowering and Foliage" plants by Mr. David Weir, gardener to the Gardner estate, Beverly, who failed to enter them as he evidently intended to do. Further, while many of his plants were, by reason of age, beyond their prime, they, yet by their bright and attractive appearance, added to the exhibit and merited certainly the gratuity we were able to grant. Mr. Gordon, gardener to Mr. Pickman of Beverly, also displayed of his skill and added not a little to the success of the exhibit. We trust at the next annual exhibition both of these gentlemen, as well as others, will favor us as well, if not better, that all may enjoy.

Noticeable was the absence of Plants in the "Single Specimens" that often have graced our tables. Designs in both native and cultivated flowers were lacking, a feature of the annual display that we hope hereafter will not again be wanting.

For the first time, the society offered a premium for collections of wood of native trees in sections arranged suitable for the occasion in the hope that the boys and girls of the county and even those of more mature years would find not only pleasure, but instruction, in familiarizing themselves with our native trees

to the extent of showing a sample of their work accomplished.

True, likewise, in the offer made for best display of "Native and Introduced" weeds was the wish to secure interest enough in a display that might lead to more knowledge concerning them and suggest best means for their extinction.

The growth of the exhibits, in this department, following the lines marked out in the premiums offered means the annual display of a good and considerable variety, especially in the line of specimen plants often of considerable size. To accommodate such and to render possible a more effective grouping we would respectfully suggest and recommend that a space hereafter in the center of the Exhibition Hall rather than the platforms or galleries be allotted to this department. Such space will thus allow the "banking" or "massing" of the plants displayed in some compact and appropriate form easily to be seen and of good effect from all parts of the hall. The "Cut Flowers" and smaller plants as usual on tables gathered about this central location.

Edward E. Woodman, *Chairman*, Martha De M. Gage, Charlotte N. S. Horner, Mrs. L. H. Bowdoin, John A. Sears, J. H. Sears.—*Committee*.

VEGETABLES.

The Committee on Vegetables have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$3.00. First premium to W. A. Jacobs, Danversport, for Stone Mason cabbage.
- 2.00. Second premium to W. A. Jacobs, Danversport, for Red cabbage.
- 2.00. Second premium to W. A. Jacobs, Danversport, for Savoy cabbage.

- 3.00. First premium to W. A. Jacobs, Danversport, for Danvers carrot.
- 50c. Gratuity to I. Foster, Jr., Peabody, for Hubbard squash.
- 50c. Gratuity to I. Foster, Jr., Peabody, for Essex Hybrid squash.
- 3.00. First premium to I. Foster, Jr., Peabody, for Peach tomatoes.
- 3.00. First premium to A. A. Mason, North Beverly, for Marrow, Dunlap squash.
- 3.00. First premium to A. A. Mason, North Beverly, for Turban squash.
- 2.00. First premium to A. A. Mason, North Beverly, for Cantalope melon.
- 1.00. Gratuity to A. A. Mason North Beverly, for Parsnips.
- 1.00. Gratuity to David Warren, Swampscott, for Danvers onion.
- 3.00. First premium to David Warren, Swampscott, for Bay State squash.
- 1.00. Gratuity to E. W. Galloupe, Wenham, for Butnam squash.
- 1.00. Gratuity to Batchelder Farm, West Wenham, for Marblehead squash.
- 3.00. First premium to Batchelder Farm, West Wenham, for Yellow Ruta Bagas.
- 3.00. First premium to Batchelder Farm, West Wenham, for Clark's No. 1 potatoes.
- 2.00. First premium to Batchelder Farm, West Wenham, for Brunswick cabbage.
- 50c. Gratuity to S. F. Newman, Newbury, for Red onions.
- 3.00. First premium to Richard Jaques, Newbury, for parsnips.
- 3.00. First premium to Richard Jaques, Newbury, for Flat onions.

- 3.00. First premium to Richard Jaques, Newbury, for Red onions.
- 3.00. First premium to Richard Jaques, Newbury, for Edmand's beet.
- 3.00. First premium to W. Burke Little, Newbury, for Dewing's beets.
- 3.00. First premium to W. Burke Little, Newbury, for Eclipse beets.
- 3.00. First premium to W. Burke Little, Newbury, for Danvers onions.
- 3.00. First premium to W. Burke Little, Newbury, for Beauty of Hebron potatoes.
- 50c. Gratuity to John E. Foster, Beverly, for peppers.
- 50c. Gratuity to G. E. Ward, Beverly, for Bay State squash.
- 3.00. First premium to Asa F. Lee, Beverly, for Brunswick cabbage.
- 3.00. First premium to Asa F. Lee, Beverly, for Potter's sweet corn.
- 50c. Gratuity to Asa F. Lee, Beverly, for Boston favorite beans.
- 50c. Gratuity to Mabel Woodbury, Beverly, for Gourds.
- 3.00. First premium to Aaron Low, Essex, for Early Cory corn.
- 50c. Gratuity to Aaron Low, Essex, for Low's perfection corn.
- 3.00. First premium to Aaron Low, Essex, for Essex Hybrid tomatoes.
- 3.00. First premium to Aaron Low, Essex, for Cardinal tomatoes.
- 3.00. First premium to Aaron Low, Essex, for Emery tomatoes.
- 2.00. First premium to William Monroe, Beverly, for Golden celery.

- 50c. Gratuity to W. J. Monroe, Lynnfield, for Edmand's beets.
- 50c. Gratuity to W. J. Monroe, Lynnfield, for Essex sweet corn.
- 2.00. Second premium to Moses H. Poor, West Newbury, for Stone Mason cabbage.
- 3.00. First premium to Albert Berry, North Andover, for White Ruta Bagas.
- 50c. Gratuity to C. R. Andrews, West Boxford, for egg white turnips.
- 50c. Gratuity to C. R. Andrews, West Boxford, for Red cabbage.
- 50c. Gratuity to J. B. Bresnehan, Peabody, for 1 peck of Hebron potatoes.
- 50c. Gratuity to S. B. Bresnehan, Peabody, for Marrow squash.
- 3.00. First premium to T. C. Durkee, West Peabody, for Savoy cabbage.
- 2.00. Second premium to T. C. Durkee, West Peabody, for Brunswick cabbage.
- 3.00. First premium to W. K. Cole, West Boxford, for peck cranberries.
- 3.00. First premium to Edwin Bates, Lynn, for Mangold Wurtzels.
- 3.00. First premium to Edwin Bates, Lynn, for Livingstone tomatoes.
- 50c. Gratuity to J. T. Kelley, Salem, for Trophy tomatoes.
- 2.00. First premium to H. A. Stiles, Middleton, for 1 peck cranberries.
- 3.00. First premium to H. A. Stiles, Middleton, for purple top turnips.
- 3.00. First premium to H. A. Stiles, Middleton, for White top turnip.
- 1.00. Gratuity to J. Swinerton, Danvers, for Ruta Baga turnips.

- 1.00. Gratuity to N. A. Bushby, Peabody for Sibley squash.
- 3.00. First premium to N. A. Bushby, Peabody, for Short Horn carrot.
- 3.00. First premium to W. K. Cole, West Boxford, for 1 peck Early Rose potatoes.
- 1.00. Third premium to F. D. Marston, Danvers, for 1 peck Cranberries.
- 8.00. First premium, to J. J. H. Gregory, Marblehead, for collection of vegetables.
- 3.00. First premium to J. J. H. Gregory, Marblehead, for Hubbard squash.
- 1.00. Gratuity to Batchelder Farm, West Wenham, for collection of potatoes.
- 3.00. Gratuity to Aaron Low, Essex, for collection of tomatoes.
- 50c. Gratuity to Osman Babson, Gloucester, for last year's squash.
- 50c. Gratuity to W. A. Jacobs, Danversport, for Dunlap's Prolific Marrow squash.
- 50c. Gratuity to W. A. Jacobs, Danversport, for Cauliflower.
- 1.00. Gratuity to W. A. Jacobs, Danversport, for Stowell corn.

Richard Jaques, John T. Elliot, Wm. H. Greenleaf—*Committee.*

GRAIN AND SEEDS.

The Committee on Grain and Seeds have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$1. First premium to S. W. Weston, Middleton, for 1 peck field corn.

- \$1. First premium, to S. W. Weston, Middleton, for 1 peck rye.
- \$1. First premium, to B. H. Farnum, North Andover, for 1 peck buckwheat.
- \$5. First premium, to C. K. Ordway & Son, West Newbury, for 25 ears field corn.
- \$3. Second premium, to A. S. Longfellow, Groveland, for 25 ears of field corn.
- \$2. Third premium, to S. W. Weston, Middleton, for 25 ears field corn.
- \$3. First premium, to A. C. Osborne, Peabody, for 25 ears of pop corn.
- \$2. Second premium, to Edwin Bates, Lynn, 25 ears of pop corn.
- \$8. First premium, to J. J. H. Gregory, Marblehead, for 303 samples of field and garden seeds.
- Charles B. Grant, Wm. H. Smith, Albert Berry—*Committee*.

NOTE—Awards made to Aaron Low and Buxton & Co., by Committee, were not confirmed by Trustees, because separate entries were not made of what were grown by them and what were grown by others.

COUNTERPANES AND AFGHANS.

The Committee on Counterpanes and Afghans have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- \$3.00 First premium, to Mrs. Ivory Quimby, Wenham, for Caterpillar afghan.
- 2.00. Second premium, to Mrs. J. E. Galloupe, Beverly, for knitted afghan.
- 4.00. First premium, to Mrs. W. C. Davenport, Salem, for knitted quilt.
- 2.00. Second premium, to Mr. W. Pollies, Boxford, for silk quilt.

- 1.00. Gratuity, to Miss C. M. Keyes, East Boxford, for silk quilt.
- 1.00. Gratuity, to Mrs. M. W. Downing, North Beverly, for knit quilt.
- 2.00. Gratuity, to Mrs. S. P. Baker, Peabody, for silk quilt.
- 2.00. Gratuity, to Mrs. J. T. Harris, Beverly, for silk quilt.
- 1.00. Gratuity, to Mrs. Walter Perry, Beverly, for knitted afghan.
- 1.00. Gratuity, to Mrs. Wilmont Vivian, Salem, for plush quilt.
- 1.50. Gratuity, to Mrs. R. D. Wilson, Beverly, for woollen quilt.
- 1.50. Gratuity, to Mrs. Melvin W. Gould, Topsfield, for quilt and shams.
- 1.00. Gratuity, to Miss M. E. Droyer, Salem, for afghan.
- 50c. Gratuity, to Mrs. S. F. Towne, Beverly, for cotton quilt.
- 50c. Gratuity, to Mrs. A. E. Dodge, Beverly, for cotton quilt.
- 1.00. Gratuity, to Mrs. M. A. Osgood, Beverly, for knit quilt.

Mrs. A. F. Harvey, Mrs. M. E. Fuller, Mrs. A. Babson—
Committee.

CARPETING AND RUGS.

The Committee on Carpeting and Rugs have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$3.00. First premium, to Mrs. B. W. Hobbs, Wenham, for braided mat.
- 2.00. Second premium, to Mrs. Mary Vickery, Beverly, (age 87 years,) for braided mat.
- 1.00. Gratuity, to Mrs. James E. Gerrish, Beverly, for rug.

- 1.00. Gratuity, to Mrs. J. N. Remson, Beverly, for drawn rug.
- 1.00. Gratuity, to Mrs. E. Standley, Beverly, for braided rug.
- 1.00. Gratuity, to Mrs. A. L. Crosby, Beverly, for braided rug.
- 1.00. Gratuity, to Mrs. C. B. Gilford, Ipswich, for drawn rug.
- 1.00. Gratuity, to Mrs. Eliza Wilson, Beverly, (age, 77 years), for mat.
- 1.00. Gratuity, to Mrs. S. A. Stickney, Salem, for drawn rug.
- 1.00. Gratuity, to Mrs. J. T. Elliott, Beverly Farms, for drawn rug.
- .50. Gratuity, to Mrs. E. J. Carleton, Salem, for rug.
- .50. Gratuity, to Mrs. S. A. Berry, Beverly, for rugs.
- .50. Gratuity, to Mrs. H. A. Appleton, Beverly, for drawn mat.
- .50. Gratuity, to Mrs. Louisa P. Hood, Danvers, for braided mat.
- .50. Gratuity, to Mrs. Horace E. Ellis, Salem, for braided mat.
- .50. Gratuity, to Mr. Calvin Foster, Beverly, for drawn mat.
- .50. Gratuity, to Mr. Calvin Foster, Beverly, for drawn mat.
- .50. Gratuity, to Mrs. Sally Martin, Manchester, for yarn mat.
- .50. Gratuity, to Mrs. Betsey Coffin, Beverly, (age, 76 years, 6 months,) for braided mat.
- .50. Gratuity, to Mrs. Elnathan Dodge, Danvers, for braided mat.
- .50. Gratuity, to Mrs. David Standley, Beverly, (age, 76 years.) for braided mat.
- .50. Gratuity, to Mrs. L. J. Hooper, Beverly, for drawn mat.

- .50. Gratuity, to Mrs. H. E. Pope, Salem, for drawn mat.
- .50. Gratuity, to Mrs. Clara N. Davis, Beverly, for drawn mat.
- .50. Gratuity, to Mrs. Elizabeth Woodberry, Beverly, for drawn mat.
- .50. Gratuity, to Mrs. J. Arthur Trask, Peabody, for braided mat.
- .50. Gratuity, to Mrs. H. Pushee, Beverly, for drawn mats.
- .50. Gratuity, to Mrs. Alice Caswell, Beverly, for drawn mat.
- .50. Gratuity, to Mrs. Rosie E. Cahoon, Beverly, for drawn mat.
- .50. Gratuity, to Mrs. Joseph Bushby, Danvers, for rag mat.
- .50. Gratuity to Miss L. E. Gillispie, Salem, for kid button rug.
- .50. Gratuity, to Mr. A. Quimby, Salem, for drawn rug.
- .50. Gratuity, to Mrs. H. A. Preston, Beverly, for button mat.
- .50. Gratuity, to Mrs. Eliza Porter, Danvers, (age, 91 years,) for braided mat.
- .50. Gratuity, to Mrs. W. H. Harmon, Beverly, for worked worsted rug.
- .50. Gratuity, to Mrs. Sarah E. Woodman, Danversport, for braided rug.
- .50. Gratuity, to J. T. Ross, Danversport, for braided rug.
- .50. Gratuity, to Lydia P. Ober, Beverly Farms, for drawn rug.
- .50. Gratuity, to Lydia P. Ober, Beverly Farms, for drawn rug.
- .50. Gratuity, to Mrs. M. J. Ham, Beverly, for drawn rug.
- .50. Gratuity, to B. Cook, Wenham, for braided rug.
- .50. Gratuity, to Fannie F. Flint, Middleton, for knit silk rug.

- .50. Gratuity, to Mrs. Henry F. Williams, Beverly, for drawn rug.
- .50. Gratuity, to Minnie Mansley, Beverly, for drawn mat.

Mary E. Stiles, Andrew Nichols—*For the Committee.*

MANUFACTURES OF LEATHER.

The Committee on Manufactures of Leather have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$5.00. First premium, to Charles McTernen, Danvers, for team harness.
- 1.00. Gratuity, to Charles McTernen, Danvers, for express harness.
- 5.00 First premium, to T. W. Howse, Beverly, for express harness.
- 2.00. Gratuity, to T. W. Howse, Beverly, for carryall harness.
- 2.00. First premium, to J. F. Todd, Rowley, for pair kid boots.
- 2.00. First premium. to W. H. Flint, Danvers, for boots.
- 3.00. Gratuity, to C. P. Spencer & Co., Salem, for Surry harness.
- 2.00. Gratuity, to C. P. Spencer & Co., for coach harness.
- Diploma, to Pedrick & Seavey, Beverly, for case of shoes.
- 4.00. Gratuity, to Creesy & Obear, Beverly, for case of shoes.
- 5.00. First premium, to H. H. Pillsbury, Danvers, for car harness.

H. H. Pillsbury, P. E. Clark, G. C. Foster—*Committee.*

FANCY WORK.

The Committee on Fancy Work have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$1.50. Gratuity, to Martha O. Barrett, Peabody, for pen-writing on linen.
- 1.00. Gratuity, to Annie P. Newhall, Lynn, for pen-writing on linen.
- 75c. Gratuity, to Emma L. Porter, Beverly, for lace handkerchief.
- 50c. Gratuity, to Miss Jennie P. Felt, Lynn, for Honiton lace hood, collar and handkerchief.
- 50c. Gratuity, to Helen Southard, Beverly, for handkerchief.
- 50c. Gratuity, to Mrs. H. F. Walker, Beverly, for Tidy.
- 50c. Gratuity, to Olive Rodie, Peabody, handkerchief.
- 50c. Gratuity, to Annie Balecomb, Salem, for lace.
- 50c. Gratuity, to Mrs. Otis Brown, Peabody, for toilet set.
- 1.00. Gratuity, to Miss Clara Swasey, Beverly, for knit table center.
- 50c. Gratuity, to Mrs. E. W. Fisk, Salem, table cloth.
- 50c. Gratuity, to Mrs. J. T. Mooney, Salem, for lambrequin.
- 50c. Gratuity, to Mr. Chandler, Beverly, for handkerchiefs.
- 50c. Gratuity, to Annie L. Smith, Danvers, for dress.
- 50c. Gratuity, to Miss Gussie Denning, Beverly, for silk quilt.
- 50c. Gratuity, to Mrs. J. M. Ward, Peabody, crochet mat.
- 50c. Gratuity, to Cora S. Haskell, Salem, bureau scarf.
- 75c. Gratuity, to Mrs. Gunn, Lynn, for blanket.
- 50c. Gratuity, to Josie P. Felt, Lynn, for flannel skirt.
- 50c. Gratuity, to Julia S. Parsons, Lynnfield centre, for handkerchief.
- 50c. Gratuity, to Mrs. A. Dodge, Beverly, for knitted cap.

- 50c. Gratuity, to Lizzie Fernald, Danvers, for specimens of lace.
- 50c. Gratuity, to Miss Flora E. Sampson, Lynn, for sample of lace.
- 50c. Gratuity, to Mrs. W. A. Perry, Salem, for tidy.
- 75c. Gratuity, to Judith Crosby, Danvers, for sample of edging.
- 50c. Gratuity, to J. L. Goodrich, Beverly, for apron.
- 1.00. Gratuity, to Miss Clara M. Ames, Peabody, for mats.
- 50c. Gratuity, to Miss E. W. W. Chadwick, Salem, for bureau scarf.
- 50c. Gratuity, to Miss Faxon, Danvers, for skirt border.
- 1.00. Gratuity, to Miss N. F. Butman, Beverly, for silk cocoons.
- 50c. Gratuity, to Mrs. E. W. Davis, Beverly, for doll.
- 1.00. Gratuity, to Mrs. Wilmont Vivian, Salem, for table cloth.
- 50c. Gratuity, to Ida E. Merrill, Beverly, for sham, apron, handkerchief.
- 75c. Gratuity, to C. Mason, Beverly, for foot rest.
- 50c. Gratuity, to Katie A. Lynch, Beverly, for table scarf and sofa pillow.
- 50c. Gratuity, to Mrs. Ellen G. Hart, Peabody, for down pillow.
- 75c. Gratuity, to Nellie F. Standley, Beverly, for satchel.
- 75c. Gratuity, to Mrs. Clara E. Porter, Beverly, for pillow shams.
- 50c. Gratuity, to Mrs. W. F. Porter, Beverly, for apron.
- 50c. Gratuity, to W. C. Davenport, Salem, for apron.
- 75c. Gratuity, to Miss C. M. Dannel, Ipswich, for piano cover.
- 75c. Gratuity, to Annie Bushby, Peabody, for table cover.
- 75c. Gratuity, to Mary Gray, Salem, for lambrequin.
- 50c. Gratuity, to Lizzie Goldthwaite, Salem, for dress.

Elizabeth P. Nichols, Frances O. Perkins, Emily H. Campbell, Mrs. J. M. Todd—*Committee*.

WORKS OF ART.

The Committee on Works of Art have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$3.00. Gratuity, to Mrs. Foster, Beverly, for oil painting, and painting on china.
- 3.00. Gratuity, to Ida F. Upton, Salem, for oil painting.
- 2.00. Gratuity, to Annie Woodbury, Beverly, for crayon drawing.
- 2.00. Gratuity, to Miss E. W. Chadwick, Salem, for brass etching.
- 2.00. Gratuity, to Beverly Pottery, Beverly, for pottery.
- 1.50. Gratuity, to Mrs. A. E. Clark, Beverly, for oil painting.
- 1.50. Gratuity, to Fred N. Dodge, Beverly, for clock in sorrento work.
- 1.50. Gratuity, to Fred M. Herrick, Beverly, for clock in intarsia or inlaid work.
- 1.00. Gratuity, to Miss M. S. Friend, Beverly, for artistic pen sketch.
- 1.00. Gratuity, to Miss Susie S. Kelly, Salem, for charcoal drawing.
- 1.00. Gratuity, to R. T. Chapple, Salem, for decorated vases.
- 1.00. Gratuity, to Florence Kilham, Beverly, for oil painting fruit.
- 1.00. Gratuity, to Mrs. Taylor, Beverly, for oil china painting.
- 1.00. Gratuity, to Mrs. Martha Barrett, Peabody, for oil painting.
- 1.00. Gratuity, to William O. Cree, Beverly, for stuffed birds.
- 1.00. Gratuity, to J. M. Washington. Salem, for penmanship.

- 1.00. Gratuity, to A. Elwell, Danvers, for photographs and crayon drawing.
- 75c. Gratuity, to S. D. Rice, Danvers, for oil painting.
- 75c. Gratuity, to R. P. Story, Essex, for composition of still life, in oils.
- 75c. Gratuity, to A. S. Symonds, Peabody, oil painting, fruit.
- 75c. Gratuity, to Mary L. Woodbury, Beverly, for oil painting, flowers.
- 50c. Gratuity, to G. H. Worrall, Salem, for oil painting, flowers.
- 50c. Gratuity, to Willie Hill, Beverly, for drawing of horses' heads.
- 50c. Gratuity, to Mrs. C. P. Lefavour, Beverly, for oil painting ; mirror frame.

There were 153 entries under the head of Works of Art. The character of the objects which were submitted to the Committee was very varied, as there were comprised under this head, paintings in oil and in water colors, charcoal and pen sketches, specimens of penmanship, wood-sawing or sorrento work, intarsia or inlaid work in wood, painting on china and silk, moulding of pottery, and decorative modelling and painting of the same, brass etching, stuffed birds, etc.

Of course the greater part of the exhibitors had to go unnoticed, many of whom had more or less merit, but as the seeing and recognizing works of merit superior to one's own, is one of the very best of teachers, and one of the principal advantages of public exhibitions, they will have gained something by comparisons which an earnest worker will be glad to have done, and will profit by.

As the chief aim of this society is to raise the standard of all kinds of home work, knowing that to produce the best of each thing after its kind is improving and refining, it is thus, quite naturally drawn towards the representations of the beautiful in

the nature which surrounds them and presents itself to their notice under so many and such varied forms ;—of great power sometimes, and at other times, of great beauty, the study or observation of which is always ennobling, and whether they realize it or not, goes far towards making the agricultural class, some of the most thinking and well balanced of our people.

How grandly do some of our best artist depict nature in her stern mood of the thunder storm, her benevolent mood of the generous harvest, or her good-night salutations of a brilliant sunset ! How nobly has Rosa Bonheur immortalized her name and her art, by her splendid, strong and true representations of fine cattle ! She had to begin once, and in this very exhibition was one study of a dog's head by Mrs. A. E. Clark, which Rosa Bonheur might once have been proud to have painted, it is so true, so living.

Therefore, the first consideration of the Committee was drawn to Fine Art, properly so called, or the representing of the works of the Creator by his loving and studious children ; after this to decorative and industrial art ; he who excels in either of these departments, raises the famous banner "Excelsior" for the encouragement and guidance of his fellowmen.

After having exhausted the fund appropriated by the society for gratuities, the Committee decided that it would be well to make honorable mention of a few of the works which most deserved it ; they therefore wish thus to recognize the merits of a small picture in water colors, called "View from the Willows," by A. K. Abbott, which showed excellent drawing, good proportions and much promise ; of a "Fire Screen" by Mrs. W. W. Kilman, on which the brightly blooming caecties made a good apology for shutting out the fire-light ; of a charcoal drawing, by Arthur Streamburg of Beverly, which had good artistic qualities and was very promising ; of a fine specimen of penmanship, giving the true penman's flourishes in a very free manner, around which was grouped some clever sketches in water colors by Mr. Gardner ; of two bits of tree drawings with pen and ink

by S. E. Ober, showing careful study ; of a plaque in wood, with a fairly good head painted in the centre, but with a very beautiful open-work border, by W. H. S. Hascall, of Beverly ; and of an unpretending branch of oranges and orange blossoms by Miss Balcomb, which was well studied and refined in tone. A little painting of roses by Lilia Quinby "aged twelve years" would surely have been rewarded if it had been placed in the children's department, but having no special artistic merit it was overlooked by the Committee ; yet when, after the list of awards had been filled out and sent in to the Secretary, it was seen that it was done by so young a child, it was decided to give it honorable mention in their report, for pains-taking work, she may yet hope to win the first prize some day.

The works of the Beverly Pottery form a very desirable industry which is so well known that it is hardly necessary to make any comment upon them ; yet the directors deserve high praise for continuing to make jars and vases which have for one of their chief merits that they generally retain beauty and simplicity of form, without attempting to produce surprising odd, or unartistic forms to please, or cater to an uneducated taste.

The Committee would most respectfully suggest to the officers of the society, that if the term "Works of Art" is to be so broadly applied it would be very desirable that the amount of money for the awards should be increased by \$10, or more.*

Miss Martha O. Barrett, Mrs. Charles J. Peabody, Miss Mary E. Williams, Miss Daisey F. Raymond, Mrs. John F. Smith—*Committee*.

*The Trustees have increased the amount for awards for Works of Art, to \$50.

CHILDREN'S WORK.

The Committee on Children's Work have attended to their

duty, and respectfully report to the Secretary that they have made the following awards :

- \$3.00. First premium, to Mattie G. Ferguson, Danvers, for handkerchief.
 - 2.00. Second premium, to Clara M. Keyes, Boxford, for quilt.
 - 1.00. Gratuity, to Abbie T. Woodbury, Beverly, for painting.
 - 1.00. Gratuity, to Lena G. Morgan, Manchester, for crochet work.
 - 50c. Gratuity, to Mary E. Dodge, Hamilton, for oil painting.
 - 50c. Gratuity, to Grace B. Lowd, Salem, for pillow shams.
 - 50c. Gratuity, to Lizzie Berry, Beverly, for quilt.
 - 50c. Gratuity, to Joanna L. Endicott, Beverly, for tray cloth.
 - 50c. Gratuity, to Hattie F. Dodge, Wenham, for afghan.
 - 50c. Gratuity, to Gertrude P. Cole, Peabody, for apron.
 - 50c. Gratuity, to Etta Pushee, Beverly, for crayon drawing.
 - 50c. Gratuity, to Fannie Merrill, Newburyport, for quilt.
 - 50c. Gratuity, to Annie J. Haskell, Beverly, for mat.
 - 50c. Gratuity, to Edith Elliot, Beverly, for bureau scarf.
 - 50c. Gratuity, to Lillie Ward, Beverly, for basket of flowers.
 - 50c. Gratuity, to Blanche Munroe, Beverly, for scent bag.
- Mrs. Bennett Griffin, Mrs. Fred A. Dodge, Mrs. A. B. Fellows, Ellen M. Dole—*Committee*.

REPORT OF COMMITTEE ON IMPROVING WASTE LAND.

Three members of your committee visited the land entered by N. N. Dummer, (the only entry made,) and there found a track of about 15 acres, which had been reclaimed for the most part

from an alder swamp. The steps taken by Mr. Dummer are stated in his report. The water level being from necessity within a foot of the surface of most of the area as late as through planting time, of necessity limiting the crop that it is possible to raise upon it to the grasses, and the presence of some of the varieties of plants that thrive in wet and cold soil, gives evidence that the water needed to be lowered in the ditch, which though shallow, had become partly filled with soil. Still the committee had reason to believe that with but a small additional outlay, during the period remaining of the lease, Mr. Dummer would obtain for the land considerable more than sufficient to repay him all the expense incurred. Assuming that the owner himself had entered on this investment, how would the case have stood? Assuming that his course and outlay had been the same as Mr. Dummer, and with like results, then in five years, he would have received back all his outlay, with more than the interest on the investment, and in addition a worthless alder swamp turned into productive grass land, a permanent profit.

The experiment of Mr. Dummer is one of especial value to the farmers of Essex County, for two reasons: 1st, because as far as it has gone, it demonstrates that it may pay any man to reclaim waste land, even when not his own, on terms that will make the work a profit to both parties concerned in the enterprise; and secondly it proves that there is a kind of low land in the county, that it will pay to reclaim even when the water in the early part of the season, stands within a foot of the surface. Your committee awarded to Mr. Dummer the premium of \$15.

J. J. H. Gregory—*For the Committee.*

STATEMENT OF N. N. DUMMER OF ROWLEY.

The land which is entered for premium is a piece of pasture containing about 15 acres situated on the east side of the Newburyport Turnpike, near Glen Mills in Rowley. This pasture

I took for the purpose of making a field and was to have all I could get from it for five years. When I took it in August, 1886, it was covered with a growth of Alders, with here and there an open space, excepting two acres which had been plowed. I commenced at once cutting down and burning the bushes and alders. The first year I plowed fourteen acres and sowed thirteen of them with grass seed.

It was plowed by a two horse team and at the rate of about three-fourths of an acre a day.

The next year I took for the first crop eighteen tons of hay. That year I planted one acre with potatoes and received 70 bushels. I then sowed it with grass seed and broke a half acre more of the land. The next year I cut sixteen (16) tons of hay. This year I plowed and sowed down the remaining land, and have cut fifteen tons of hay. The hay would have weighed more, but there was so much rain and cloudy weather, it did not ripen well. I have received from the land within, \$125, enough to pay for the outlay, and have two more crops to take from it to complete the term of five years.

I received :

1st year.—18 tons of hay at \$11.	Standing	\$198.00.
2d “ —16 “ “ “ “ “	“	176.00.
“ “ 70 bushels of potatoes at 75c.		52.50.
3d “ 15 tons of hay,		165.00.
		<hr/>
		591.50.
		<hr/>
Expense of plowing,		\$75.00.
Cutting and burning bushes,		300.00.
Fertilizers and manures,		341.00.
		<hr/>
		716.00.

Expense exceeds receipts by \$124.50.

N. N. DUMMER.

REPORT OF COMMITTEE ON GRAIN CROPS.

To the Secretary of Essex Agricultural Society:

The Committee on Grain Crops report but two entries, same number as last year. One of Indian corn, by the same person, O. P. Kilham, of Boxford. One of barley, by Silas Plumer, of Newbury. Both crops were entered to be visited immediately, which leaves no time to notify the committee in all parts of the county. I visited Mr. Plumer's crop July 8th, and he cut it the 10th. It was very early, and had not lodged any this wet year. I think the reason he did not get more than 38 bushels, was that the seed, though from a premium crop is deteriorating, as there were two and four rowed barley, with a few oats, which shows that we should have the best of seed. We recommend that Mr. Plumer be given the first premium of \$10.*

I visited Mr. Kilham's corn the 7th of Sept., the same day that I received the entry. He had begun to cut and stook it. The ears were very uniform in size, dry and ripe; it showed the same clean cultivation as last year, but the grass was showing its claim on the land. We recommend that Mr. Kilham be given the premium of \$10.

He has given a very exact statement; but I do not agree with the profit. Plowing and harrowing on his corn land last year, was \$9.00. Cultivating and hoeing, \$7.00. This year it should be twice that, as the corn was in drills, and had to be thinned; and also a wet year. The corn stover should be valued not over \$24. The amount of grass that would grow if not plowed, which I think would have been heavy, should have this extra plowing expense reckoned also.

Andrew Dodge—*For the Committee.*

*The Trustees would not suspend the rules to allow a premium on a crop less than 40 bushels to the acre.

STATEMENT OF OLIVER P. KILHAM.

The two years, 1887 and 1888, the land produced light crops of English hay, 1200 to 1500 pounds per acre, no manure was

used. The soil is a dark loam. The field was plowed about the 15th of May, six inches deep, at a cost of \$3. per acre. The field was manured with 20 loads of manure from barn cellar, 30 bushels per load, which was spread and plowed under. Value of manure spread on ground \$2. per load. Field planted May 18th with a machine, using 12 qts. of eight rowed yellow corn to the acre, at a cost of \$1.50 per acre. The field was cultivated four times and hoed twice. Cost of cultivating including weeding and thinning, \$6 per acre. Commenced cutting and stooking the 2d. day of September and finished the 15th. Cost of cutting and stooking \$6. Getting in and husking \$15. About 300 lbs. of Stockbridges Corn Phosphate, costing \$6, was drilled in with the seed. I weighed 80 lbs. of ears when husked 4th of October, put it in thin bags and hung them on a pole, in the sun three weeks, it was then nice and dry enough to grind 68 lbs, cobs 12 lbs, making 56 lbs of shelled corn.

CORN CROP.

Dr.

To Plowing and Harrowing,	\$4.75
20 loads of manure spread,	40.00
Seed and planting,	1.50
Cultivating and hoeing,	6.00
Cutting and stooking,	6.00
Getting in and husking,	15.00
300 lbs. Phosphate	6.00

Expense per acre,	\$79.25
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Cr.

By 4 tons of Stover at \$12,	\$48.00
98 1-16 bushels of corn at 70c.,	68.64
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	\$116.64

Value of manure left in field,	\$ 23.00
	<hr/>
	\$139.64
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Profit per acre,	\$60.39

It might be thought I estimated the value of my corn too high by the bushel. I have been selling this fall for hulling, for 75c. per bushel.

This may certify that I measured for O. P. Kilham 4 rods, at each end of the field, and 4 rods in the middle, and it weighed 49 1-3lbs. per rod. I hauled and weighed the same.

MOODY K. STACY.

REPORT OF COMMITTEE ON ROOT CROPS.

The Committee on Root Crops have only six entries to report this year from five competitors, as against ten entries in 1888, and the smallest number we think for several years, and probably due to the excessive rains the past season, are as follows:

John H. George, of Methuen, crop of onions and potatoes. Daniel Carlton, of North Andover, crop of cabbage. David Warren, of Swampscott, crop of Bay State squash. Cornelius Moynihan, of Newbury, crop of Ruta Baga turnips. James Manning, of Topsfield, crop of Ruta Baga turnips.

The first visit we made was to see Mr. John H. George's crop of onions and potatoes, on Aug. 22, and found for this season what we called a remarkably good crop of both. The onions grew on the same piece of reclaimed swamp land that he has entered for a premium before, not any weeds on the piece, and the onions all dried down and ready for market, with no scallions, and very few picklers. The size of the onions as a whole, were not so large as some would like, but were a very even medium, that would suit most people for family trade. His crop of potatoes grew on a new piece of ground, that was covered with rocks and stumps, the previous year, when your Committee

visited him, of a gravelly loamy nature, but the rocks and stumps had all disappeared and a fine crop of potatoes planted in hills, three feet apart each way, of good even size, smooth, and free from rot.

On Sept. 5 we visited Mr. Carlton's crop of cabbage, they were Brunswick's planted on good, strong, dark, loamy soil. The cabbage was planted in rows three feet apart and set eighteen inches apart in the row, and at the time of our visit every cabbage had a head of large size for that season of the year, so large that most of them touched and crowded each other. On Sept. 21 we went to Newbury to see the crop of Ruta Baga turnips entered by Mr. Moynihan; they were planted quite early in the season for turnips, on a side hill sloping to the north, of a dark yellow loam. The crop was a good one, but the quality of it was so large and coarse, that very few of them would be marketable, and your Committee did not feel justified in giving him the first premium.

On Sept. 27, we went to Swampscott to see Mr. Warren's crop of Bay state squashes, which we found to be of good quality, even in size, and well ripened. Mr. Warren showed us one side of the piece that was planted with seed taken from squash weighing eight or nine pounds, and the product was the same, while the balance of the piece, seed were taken from squash weighing from twelve to sixteen pounds and the product the same.

Oct. 8 we went to Topsfield to see a crop of Ruta Baga turnips entered by Mr. Manning; they were planted so late that very few of them grew large enough to be of a marketable size, but they were even, set well in the rows, and if they had one month more to grow, would undoubtedly have been a fine crop, but under the circumstances the Committee thought they could not award him a premium, and do justice by the society.

The Committee award the following premiums :

\$10. First premium, to John H. George, Methuen, for crop onions.

- \$10. First premium, to John H. George, Methuen, for crop potatoes.
- \$10. First premium, to Daniel Carlton, North Andover, for crop cabbage.
- \$10. First premium, to David Warren, Swampscott, for crop Bay state squash.
- \$5. Second premium, to Cornelius Moynihan, Newbury, for crop Ruta Baga turnips.

John M. Danforth, *for the Committee.*

STATEMENT OF A CROP OF ONIONS, GROWN BY JOHN H. GEORGE, OF
METHUEN.

The half acre of onions, which I enter for the society's premium, were grown on a peat meadow. It has had onions grown on it for the last five years, and has been manured each year at the rate of, not to exceed 10 cords compost to the acre. This year it had about 4 cords good manure, horse, cow and night soil, mixed on the half acre. It was applied last fall, and ploughed in about 4 inches deep with one horse. This spring it was harrowed, brushed, dragged, and sown with Yellow Danvers onion seed, 6 lbs. to the acre; 12 inches between the rows; hoed 5 times; weeded 3 times; raked out, picked up into crates, piled up in the field to dry; when dry carted to the onion house, topped and sold. The yield was 312 bushels medium sized onions with not a scullion among them.

CROP OF ONIONS.

Dr.

To Manure, 4 cords,	\$20.00
Ploughing, harrowing, brushing and digging,	3.00
3 lbs. onion seed,	6.00
Sowing,	1.00
Hoeing 5 times, 2 1-2 days work.	3.75
Weeding 3 times boy labor at 75 cents,	7.00

To Harvesting and topping, at 5 cents per bushel,	\$15.60
Interest and taxes on land,	6.00
	<hr/>
	\$62.35

Cr.

By 312 bush. onions at 80 cents,	\$249.60
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NOTE—Crop per acre, 624 bushels, at 80 cts. per bushel,	\$459.20
Expense per acre,	124.70
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Profit per acre,	\$334.50

METHUEN, Aug. 26, 1889.

I hereby certify that I have this day measured a tract of land for John H. George. on which was a crop of onions entered by him for premium of the Essex Agricultural Society, and that said tract contained one half an acre.

JOS. S. HOWE.

STATEMENT OF A CROP OF POTATOES, GROWN BY JOHN H. GEORGE
OF METHUEN.

The piece of potatoes which I enter, were grown on new land, which had never before been ploughed, and had never had manure applied. The soil is a yellow gravelly loam, facing south-east. This spring I ploughed the piece with four large horses and the largest plough I ever saw used. I had three men follow the plough and take out all the stones, which pretty well covered the ground. After we were through I contracted with a man to carry away the stones, for them, big and little, so it cost me nothing to remove them. I then harrowed it well; furrowed it with a large plough going twice in a row, and making a furrow about 10 inches deep; I manured in the hill with a compost of muck, night soil, wool waste and a little lime, a good shovelful in a hill; hills and rows as near three feet apart as I could guess. It was planted with medium size potatoes, two in a hill. Varieties:

Beauty of Hebron and early Essex, planted Apr. 29th. June 29th, dug a bushel of good sized tubers from 20 hills. They were cultivated 4 times with horse hoe, one day's hard work with hoe, and that was all until digging time. They were ripe before the mildew came, so I had but very few rotten ones. The yield was 148 bushels on the half acre, a fair yield for this year, of excellent quality, and though I have raised many a larger one, few, on the whole, have given me greater satisfaction for the labor and money expended.

CROP OF POTATOES.

Dr.

To Ploughing, 4 1-2 days, at \$1.50,	\$6.75
Harrowing and furrowing,	1.50
Compost, 3 cords, at \$4.00,	12.00
Applying in hill,	3.00
Planting,	3.00
.5 bushels potatoes at 50 cents,	2.50
Cultivating 4 times,	3.00
Hoeing, 1 day,	1.50
Digging 4 days.	6.00
Interest and taxes,	3.00
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	\$42.25

Cr.

By 148 bushels potatoes, at 80 cents,	\$118.40
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I sold all I wanted to sell at above price, and could have sold the whole at the same price.

NOTE—Rate of 296 bushels potatoes per acre,	\$236.80
“ “ expenses per acre,	84.50
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	\$152.30

METHUEN, Aug. 26, 1889.

I hereby certify that I have this day measured a tract of land for John H. George, on which was a crop of potatoes, entered by him for premium of the Essex Agricultural Society, and that said tract contained one half an acre.

JOS. S. HOWE.

STATEMENT OF DANIEL CARLTON, OF NORTH ANDOVER, ON CABBAGE CROP.

To the Committee on Root Crops:

GENTLEMEN: The half acre of cabbage entered by me, was grown on land that had been in grass for six years. No fertilizer had been applied while in grass. The soil is a dark shallow loam, resting upon a rocky sub-soil, and has natural drainage. Twenty loads of green cow manure per acre were spread upon the sod last spring, and plowed under six inches deep. The land was then thoroughly harrowed with the Acme harrow.

The rows made 3 1-2 feet apart, and 1-2 ton per acre of Cumberland, super-phosphate sown in the drills. The seed was sown by machine, using 3-4 lbs. of Fottler's Improved Brunswick cabbage seed per acre, sown May 20. Seed was raised by Warren P. Barker, of Danvers, and came up well, so that there were no vacant places to fill. The plants were thinned so as to stand about 18 inches apart in the row. The piece was hoed by hand twice, and the cultivator used between the rows once a week until the cabbages were two large for the team to go between the rows. The half acre contains twenty rows of equal length, and as I do not wish to dispose of the whole crop at present price, I have harvested two rows which yielded 29 bbls. of solid cabbage, trimmed for market, weighing considerable over 100 lbs. per bbl. These two rows were no more than an average of the twenty in the half acre. This would give a yield of 580 bbls. per acre.

The cost per acre I make as follows :

Plowing and preparing land,	\$9.00
Seed and sowing,	3.00
Cultivating and hoeing,	18.00
1-2 ton fertilizer and sowing same,	17.00
Value of manure when spread,	50.00
<hr/>	
Total,	\$97.00

Which makes the cost per bbl. a little less than 17 cents.

I have charged nothing for thinning the plants, as they were most of them used by myself and neighbors to set again, neither have I charged interest and taxes on land, as there is probably fertilizer unused in the land to more than balance those items. The manure used was made on the farm, and my estimate of the value of that may be either too high or too low.

Respectfully,

DANIEL CARLTON,

North Andover.

STATEMENT OF DAVID WARREN, OF SWAMPSCOTT, ON SQUASH CROP.

To the Committee on Root Crops:

The crop of Bay State squashes, which I enter for premium, was grown on one half acre of land. The crop of 1887, was cabbages, manured in the hill at the rate of six or seven cords to the acre. The crop of 1888 was onions, manure applied by going over it twice with Kemp's spreader.

The soil is a dark loam with gravelly sub-soil. It was ploughed in the spring of 1889, about six inches deep, stable manure applied by going over it once with Kemp's spreader, then harrowed in with common harrow, and a shovelful of stable manure to each hill. Planted, 15th of May, in hills eight feet apart, and four seeds to a hill, cultivated twice and hoed twice.

I would say here that I planted most of my piece with seed

taken from quite large squashes, and found I had one quarter more crop than those taken from small ones.

Cost of crop :

Rent of land,	\$3.00
Ploughing,	1.50
Manure, 4 cords,	20.00
Furrowing and preparing hill,	.75
Planting,	.75
Cultivating and hoeing twice,	3.00
Cost of harvesting,	3.00
Seed,	1.00

Cost on eighty square rods,	\$33.00
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Product on same, 12095 lbs.

NOTE -Product per acre, 24,190 lbs.,	\$220.00
Expenses per acre,	60.00
Profit per acre	\$160.00

DAVID WARREN.

SWAMPSCOTT, Sept. 14, 1889.

This certifies that I have this day measured a tract of land, having on it a crop of squashes, owned by David Warren, of Swampscott, and entered by him for the Essex Agricultural Society's premium, and that such tract contained eighty rods of land.

ALLEN ROWE.

SWAMPSCOTT, Sept. 30, 1889

From David Warren, 5 loads of squashes, gross 29,120 lbs ; tare 17,025 lbs ; net 12,095 lbs.

C. S. LEWIS, *Weigher*.

STATEMENT OF CORNELIUS MOYNIHAN, OF NEWBURY.

My Ruta Baga turnip crop I offer for premium. The crop of 1887 was corn and corn fodder. It was ploughed up from past-

ure. 1888 the crop was potatoes; used six cords of barn-yard manure for the two years. Soil is loam. This year I used for the turnips the same kind of manure, three and one-half cords, (or at the rate of seven cords per acre.) One-half pound of seed was used, sown in drills three feet apart; was cultivated once; was weighed in baskets to sixty pounds to the bushel. The result was 343 bushels of merchantable turnips on the half acre.

Cost of ploughing and levelling,	\$3.50
Value of manure, three and one-half cords,	22.75
Value of seed and sowing same,	2.00
Cultivated once,	.50
Weeding and thinning,	5.00
Harvesting,	11.00
	<hr/>
Whole expense,	\$44.75
Value of ruta bagas, 343 bushels, at 35 cts.	
per bushel,	120.05
Expense,	44.75
	<hr/>
Profit of half acre,	\$75.30
Rate of turnip crop per acre, 686 bushels,	\$240.10
Rate of cost of crop per acre,	89.50
	<hr/>
Profit per acre,	\$150.60

This is to certify that I, Daniel D. Adams, surveyed the land for Cornelius Moynihan, where the 343 bushels ruta bagas grew, and found it to be one-half acre.

DANIEL D. ADAMS.

This is to certify that I measured, in basket, sixty pounds to the bushel, the half acre of ruta baga turnips of Cornelius Moynihan; the result was 343 bushels.

DENNIS F. MOYNIHAN.

REPORT OF COMMITTEE ON STRAWBERRIES AND OTHER SMALL FRUITS.

The Committee on Strawberries and other small fruits, regret that they can report but two entries, viz :—Strawberry crop, by Lewis B. Davis, of Amesbury. Blackberry crop, by Daniel Stiles, of North Andover.

We visited the farm of Lewis B. Davis in the latter part of June, too late to see his early varieties in their prime, but we were surprised to find so heavy a crop of Sharpless. We think Mr. Davis raised a larger quantity of those berries on the same amount of land than was ever grown in this vicinity.

Our own experience with the Sharpless, is, that it is a very shy bearer. I have tested them by the side of quite a number of other varieties for nearly ten years and have never had more than two, what I called, fair crops. This season they were generally a complete failure.

The land on which Mr. Davis' berries were raised, was a high gravelly knoll, which in the extraordinary wet, cold season, may account for his success, he having raised nearly 3200 boxes per acre. While this is not a very large crop compared with some which have been grown in former years, the Committee thought it a good one for the season.

I wish to say just here, a word in favor of that much abused variety, the Wilson. In 1881 I grew on less than 95 rods, 6068 boxes of these berries. Many claim that the Wilson plants have been grown so long that that old variety has run out.

My plants were obtained of the originator twenty-eight years ago, and the plants I set this Spring were from the original stock. The vines never looked better than they do this fall, and the prospect is for a heavy crop next summer, if nothing unusual befalls them. The old variety is again coming into favor with the producer, the market man and the consumer, and take it as a whole, it has not been excelled. The object of the

producers of new varieties has been to get one that is equal to the Wilson in all points and to excel it in quality.

If allowed to get fully ripe before picking it is hard to beat in quality, it is then sweet, sprightly and good enough for any one. A week, many times, is not too long between the pickings. I have sent berries to Boston, which have been left on the vines that length of time and they arrived in good order and gave satisfaction.

I venture to say that more money, ten times over, has been made producing the Wilson than all other varieties together.

Mr. Emory, of the Committee, visited the farm of Mr. Stiles, to examine his blackberries.

Mr. Emory says that his crop is certainly entitled to a premium. We therefore recommend that the Trustees award.

\$10. First premium, to Lewis B. Davis, Amesbury, for crop strawberries.

\$10. First premium, to Daniel Stiles, No. Andover, for crop blackberries.

B. F. Huntington, Edward E. Woodman, Frank A. Emory, Joseph Ilsley—*Committee*.

STATEMENT OF L. B. DAVIS, AMESBURY, OF STRAWBERRY

CROP.

The forty-one and three one hundredths (41 $\frac{3}{100}$) rods of land on which my strawberries were raised this present year; was in the spring of 1887 ploughed, and one and one-half cords of stable manure spread on and harrowed in. Then planted with potatoes, of which I harvested sixty bushels. In the spring of 1888 the land was again ploughed six inches deep, and two cords of fine manure and twenty bushels of ashes spread on and harrowed in with a common iron tooth harrow. The strawberry plants were set in May, in rows four feet apart, and fifteen inches apart in the rows. The runners were allowed to grow and fill in the space between the rows. In November the plants

were covered with a good coat of meadow hay, which was mostly removed in April. The soil is high and gravelly.

The cost of cultivation is as follows :

Preparing ground, setting plants, weeding, etc.,	\$18.00
Picking 800 boxes, at 2cts.,	16.00
Marketing,	8.00
Manure, estimating at one-half cost,	9.40
	<hr/>
	\$51.00
Amount of crop 800 boxes, at 13 cts.,	104.00
	<hr/>
Balance in favor of crop,	\$52.60

NOTE—With certificate of Surveyor 41 31-100 rods as a basis, the	
crop per acre, was 3099 quarts at 13c.,	\$402 87
Cost of crop \$199.07 per acre,	199.07
	<hr/>
Profit per acre,	\$203.80

AMESBURY, Oct. 11, 1889.

This certifies that I have this day surveyed, for Lewis B. Davis, of this town, a strawberry patch which has been fruited the past season and find the same to contain 41 31-100 rods of ground.

JOS. MERRILL, *Surveyor*.

STATEMENT OF DANIEL STILES, OF NORTH ANDOVER, ON BLACKBERRY
CROP.

Seven years ago the land, the bushes stand on, was grass land, poor at that. I ploughed it up and set out 200 plants of the Wachusett thornless blackberries on the sod and planted beans and potatoes on the rest of the piece, using 200 pounds of Stockbridges, and no other manure. The next year the same, bought 200 more plants, and set them out; used the same amount of Stockbridge fertilizer. The next year I had plants

enough of my own to set and kept on setting each year until the piece was all set using 200 lbs of Stockbridge every year and no other manure.

I set my rows 10 feet apart with bushes 3 feet apart. It takes six plants per rod. Ploughed between the rows every year, sowing on the Stockbridge, then cultivating in it, then I run a furrow through the middle of the rows and planted beans and potatoes. I did not keep any account of my berries until 1887. I take out all the sprouts between the rows every year, and sell them at \$2.00 a hundred, selling 800 to 1,000 every year; the plants sold paying nearly the whole expense of the whole season's crop. I use the plough cultivation and hoe all the same. No barnyard manure is used at all, only Stockbridge. Picking begins about the 20th of July and continues until the last of September. I sell my berries at the door, and the average price is 10 cents per quart box.

CROP OF 1887.

Dr.

For Ploughing and cultivating,	\$2.00
200 lbs. Stockbridge fertilizer,	4.00
Pruning and staking.	1.50
Picking 767 boxes berries,	11.47
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Total cost	\$18.97

Cr.

By 767 boxes Wauchusett thornless strawberries,	
sold, average 10 cents per box,	\$76.70
	<hr/>
Profit of crop of 1887,	\$57.73

CROP OF 1888.

Dr.

For Ploughing and cultivating,	\$2.00
200 lbs. fertilizer,	4.00
Pruning and staking,	1.50
Picking 735 boxes berries,	11.02

Total expense,	\$18.52
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Cr.

By 735 boxes berries, sold, average 10c. per box,	\$73.50
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Profit of crop of 1888,	\$55.08
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CROP OF 1889.

Dr.

For Ploughing and cultivating,	\$2.00
200 lbs. of Stockbridge fertilizer,	4.00
Pruning and staking,	1.50
Picking 824 boxes,	12.36

Total cost,	\$19.86
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Cr.

By 824 boxes berries sold at 10c. per box,	\$82.40
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Profits of crop of 1889.	\$62.54
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NOTE—1887, crop rate per acre,	1534 boxes,	\$153.40
1888, " " "	1470 "	147.00
1889, " " "	1648 "	164.80

1887, expense rate per acre,	\$465.20
1888, " " "	\$37.94
1889, " " "	37.14
	39.72

	\$114.80
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3 years' profit,	\$350.40
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Or \$116.80 yearly besides sale of plants,	
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TREADWELL FARM REPORT.

The farm is still held by J. Plummer, being the 2d year of his lease. While the Committee are dissatisfied with his management of the farm and are painfully aware that he has forfeited his lease by non-compliance with its conditions, yet have felt it for the best interest of the society not to take possession at present, hoping that he may yet redeem his obligations.

The experiment required of him this year was to carefully keep an account of the cost of production of two acres of ensilage corn and putting into the silo. The following is his statement of production as he did not put it into the silo, he gives the average cost of cutting it for several years, as his crop was small the relative cost per ton is greater than with a larger crop :

Ploughing two acres,	\$4.00
Harrowing,	2.00
Planting,	2.00
Applying fertilizer,	2.00
Cultivating,	2.00
800 lbs. guano,	14.00
200 lbs. of Stockbridge fertilizer,	4.00
Seed corn,	1.00
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Total cost of production,	\$31.00

Total crop of 23 1-4 tons ; cost of one ton in the field \$1.33 1-2 ; result of five years' experience of cutting into the silo is from 50 to 75 cts. per ton, making total cost of ensilage \$2.00 per ton.

Planted 15 acres of barley yielding 20 tons ; cut 20 tons of hay and sold \$75 worth of melons, sweet corn, etc.

He has kept 20 cows through the season in the barn, and proposes to apply the manure as top dressing, this fall, on the grass-fields about the barn and also proposes to winter 40 or 50

milch cows, by which plenty of manure will be furnished for next year, and also promises to square up his rent by March 1st. These are the conditions which the Committee are to consider. The buildings are in good condition.

Respectfully submitted,

BENJAMIN P. WARE—*For Committee.*

REPORT ON NEW MEMBERS.

The premium awarded to the person who obtains the largest number of new members from any town or city in the county, up to November 1st, is this year awarded to Andrew Dodge, of Beverly, six dollars for obtaining thirty new members.

The total number of new members to January 1st, 1890, was sixty-six, including those who by receiving awards of seven dollars, or upwards, in 1889, became members under the rule which deducts three dollars from such awards to non-members for membership, which membership is for life, without assessments, and entitles the member to a voice and vote in the Society's business, and a copy of its annual publication of its transactions. The following places furnished the new members :

Amesbury,	1	Lynn,	9
Beverly,	31	Newbury,	3
Boxford,	1	Peabody,	1
Danvers,	3	Rockport,	7
Hamilton,	1	Salem,	2
Lawrence,	1	Wenham,	1
Lynnfield,	4	Winchester,	1

Respectfully submitted,

DAVID W. LOW, Secretary—*Committee.*

ESSAYS.

ESSAY ON POULTRY FARMING.

BY M. SUMNER PERKINS, OF DANVERS.

In those times when frequently the markets of the country for agricultural produce became overstocked through excessive production, and when certain crops are not worth the expense of marketing, to say nothing of the cost of raising, (as was the case with the cabbage and onion crop last year,) it behooves the farmers of Essex county to make an investigation of rural industry, whose votaries are less numerous, and whose products as a natural sequence in point of quantity fall far short of local consumption.

A careful survey of the field seems to show that nothing in this line is more neglected than poultry farming. As long as there are over sixteen millions dozens of eggs imported annually, there can certainly be no fear of an overproduction. From whence does all this immense influx of eggs come? It comes from France, Germany, Scotland and Ireland, countries, all of them overrun with population, making land scarce and dear. Contrast the surroundings of the inhabitants of those nations with our own.

We have acres upon acres of cheap land highly suited to poultry raising that can be bought at a merely nominal price, land, that having been used for poultry a few years, will double, triple, yea, quadruple in value, and become of great agricultural worth. Is it not a reproach upon us, living in country possessing every advantage and opportunity for stock-breeding in all its branches, that we do not produce all the eggs and poultry we consume, to say the very least, but that the poor peasant of the

Orient, ground down by heartless nobility and having at his disposal but a mere fragment of land, factors so mightily in feeding his more highly favored brethren.

That the farm possesses those natural advantages best fitted for a beautiful and prolific condition of poultry, is plainly evident, and yet, how few farmers pay any systematic attention to this industry. A few forsaken looking, mongrel fowls of mixed lineage and uncertain breeding, left to shift for themselves and to depend mainly upon their own exertions for a livelihood, represent the *ne plus ultra* of poultry breeding on the average farm. To be sure there are a few notable exceptions to this rule, but the number is very insignificant.

There seems to be a tendency among farmers to regard with suspicion pure-bred or so called fancy stock in general, and none more so than fancy poultry, the idea seeming to be prevalent that this kind of stock is bred solely to make a handsome appearance, and that it possesses no practical worth to recommend it. Now this is a great mistake, for, while as in every thing else, there is great variation in the quality of different breeds of poultry, yet we have a large variety of distinct breeds that hold the same position among poultry in general, as does the Arab among horses, and the Jersey, Guernsey and Holstien among neat stock. Indeed it was lamented by some that the poultry department of the late Fair held at Beverly, comprised so largely birds entered by the so-called poultry fanciers, rather than by farmers, it being stated in substance that the fanciers breed simply for feathers and external beauty, rather than eggs and flesh, the true practical qualities. In reality this is but the expression of the notion that fanciers and farmers possess nothing in common, which is by no means the case, nor are fanciers themselves, as a class, so careless of utility as is generally supposed. For while the breeding of fowls to feather and fancy points to the sacrifice of everything useful is to be highly condemned, and undoubtedly the practice is in vogue to some extent,

yet its adherents are greatly in the minority, and of little significance, as compared with that vast army of true fanciers with whom, although careful attention is paid to standard points, quantity and quality of flesh, size and number of eggs produced, hold supreme importance.

Thus it happens that among our best breeds we find birds possessing a harmonious blending of attractive colors and a symmetrical shape, united with solid utilitarian qualities as shown by large plump yellow bodies and a surpassing egg record.

This is notably the case with those two breeds of strictly American origin and American production that represent the consummation of the poultry breeder's skill, the highest combination yet attained of all those requisites that go to make a perfect general purpose fowl. We refer to the Plymouth Rock and Wyandotte. Who was it that brought that inveterate layer, the Leghorn, from Italy, the Houdan from France, that model table-fowl, the Dorking, from England, the Pekin duck from China, and, in fact, all those improved varieties of fowl, both gallinaceous and aquatic, that have proved so good material in the hands of the breeder both for the production of meat and eggs?

It is the fancier, he it is, who, at first undoubtedly attracted by gorgeous plumage, uniqueness of appearance, or elegance of symmetry, speedily gains possession of a pair or so, brings them to his native country, and ultimately their blood becomes distributed over a large extent of country to the great improvement of a nation's poultry both in the production of pure-bred stock and grades. Therefore there is a bond of fellowship between fancier and poultry farmer. Each is necessary to the success of the other.

It is the office of the fancier to develop the breeds we now have, to originate new breeds, and to bring from foreign countries the best they afford. It is the province of the poultry

farmer to make the best use of the varieties at hand, by producing the largest number of eggs, and the maximum quantity of flesh from a given amount of food. These are the relative positions of fancier and market poulterer. We are glad to note the fact that these two persons are often one and the same, thus constituting the highest type of the true poultryman.

The poultry at our late exhibition was fancy in the sense that it comprised birds, whose breeding in their present perfection, was the work of years, and by no means fancy in any sense, implying a sacrifice of practical requisites; for excellent specimens of geese and ducks were shown, which are acknowledged to be the leading flesh and egg producers of the age. Also the leading varieties of land fowl were well represented. In short, we would not in the least hesitate to recommend them to farmers and market poulterers in general, as most profitable for their own use.

The remainder of this essay will now consist of certain hints and suggestions concerning the management of poultry, which have been presented to the writer's notice, during some years of study and practical observation in this line, and on this account are deemed especially pertinent.

Nothing is a more natural food for young chicks, and better calculated to give them a strong hold on life, than hard-boiled egg fed for the first few days. This may be crumbed finely and fed as it is, or moistened with a little warm milk. At first thought this may be considered a very expensive dish for chicken feed, but if the eggs for hatching are candled about the sixth day of incubation, and those found infertile by this test removed and reserved for the future use of the coming brood, the cost will be of no consideration. Stale bread, or old-fashioned Johnny cake, baked crisply, may soon be substituted for this. If many chicks are raised, the best plan will be to buy waste bread from city hotels and restaurants. It can be procured at 1 1-2 cents per pound. But if only a few chicks

are raised, and the breeder lives a considerable distance from the city, rendering this plan impracticable, it will be little trouble, and pay well, to bake a cake for the chicks. The usual ration of corn meal dough, which is more or less wet when fed, should be entirely discarded, as it is productive of bowel disease and small white worms in the intestines, which cause considerable mortality in young chicks. We have had experience in this particular, loosing a large number of fine chickens one season. On making a change of diet, no further trouble was experienced nor has been since.

Now as a staple food for growing stock of every description, nothing excels some form of oats, which for young chicks should be in the shape of oatmeal, coarsely ground. This, if boiled into a stiff pudding, cannot be surpassed as a food for chicks of all ages, and, although expensive, we think it is economical at least to give a healthy start.

Soon they will be able to pick up a few kernels of wheat, and a regular evening feed of this grain will make them thrifty. Cracked corn, oats and buckwheat, may also be added to the regular bill of fare. A limited quantity of finely chopped meat scraps, and a plenitude of some good, green, vegetable food is indispensable at all times. If the chicks appear ailing at any time, a raw egg well beaten and mixed with their oatmeal, will form an excellent tonic.

For the breeding and laying hens, as great a variety in feed as possible, should be sought. A warm mash, composed of some vegetable, well cooked, and thoroughly incorporated, with a mixture of ground oats and corn meal, to which has been added a few handfuls of cottonseed or gluten meal, and ground beef scraps, with a little salt and pepper, makes the best morning meal in cold weather. A quantity of this should be given as soon as the fowls leave the roost in the morning, but not enough for satiety. Soon after they have eaten this, throw some wheat or other small grain among the chaff or leaves that

are strewn about the floor of every well-ordered hennerly. The exercise necessary to procure this meal is highly conducive to the health of the fowls.

At night feed whole corn. In warm weather, little or no corn and more oats or other light food should be fed. A piece of land should be set apart whose produce is to be strictly devoted to the use of the poultry. This should be sown to winter rye in the autumn to get the earliest green food in the spring. Then clover seed may be sown on the grain or on a separate plat and this with the refuse vegetables which are always about the farm, will furnish a continual supply of green food for all kinds of poultry.

As a stimulus to laying fowls nothing is better than raw meat.

Now a few practical suggestions on the extermination of by far the greatest bane of poultry—lice. In the first place the floor of the hen coop should consist of five or six inches of finely pulverized dust which being constantly stirred by the fowls in flying about will be held in suspension in the air, and will act as a valuable aid in keeping these pests in check. Of course the dust bath must not be forgotten. It must be of sufficient size and must be frequently renovated. A good receipt is to add a small quantity of hard wood ashes to a bushel of perfectly dry muck, finely sifted coal ashes, or fine road dust.

Another efficacious remedy is half a bushel of lime, a dozen pounds of sulphur and a little carbolic acid, the whole to be thoroughly mixed together. If this be scattered over five hundred square feet of floor surface, the building being kept tightly closed for two hours, the lice will decidedly lose ground. If any birds are effected with roup or gapes, let them inhale the atmosphere for fifteen or twenty minutes. It will benefit them greatly.

Every week the perches should receive a liberal dressing of kerosene oil, care being taken that all cracks and nail holes are given special attention. This operation will be greatly facilitated and rendered more efficient, if the roosts are thoroughly

planed and fitted loosely into grooves so that they may be easily removed for cleansing. Sulphur pyrethrum or buhabh and tobacco dust are all useful powders for the extermination of lice. They may be dusted among the feathers of the fowls, and also scattered in the nests. The coops should be thoroughly white-washed at least twice a year, the oftener the better. The wash should be applied as hot as possible and quite thin that it may penetrate every crack and crevice. A small quantity of carbolic acid should be added to every bucketful applied.

Sometime during the year when farm work is not very pressing, the farmer, with the assistance of his boys and hired help, can put up a very substantial poultry house, at small expense. There are two prerequisites, absolutely essential to the place which is to be chosen as a location for a poultry house, namely a warm southerly exposure and a perfectly dry soil. A slight elevation, gently sloping southward, furnishes a very suitable site, for, by making a small excavation, the building may be set with the rear partly under ground, which location will break off the North winds, and save a large amount of warmth. If the ground is at all wet, it must either be tile drained, or the earth must be removed to the depth of two feet, then rocks filled in and covered with gravel. The lumber used in the construction of the building, need not necessarily be expensive, but must be strong and durable. The cheapest form would be one roof, sloping from front to rear, about five feet stud in the rear, and seven feet in the front, or perhaps a foot more on each would make it more convenient. If the coop is to be divided on the inside into a number of divisions, it will be handy to have a passage two and a half feet wide run along the rear of the building. Let everything on the inside be as simple as possible, and the nests and roosts be portable, that they may be often removed for cleansing.

For inside division, two inch nest wire netting is a much neater device than laths. It will be well to board up tight to two and a half feet from the ground to prevent the males from

fighting. Let the front be supplied with one window in every eight linear feet, and each window be supplied with a closely fitting wooden shutter to be closed on cold nights. Shingles make a warmer outside covering for the buildings than clapboards. Tarred paper or building paper put on under the shingles will save the heat.

It is surprising how few farmers breed any water fowl. They all possess plenty of pasture land that yields them little or no income which if used as grazing land for geese would become one of the most paying portions of the farm and steadily increase in fertility. Most people have the idea that to keep water fowl access must be had to a pond of water. This is by no means necessary as they grow just as well, are just as thrifty, and fatten much more readily, when not allowed this indulgence. Geese are distinctly grazing birds; and, if abundant pasturage is furnished, will be no trouble or expense to any one. In fact they prefer vegetable food in general to grain. On a farm where all kinds of crops are raised, there need be no outlay whatever in rearing goslings to the fattening period, and then a few bags of corn will go a great way. Goslings grow like weeds, you can almost see them grow so that, if well fed, at the age of six or seven months, they are well nigh full formed. The old goose will lay on an average forty or fifty eggs during the season. The first clutches may be given to hens to incubate and the last to the goose herself, unless she is very large and heavy when it will be better to give this one also to a hen. The goslings are quite tender for the first week or ten days but can be raised with good success, if proper attention is paid to their food and shelter. A piece of sod covered with short tender grass is excellent for them, and all food in the shape of grain should be cooked. They must have dry quarters and be kept in in the morning, until the dew is dried up and be protected from all storms until their permanent feathers are well grown. With these precautions, the rearing of goslings is not difficult. There are only two breeds worthy

the attention of farmers, the Toulouse and Embden, the former are of a gray color and the latter of a spotless snowy white plumage throughout. A person, choosing either of these two grand breeds, will not be disappointed. The Toulouse are larger, less fond of water and less inclined to sit, so perhaps will give the market poulterer greater satisfaction.

The farm is well adapted to the raising of ducks. They are great eaters, but they relish all kinds of food, and take on flesh very rapidly. They make some of the best table fowls we have, are inveterate layers if kept in small flocks; beginning to lay early in February, and continuing every morning regularly for four or five months, with scarcely an omission. Their eggs are larger, of a nice flavor, and are excellent in cooking because of their richness. By all means, let every farmer keep a few ducks.

There should also be two or three pairs of Guinea fowl on every farm. They are good layers, and in their proper season, make excellent poultry for the table. They are monogamous in habit and mate strictly in pairs. They are as good as a watch dog to give warning of the approach of a stranger, and exercise a beneficial influence in fighting hawks when inclined to prey upon their broods of young chickens.

Where are the turkeys? Fifty years ago a bunch of turkeys was one of the standard market crops of Essex county at Thanksgiving time; but, for some reason or other, these grand and useful birds are now quite uncommon in this vicinity. Of course Western breeders, from their happy location in the midst of boundless prairies replete with all kinds of grain seeds scattered after the reaper, have the most favorable location for this branch of poultry industry and as a consequence, furnish the bulk of supply for Eastern markets. There is however plenty of forage land on most farms for a flock of twenty or more turkeys to roam over and pick up the larger portion of their keep. These birds, well fattened, dressed, and marketed during the holiday season, will make quite an item in the credit of the farmer's

account. No particular trouble will be experienced in raising the turkey poultry if proper care is exercised to maintain those conditions necessary to the health of all poultry. It has been aptly said that the greatest enemies of turkey poults are uncooked food and morning dew. They must be kept in during all storms, and not set at liberty until the sun has dried all moisture from the grass. This with the further precaution of feeding all food cooked or well scalded, which is the best plan with all poultry, will give general success. After their long quill feathers have grown, and they have "shot the red," that is, grown the fleshy protuberance over the beak, which generally occurs at the age of a month or six weeks, no further trouble will be met as this is the most critical period.

In conclusion, it will be proper to call attention to the fact, that to obtain the highest success in the poultry business, one must have a natural fondness for fowls, and a happy faculty of anticipating their needs, in making them comfortable even to the minutest detail. Speaking for ourselves, we can say that our interest in the feathered tribe increases as time elapses; and, that to us, it is very interesting to observe the great variety of breeds of domestic poultry in their present state of perfection. Especially when we consider, it is undoubtedly the case that man, working with the law of variation, natural to all animated life, has originated so great diversity from our common original stock, the wild jurgal fowl of India.

FARMERS INSTITUTES.

The Society held six Institutes during the season of 1888-89, on as many days forenoon and afternoon, at which the following subjects were opened by carefully prepared essays, and freely discussed afterwards, viz :

1. "The present condition of underdrained Lands in Essex County."
2. "Pasture Lands, and the best methods of their Improvement."
3. "Which has been the most profitable Crops to Essex County Farmers during the past five years?"
4. "Whittier the Poet of the New England Home."
5. "Utilizing the Waste of the Farm."
6. "How can Farmers most profitably spend the Winter Season."
7. "Co-operative Creameries."
8. "Does the present Dog Law answer the requirements of the Public of Essex County?"
9. "The Parasites of our Domestic Animals."
10. "Insects injurious to our Farm Crops."
11. "The Profits of Farming."
12. "A Trip to Florida."

All of which were reported quite fully in the "Essex County Mercury," and a copy mailed to each member in the county.

The first Institute of the season, and the 61st one of the Society, was held at Beverly, Town Hall, Dec. 13, 1888, President Ware presiding. James J. H. Gregory, of Marblehead, opened in the forenoon, with the subject of "The Present Condition of Underdrained Lands in Essex County," who stated that he had counted twenty six lots of land, which had been underdrained by himself and neighbors, in Marblehead and Middleton, seventeen being his own.

Mr. Gregory, and all the speakers following him (excepting one,) took the ground that all lands are emphatically improved by underdraining, that underdrains are better than open drains, that when properly constructed there is no trouble with them, and that they pay when not too elaborately built. Mr. Gregory

believed in draining the springs only, his first piece of land, he said, was underdrained about thirty-three years ago, and is in perfect order to-day.

Speaking of muck in bogs, Mr. Gregory said it was not, as generally supposed, a wash from the surrounding hills, but a formation from decomposed water growing plants. These plants grow, die, and then half decompose, and the accumulating matter is muck. The deposit is very rapid in some places.

In the general discussion, J. E. Page, of the Pickman (Loring) farm, Salem, David Warren of Swampscott, John H. George of Methuen, O. S. Butler of Georgetown, H. G. Herrick of Lawrence, G. A. Tapley of Revere, Warren Brown of Hampton Falls, N. H., Aaron Low of Essex, and James P. King, all having had more or less experience in underdraining; their statement gave a great deal of information as to details.

Mr. Butler took a somewhat different view from other speakers, stating that he did not believe that it paid in the northern part of the county. The Topsfield meadows could be easily drained, but the farmers there think it pays better to cut the wild hay, worth \$11 or \$12 per ton, than to drain and cultivate the land. Gravel, put on underdrained land, may improve it, but it all disappears in from three to five years.

The afternoon subject, "The Improvement of Pasture Lands," was opened by Samuel Hawkes, of Saugus, who considered one of the best methods of improving pastures is by keeping sheep in them, which would be profitable also, if it were not for dogs. The second method is to cultivate and transform them into fields leaving the bowlders. Another method is to set out orchards on them, this he would not advise. Henneries and piggeries have also been valuable in improving such land. Pasture land is also especially adapted to the cultivation of small fruits. Last and most important of all, utilize it for cows which are sure to be benefitted, with improved milk, by having the run of a pasture, even if the pasture is not improved. If

all these fail, the land can be allowed to go back to wood again, and with some land this is the best.

Mr. Gregory believed that it would be best to let much of the pasture land go back into woods. Like the Topsfield meadows, on the Ipswich river, they are best in their natural state; different lands are adapted to different trees. In some pastures apple trees grow well, and where they do it is well to let them grow.

James P. King, of Peabody, had met with success in reclaiming pasture land, and believed that there were hundreds of acres of pasture land, that if reclaimed and cultivated for three years, would yield better crops of onions than any other land in the county, except the underdrained lands spoken of in the forenoon.

Frank Marsh, of Peabody, did not believe it paid to touch pasture lands, excepting in special cases. The farmer depending on getting his living from the soil, will do better to devote his attention to other land.

G. A. Tapley, would put into wood, as fast as possible, all land that isn't fit to cultivate.

Warren Brown said that a good way to improve a pasture, was to put in more stock than it would feed, and to feed outside, thus improving the land, and killing out the bushes. He believed that pastures should be improved as well as other lands and buildings. If we wait for wood to grow, we shall have to wait sixty years for timber, and forty for wood.

C. J. Peabody, of Topsfield, has cleared 27 acres, cutting the bushes in early winter, and burning them. The second year, finishing the work, adding 40 per cent. to its value in three years, so that it paid for itself. A neighbor had 8 acres covered with alder bushes. The large wood he gave away for the cutting, and then cut and burnt the rest of it. He had mowed off the bushes twice a year, in winter, and in August for four years, and now the pasture was as good as any he knew of. Another neighbor had improved a pasture by turning in more cows than

the place would feed, increasing their grain and scattering their droppings. A rocky pasture is hard to mow, and practically it does not pay.

THE 62ND INSTITUTE was held at Topsfield Town Hall, Dec. 28th, 1888, to discuss "Which have been the most profitable Crops for Essex County Farmers during the past five years?" opened by Aaron Low, of Essex, who referred to the subject as one difficult to discuss in a general way, owing to the differences in the location of the farms in regard to markets and places for procuring fertilizers, and found the question a hard one to answer in his own experience, much more so in regard to the whole county. He then gave points in favor of cabbages, potatoes, onions, sweet corn, squashes and tomatoes as leading vegetables for profit. He believed in double crops for profit. He closed with the following statement of crops awarded premiums by the society:

Daniel Carlton in 1883, realized \$128.15 profit from a half acre of cabbages, in 1884, \$176.50 from a half acre, and in 1885 \$243.82 from an acre. In 1887, (a very bad year,) Charles W. Mann, of Methuen, realized \$67.33 profit from a half acre.

An onion crop in 1883, by H. F. Longfellow, yielded a profit at the rate of \$526.70 per acre; in 1884, J. H. George, \$510.02; in 1885, David Warren, \$778. In 1886, Asa T. Newhall, \$913.62; in 1887, J. H. George, \$577.22.

A potato crop, by John H. George, in 1885, yielded a profit at the rate of \$154.26 per acre, and in 1886, \$120.88. Richard F. Dodge, in 1887, \$226.

Squashes—Asa T. Newhall, in 1886, \$151.21 profit, from an acre as a second crop, following early potatoes; 1887, David Warren, \$194.62 profit from an acre.

In answer to a direct question by President Ware, Mr. Low said he would, generally speaking, consider the cabbage crop as most profitable with onions second place, though in some locali-

ties sweet corn might head the list. Potatoes are important, but not grown to much profit.

The general sentiment, as shown by the discussion which followed, entered into by some fifteen, or more speakers, was that the cabbage crop had led all others for reliable profit, while forage crops for milk production, were considered by some the most profitable.

IN THE AFTERNOON, the essay on "Whittier, the Poet of the New England Home," was a finished production by M. Walsh Bartlett, a West Newbury farmer, showing himself thoroughly acquainted with his subject, giving numerous quotations from the poet's writings, illustrative of his inspiration and characteristics. Only the leading points of the essay, as reported, are given here.

President Ware, in introducing the essayist, spoke of the special inspiration found in agriculture for poetic thoughts, and said that Whittier was to the farmers of New England, what Burns was to Scotland.

Mr. Bartlett began by saying that heretofore all the subjects discussed by these institutes had reference to dollars and cents. This is a refreshing departure. He spoke of Whittier, a little more than fifty years ago, at the age of 28, tilling the soil of his father's across the Merrimac. Some time since the poet expressed himself to the speaker as "glad to be remembered by the Essex County farmers, for I was one of them until near 30 years of age." The question was asked when this subject was proposed :

"Do any of our farmers care for poetry?" If they are so intent upon the acquiring of property that they cannot see the beauty and poetry in nature about them, then there is something wrong in our New England farm life and it is time to call a halt. But such is not the case.

To posterity must be assigned the task of fixing Whittier's place among the English poets. His style has not the range of the great masters ;—there is but one Shakespeare and one Mil-

ton. Whittier has a very modest estimate of his own powers, and does not claim even equality with the early English poets. He has been termed with some justice the Burns of New England—both poets having the flavor of the soil that gave them birth.

Whittier's inspiration is always sanctified and ennobled by a love for universal humanity, by a high ideal of the domestic virtues, reverence for the home circle, and a desire for the development of man's better nature. No one puts so much of himself into his poetry. Indeed the poetry is simply the outgrowth of the man.

Whittier's peculiarly local poetry of Essex County and its traditions was dwelt upon. In the pro and anti-slavery days for twenty-five years before the war, when the feeling against abolitionists was intense, Whittier joined the cause and became ostracized from polite society—nor did he ever regret it or swerve from his course. The meek Quaker of earlier days gave place to the fiery souled reformer, although his anti-slave lyrics were not altogether to his taste. Long years after the struggle he wrote: "I see a higher value on my name as appended to the anti-slavery declaration of 1833 than on the title page of any book."

Most poets are famous for their loves, and Whittier seems to have been no stranger to the tender passion—

"Because,"—the brown eyes lower fell,—

"Because, you know, I love you."

Is it to be supposed he did not reciprocate the sentiment? especially as he can say two score years later—

"Dear girl! The grass above her grave

Has forty years been growing,

Yet memory to a gray haired man

That sweet child face is showing."

In closing a poem in response to Mary for a present of a basket of Mayflowers, he humorously says—

And maidens in the far off twilights,
 Singing my words to breeze and stream,
 Shall wonder if the old time Mary
 Were real or the rhymer's dream.

Whittier is eminently a religious man, and his religion crops out in all his verse. Not that he is in any sense evangelical, or even a believer in any creed, but in the sense that Socrates, Buddha and Confucius were religious. His early Quaker precepts have never forsaken him, though in after life.

"The Quaker garb hung loose—
 A compromise betwixt good fellow and recluse."

"Born at a time when certain dogmas in regard to future punishment were almost universally believed and preached, and having lived through a remarkable transition state, until those same dogmas are quite as universally discarded, having a keen common sense that looked quite through the gist of things, an extensive acquaintance with men of all phases of religious faith—and no faith, a reading that brought a pretty thorough knowledge of the religious systems of the ancients, including those of the orientals, we find in his poems what might at first seem very inconsistent—about equally strong declarations of the agnostic and devout Christian; for outspoken, strong and vigorous as he is in his agnosticism, and scarce anything in the English language can be stronger, he has always connected with it some saving grace in the shape of a sweet and tender trust in immortality. His want of knowledge is always supplemented by a faith in God as a loving Father, a joyous optimism that embraces the world."

Mr. Bartlett closed his essay with reference to Whittier's patriotism and his Ideal of the New England Farmers' Home, and expressed the wish that the poet may yet live many years to enjoy his honors, and the sentiment that "long will Essex County be proud of her most widely known and best loved son, John G. Whittier."

Readings from Whittier's works were given by Mrs. Joseph Silliman, who read "The Peace Anthem;" Miss Carrie H. Averhill, who read "Lines written for the Exhibition of Amesbury, Sept. 28, 1850;" Miss Annie C. Dwinell, "The Husking;" Secretary D. W. Low, "A Lay of the Olden Time," written for the society's dinner at Newburyport, Oct. 27, 1856.

Several speakers followed. J. J. H. Gregory spoke of Whittier as a man of heart, a heart of feeling. The heart is the divine standard and the head is not so important. Whittier had made mistakes about "Flud Oirson" of Marblehead, but when he found he was wrong he acknowledged his error. He had also confused the Pilgrims and Puritans. The speaker did not agree with the essayist in comparing Whittier's religion with the religions of Socrates and Confucius;—they were intellectual men, high philosophers, while Whittier's strength was in his moral nature. He revered Whittier's magnificent simplicity; the poet is not sectarian, but a friend of all creeds. The poet has not been ambitious or smart—heaven be praised! The common meaning of those qualities is an intensity of selfishness.

O. S. Butler, of Georgetown, related an army incident of one of Whittier's poems,—*"Massachusetts to Virginia"*—which the speaker read to a group of maimed soldiers one night during the war, the soldiers giving three cheers for "the poet of the *Merrimac*" at the close. Mr. Butler also offered a motion embodying the message to Whittier, which follows.

Andrew Nicholas, Jr., and Mr. E. E. Woodman of Danvers, both spoke of personal visits to the poet's home, the former touching upon his simplicity of manner, and the latter upon his interest in farming and other every day topics.

Humphrey Balch, of Topsfield, eulogized Whittier and his works, particularly his sincerity of action.

James P. King, of Peabody, referred to the part Whittier had taken in the anti-slavery struggle before the war. He also

spoke of his particular regard for Whittier, because he had been a farmer.

J. Q. A. Evans, of Salisbury, also spoke of Whittier's interest in agriculture, and mentioned the fact that he was once corresponding secretary of the Amesbury and Salisbury Agricultural Association. He also spoke of the poet's earnestness of purpose.

C. J. Peabody, of Topsfield, related one or two instances illustrating the familiarity of the children of that town with the poet's works. And Mr. Kimball, of Bradford, took occasion to announce that Whittier's birthplace was in Haverhill, and not in Amesbury, as seemed to be the common impression.

The following message to the Poet was unanimously adopted :

J. G. WHITTIER—

Dear Friend: The farmers of Essex County send greeting, their most hearty congratulation upon the health of body and mental vigor with which you have reached and passed your eighty-first birthday.

We also congratulate you that in the good providence of our Heavenly Father you have been preserved to see the time when your poems are read and prized by every nation on the globe ; and we your neighbors and friends, rejoice with you, as we contemplate the marvellous power of your words upon all classes of our fellowmen, both in peace and war, and we beg to assure you that in no places are your poems read with more interest and pleasure, or your works of tenderest love cherished with a purer admiration, than in the homes of the farmers of your native county of Essex.

They also express the hope that your life may long be preserved to shed its hallowed influence upon the world.

The above message to the Poet, elicited the following reply :

OAK KNOLL, DANVERS,
12mo. 30, 1888.

DAVID W. LOW, Esq., Secretary Essex County Agricultural Society :

Dear Friend: Thy letter conveying the congratulations and kind wishes of the Essex County Agricultural Society, at its meeting on the 28th inst., I have received with no common satisfaction. No birthday has ever given me more pleasure. My ancestors since 1640, have been farmers in Essex County. I was early initiated into the mysteries of farming as it was practiced seventy years ago ; and worked faithfully on the old

Haverhill homestead until at the age of thirty years, I was compelled to leave it, greatly to my regret.

Ever since, if I have envied anybody, it has been the hale, strong, farmer, who could till his own acres, and if he needed help could afford to hire it, because he was able to lead the work himself. I have lived to see a great and favorable change in the farming population of Essex County. The curse of intemperance is now almost unknown among them; the rum-seller has no mortgage on their lands. As a rule they are intelligent, well-informed, and healthily interested in public affairs, self respectful and respected, independent landholders fully entitled, if any class is, to the name of gentlemen.

It may be said that they are not millionaires and that their annual gains are small. But on the other hand the farmer rests secure, while other occupations and professions are in constant fear of disaster. His dealing directly and honestly with the Almighty is safer than speculation; his life is no game of chance, and his investments in the earth are better than in stock companies and syndicates.

As to profits, if our farmers could care less for the comforts of themselves and their families, if they could consent to live as their ancestors once lived, and as the pioneers in new countries now live, they could with their present facilities, no doubt double their income. But what a pitiful gain this would be at the expense of the decencies and refinements which make life worth living. No better proof of real gain can be found than the creation of pleasant homes for the comfort of age and the happiness of youth. When the great English critic, Mathew Arnold, was in the country on returning from a visit in Essex County, he remarked that, while the land looked to him rough and unproductive, the landlord's houses seemed neat and often elegant, with an air of prosperity about them. "But where," he asked, "do the tenants, the working people live?" He seemed surprised when I told him that the tenants were the landlords, and the workers the owners.

Let me return my sincere thanks to the Essex Agricultural Society for the kind message conveyed in thy letter, and with the best wishes for its continued prosperity and usefulness, I am truly thy friend,

JOHN G. WHITTIER.

THE 63RD INSTITUTE was held at Peabody Institute, Danvers, Jan. 11, 1889, Hon. J. J. H. Gregory, of Marblehead, being the speaker, on the subject of "Utilizing the Waste of the Farm," which he defined as "a loss occasioned from a lack of comprehensiveness in our planning," and a leak as "the imperfect carrying out of plans." Of innumerable farm wastes, he con-

fined himself to one particular branch, "the utilizing of unmarketable products." He cited instances where manufacturing and mining enterprises had been unsuccessful, newer ones had made a success by utilizing what in the old had been waste material. He advised never to burn weeds, if it can be helped, as the nitrogen, a very important plant food, is lost in the air, they should be allowed to rot, thus saving it, or taken to the pasture for cows to feed upon. In regard to the waste portions of vegetables as food for stock, he gave from experimental tables their relative nutrient value. Potato tops, free from poison, are of as much value as ensilage corn, green rye or mangold wurtzel, or 13 cents per cwt. Carrot tops are equal in value weight for weight with the carrots, or 18 cents per cwt., but must be fed quicker. Cabbage for forage is worth 17 cents, corn tops 16 cents, ruta bagas 15 cents, beet tops 10 cents, (when undersized, it would hardly pay to top them, the speaker thought,) squashes without seed, 10 cents, and giant carrots, which grow just above ground with heavy tops, 16 cents, buckwheat straw 47 cents, corn husks 45 cents, and dry corn stalks 43 cents, sugar beets 19 cents, apples 13 cents.

The nutrient value of apple pomace is 24 cents per cwt., double that of apples, and nearly equal to fresh cut clover. It does not freeze badly.

C. S. Emerton, of West Peabody, put apple pomace into his silo, trod it down, without weighting it, fed from the top, small quantity at first, gradually increasing, the same as with apples or grain. He fed 12 bushels to 30 head of cattle, if he stops this feed the flow of milk immediately lessens. If a cow gets her fill of it at first feeding it dries her up.

Mr. Gregory added that in some parts of the country it has a real market value like meal, and often shipped many miles by railroad. New England farmers are behind the times on this. Pea straw is worth 44 cents, and cattle eat it heartily, when cut green and fed is worth 19 cents. Clover is used in a wasteful way, as it is exceedingly rich in albumenoids, and so not much

grain is needed with it, with orchard grass and timothy they make a "complete ration," that is—a food supply containing all the elements necessary for it. Wonderful results in increasing the fertility of the soil is obtained by ploughing in clover, a good first crop cut, and the second turned under. Clover in blossom is worth 25 cents, and in hay 77 cents. Rye hay cut on the edge of blossoming has 72 cents value, and rye in silo 14 cents.

A mixed feed of one third bean meal, and two thirds corn meal was recommended by the speaker. Corn meal is fattening, but lacks the albumenoid or muscle-making qualities. Middlings are rich in phosphates. The waste of the onion crop he had boiled and fed to his hens, with no objectionable flavor to the eggs. Pumpkins are lowest in the list, only 8 cents per cwt.

Aftermath is often lost sight of. He had land from which he cut three tons of hay, and then turned in his cattle to feed there, without apparent injury. Such land must be well fed, and he put on six cords of rock-weed to the acre.

Exceptions were taken by C. S. Emerton and Frank Marsh, of Peabody, to the practice of turning in cattle on mowing land, contending that it injured it.

President Ware endorsed it, and said it was generally practiced in Marblehead. He believed that sugar weed, (known as wild beet in Plymouth County), was a valuable forage crop, and knew of nothing yielding a better green crop. In a discussion, whether Hungarian injures land for other crops, the impression was, that it did.

In response to questions, Mr. Gregory gave more relative values, barn grass 65 cents per cwt., witch grass 71 cents, timothy hay 62 cents, clover 77 cents, and best meadow hay 62 cents. Linseed meal ranks a little less than cotton seed meal.

Some half dozen speakers followed, and brought out these points. That second crop clover makes superior ensilage cut rather past blossoming, and put in the silo whole, (some wet and some dry), with cut corn on top. Hungarian and ensilage

make a perfect food. Pomace is one of the greatest wastes. The value is not in the seed, as there is only about a gill of seed to the bushel. Gluten meal is considered more valuable than cotton seed meal, for feeding, giving greater flow of milk, though the latter showed greater value by chemical analysis. Some cannot make it go so far, and prefer the latter. Have barn cellars cemented and save the liquid manure. Vegetables fed just after milking, gives no bad taste to milk. Land on which rye had been raised for a hundred years was manured by turning in a heavy crop of clover, paying better than if put into silo.

THE AFTERNOON subject for discussion, ‘How can Farmers most profitably spend the winter season,’ with J. Q. A. Evans, of Salisbury, as speaker, who said that the ordinary farm chores demand a large portion of day-light. He considered a workshop large enough to admit an ox-cart, with a supply of carpenter’s tools, a necessity on every farm for repairs. If there is snow on the ground, much can be done on the land, carting on manure, hauling off rocks, etc.

The farmer needs a liberal education—chemistry, geology, botany, laws of mechanics, and physiology—are especially desirable. So also is a knowledge of book-keeping and accounts. Every farmer should take an inventory of his possessions—land and buildings, stock, tools and produce—the first of every January deduct his bills payable, and see what he is worth. He should also carry a memorandum book in his pocket. The speaker recommended the selecting of agricultural papers of advanced ideas, one for general news, one for local news, one for temperance and morality, and also a household magazine for the women. Several books on agriculture were recommended, as also an occasional novel.

The winter season affords opportunities to visit the schools, and see how the children are faring. Farmers are apt to keep in a rut, which is avoided by cultivating the social spirit, with visits to neighbors and friends, attending agricultural meetings

and Institutes, and taking part in them. The Farmer should also remember that his first duty is to his country, not by his ballot alone, but also in studying and acting with the great moral reforms. The great danger of the country is that of indifference.

In response to questions afterwards, Mr. Evans gave his ideas concerning the Grange, which he considered a primary or intermediate school, while the farmers' institutes were the high schools.

Some ten or more speakers took part in the discussion that followed, touching on these points, among others. Farmers all keep horses and should not forget that the women and children enjoy riding. It is of the utmost importance that the home and the work of the farm should be made attractive to the children, as the hope of the country is in their good home training in country homes.

Most of the criminals are young men, under 30, nearly all of whom never had any trade or steady occupation of any kind—intemperance was largely the cause, but we should go back of the individual for the primary cause—to the home.

The importance of studying crops—those that pay and those that do not—and governing the planting accordingly, having a plan of his farm, and mapping out just what crops he should raise on each piece. The overhauling of the farm machinery and tools, and putting them in order. Picking up the waste about the barn and vegetable cellar and feed it to the stock to the best advantage. A farmer's boy said he respected that calling above all others, but what sickened him of it was, that it was all work and no play.

The advantages of education should be highly appreciated. The moral side of the home life was spoken of, that many have a house but no home. There were more books now to keep the boys at home than when the older ones were young. Boys should be brought up to be industrious. Much good resulted in visiting others in the same line of business with ourselves. It is an advantage to keep a ledger account with each crop, and

thus tell which crop it was best to discontinue. The idea of boys making collections and preparing for exhibition at the annual fair, specimens of native wools, was encouraged.

THE 64TH INSTITUTE was held at Memorial Hall, Methuen, Feb. 1st, 1889. The subject of the forenoon was "Co-operative Creameries," opened by James Cheesman of Boston, Secretary of New England Creameries Association, who said that no other article raised from the farm makes so little demand on soil fertility as good butter. The better the butter the greater its value and of its by-products—skimmilk and buttermilk. The demand for butter, cheese and milk is increasing. The taste for butter and other dairy products has been cultivated by those who formerly consumed much meat. This change has been made by cultivation of the arts of life the world over, by the special work of the dairy colleges and institutes and in this country mostly by leaders in agricultural reform and people in suburban residences who kept family cows. There is no limit to the demand for good butter and no danger of overloading the market with high class goods.

Continuing, the speaker said grass is and always has been the basis of all economic husbandry, meaning by grass all plants above ground which are cut in green state for dry fodder or ensilage. Comparative statements were given of the production and value of milk and meat.

In all English speaking countries it requires at least four pounds of milk per capita to supply the milk, cream, butter and cheese, equal to about six ounces of dry matter whereas, estimating one pound of meat per capita as the average we have only four ounces of dry matter. Milk costs less to produce than meat of any kind. Rarely can five hundred pounds of beef be made from a single acre. Good dairy practice has raised twelve to fifteen times as many pounds of milk. Reduced to dry solid matter we can raise seven or eight times as much milk solids as of dry meat solids. Ensilage should be regarded as an auxiliary crop and only a partial substitute for hay,

clover and roots, while roots have from twelve to fifteen per cent of dry matter, corn if allowed to stand till the kernels begin to glaze, holds from twenty-four to thirty per cent. of dry matter. This is the time to cut to secure the greatest amount of nutritive matter. The speaker recommended variety in feed to secure the best results in animal digestion.

In speaking of the advantages for dairying in New England over the West he mentioned the fact that much Eastern capital had been diverted into Western farm mortgages of doubtful and uncertain stability at high rates of interest and questioned if it could not be better invested in New England in stock, buildings and creameries. The effects of dairy influence on land values were given, and stated that it was not however the value of land that makes a dairy a success in one part of the country over another, but rather the capacity of the individual cow and the making of cream cheap from an economical cow, those on the plain every day farm which make from 250 to 300 pounds of butter a year. In Vermont alone there are over thirty farm herds yielding yearly butter averages exceeding 300 pounds per cow.

In reference to the general cost of production of butter and economy of management the relative value of cows must be continually borne in mind. The Turner Centre creamery in Maine was cited as the most conspicuous example of good management in a New England creamery. Last year 1,024 cows furnished cream to the factory; and the aggregate sale of butter, a little cream, buttermilk and a few sundries amounted to nearly \$55,000. The total amount of butter made was 208,000 lbs., showing an average of nearly 200 lbs. per cow. The running expenses did not exceed \$3.60 per hundred pounds of butter, and included 6 per cent. interest on a capital of \$2,475; the cost of manufacture (including packages and marketing) and the expenditure of \$1,290 on the capital amount, being the most economically managed creamery east of Cincinnati.

In the lower Connecticut Valley, south of Vermont, the

creameries pay the farmer from 22 to 28 cents per pound for the butter contained in the cream. These prices being very much higher than Western farmers realize, being largely due to superiority of the cattle, liberal feeding, and co-operative organization of patrons. Four or five hundred cows are generally the most economical number for a creamery. For a creamery, the most modern, best arranged and substantial prove the most economical in the end. Generally speaking, one pound of butter is obtained from 16 1-2 or 17 pounds, or 8 quarts of milk.

Several speakers followed. Statement was made that creamery butter is produced for 5 1-2 cents per pound, while in private dairies it is more apt to be from 6 to 10 cents, creamery butter selling 5 to 6 cents a pound higher. Only about 7 per cent. of country butter is made in creameries. Instance was cited where a marked increase in yield of butter was caused by changing the feed of the cow from Indian meal to cotton seed meal. Late returns showed that on an average, creameries paid 2 3-4 cents per quart for milk, leaving the skim milk for the producer.

In answer to a question whether he would advise the establishment of a creamery in Methuen, Mr. Cheesman was non-committal, and said it depended upon the amount of surplus milk, the prices obtained, etc.

Just before adjourning, C. W. Mann, of Methuen, offered the following resolution, which was adopted:

Resolved: That we favor the enactment of a law that shall prohibit the manufacture and sale of oleomargarine, butterine, or other imitations of butter, in which coloring matter is introduced so as to make the same resemble yellow butter or cheese produced from pure unadulterated milk, or cream from the same.

Resolved: That a copy of this resolution be forwarded to the Legislature now in session at Boston.

THE AFTERNOON subject was the inquiry: "Does the present Dog Law answer the requirements of the Public of Essex County?" and was opened by Charles C. Blunt of Andover, with the answer that it did not as the law was all on the dog's side.

The speaker said he loved a good dog, kept one, and always intended to, and questioned that man's devotion to wife and children who hates a good dog.

In all ages, at all times, and among all people, the dog has been regarded as a beast of burden, a servant, a companion, a friend, and one of the most useful of animals—but keep them where they belong, at home. With the degree of intelligence that a dog possesses, there is no reason why he should not be educated to stay at home. Here in Essex County hundreds of acres of land might be improved by sheep husbandry, an important industry almost entirely broken up and destroyed by dogs. Dogs should not be allowed to roam about any more than horses, or cattle, or swine. They not only kill sheep, but they bite and worry horses, cattle, swine and poultry; besides this, they ramble over fields and gardens, breaking down and destroying valuable crops, or taking an extra run the whole length of a lot of hot beds, breaking glass and destroying cabbage, tomato and other valuable plants. The frightening of women and children, and barking at and frightening horses attached to carriages are favorite tricks of his, not to mention the dangers of mad dogs and the horrors of hydrophobia.

The present law is evaded more or less, and should be more stringent, license cost should be increased, and a person should have the privilege of killing any dog at sight found on his premises, unattended by a keeper, after the 10th of May. Mention was made of the nuisance of men from town and city, with dogs roaming over fields, tumbling down stone walls, or breaking down fences, killing birds that should be allowed to live, or game that the farmer wants himself. The law should include the payment for injury by dogs to a man or his family when bitten, as it does on his domestic animals.

The speaker closed with these statistics of dog damages in Essex County during the past year :

158 sheep and lambs killed or injured,	\$ 489.83
18 heifers and calves killed or injured,	417.00
1 mare with twin foals killed,	1200.00

7 hogs and pigs killed,	\$ 32.00
2 guinea pigs killed,	2.00
1 goat killed,	5.00
1746 fowls, (hens, turkeys, ducks and geese) killed,	1641.30
Cost of appraising all,	428.40

\$4,215.53

Number of dogs licensed,	12,701
Number of dogs killed,	951
Total accounted for,	13,652

For every 10 dogs licensed there is 1 female.

Amount received for licenses,	\$25,826.80
Amount paid for damages,	4,215.53

Amount returned to town and cities,	\$21,611.27
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In the general discussion the general tenor of the remarks sympathized with the opening, although exceptions were taken by Mr. Gregory and others, to the killing at sight, unless the dog was attacking domestic animals. Many instances were told, showing the faithfulness of dogs, no law could be expected to kill them out, but one can be looked for to restrain them.

Mr. Gregory thought that the danger from hydrophobia is far less than that of being struck by lightning. Mr. King thought that 100 persons were saved by dogs where one died of hydrophobia. Mr. Ware believed that for every fowl or animal killed, for which damage was recovered, there were five more killed that were not paid for, he also spoke of the damage done by hunting dogs in tracking little birds through onion beds and other growing crops; such dogs are not needed in Essex County where there is so little game. Rev. Mr. McGregor, of Methuen, spoke of the value of the shepherd dogs of Scotland, and their intelligence, and his knowledge of dogs in Newfoundland, where they are almost indispensable as beasts of burden, and of the mongrel and unowned dogs of Damascus, seen by him, which act as scavengers in precincts of their own appointment, and woe betide the dog which trespasses beyond its own territory. The speaker believed the fault to be in the training of the dogs rather than with the animals themselves.

The following resolutions were offered by President Ware, and adopted with but one or two dissenting votes:

Resolved: That it is the sense of this meeting that the present "Dog Law" does not meet the requirements of the public of Essex County.

Therefore, Resolved: That the Essex Agricultural Society, in public meeting assembled, respectfully petitions the Legislature now in session, to amend the present Dog Law so that all dogs shall be restrained from going at large, except in charge of the owner, and be kept upon their owner's premises as other domestic animals are required to be.

Mr. Ware was appointed a committee of one to appear before the Legislative Committee on Agriculture upon the foregoing resolutions.

THE 65TH INSTITUTE was held at the Town Hall, Bradford, Feb. 13, 1889, on the subject of "The Parasites of our Domestic Animals," by Prof. C. A. Fernald, of Mass. Agricultural College, Amherst, who gave a very interesting and instructive illustrated lecture on disagreeable subjects, and one that cannot be reported here with any benefit, it should be listened to to be appreciated. He described the life of pork and beef tape worms, and advised the avoidance of all rare meat, and urged eating meat well cooked, pin worms, round worms, hair snakes, trichina, and a tape worm found in sheep and dogs, closing with allusion to the cause of gapes in fowls by a queer shaped worm of three parts, similar to a caulker's mallet, it being a long tube with two shorter tubes at the top. These worms clogs the windpipe of the fowl, causing suffocation. There is a male and a female. The eggs escape upon the ground disintegrate, and are retaken into the system by its lodging upon their food. The eggs hatch quickly in water. Kobbold has a remedy for this. He takes a quill, tears off one side, then taking the chicken, puts the quill thus prepared down its throat. By turning the quill round, and withdrawing it, quite a large number of these worms can be taken out. The danger in using this remedy is that large masses of worms may be detached and fall down

upon the bronchi, and cause more serious trouble. The French discovered that garlic would aid the fowl to disgorge the eggs.

About twenty persons entered into the discussion that followed, in which the Professor took part, and answered questions. In reply to one, he said that pin worms found in horses breed near the outer passage of the rectum, while in the individual they must have a breeding stage outside. The inquirer had found a good remedy in sweet or lard oil applied to the rectum. Mr. Ware had mixed over a quart of oil, with a horse's provender, and found it very effective. Mr. Holt, of Andover, had given arsenic about the size of a three cent piece, to his horse, to eradicate pin worms. The horse was stiff afterwards, but recovered. Dr. Cogswell, of Bradford, said that he had given a horse five grains of arsenic at morning, and five at night, without hurting him a particle. It would often benefit the system. A great many remedies were found out by accident. Indian meal would stiffen a horse up more than arsenic. The best thing to destroy lice and ticks, said Warren Brown, of Hampton Falls, was carbolic acid—one pound of carbolic crystals to ten pounds of common bar soap boiled down, the common carbolic soap sold in the stores not being strong enough, and said that thymo-cresol was another good remedy.

Professor Fernald said that sulphuret of potassium, from two to four ounces to a gallon of water, two for tender skin, and four for tough hide, would be found perfectly safe. He urged special caution, that no mistake be made as to kind. Sulphuret is of a dark bottle green in color, is perfectly harmless, but cyanide of potassium is white and a deadly poison.

AFTERNOON MEETING. Professor Fernald addressed on "Insects injurious to our Farm Crops," mentioning first the eye spotted bud moth, which appears on the apple-trees when the buds are swelling. Its larva eats into the bud, causing the twig to shoot out laterally, and then another moth comes along, eats into the new bud, and causes a shoot in another direction, thus giving to the tree a scraggly appearance. He had found

one moth had literally destroyed half his crop of apples. Paris green or London purple was the best poison to kill them with.

He next spoke of the codling moth or common apple worm. The best way to destroy them was by showering the trees with Paris green or London purple. This must not be done after the apple turns down on the stem, for then the poison will collect in the hollow round the stem, and may impregnate the fruit. He said he used one pound of Paris green to 125 gallons of water. The cattle should of course be kept away from the grass beneath the trees. Great care is necessary to prevent injury to the foliage by the Paris green.

Mr. Ware said a pound of Paris green to 80 or 100 gallons of water was safe enough.

Professor Fernald indorsed the Nickerson nozzle as the best spray nozzle for showering, then spoke of the grape moth, a great pest. Its larva is deposited in the grape berry itself. When feeding on the leaves it may be safe to shower with Paris green, but after the moth attacks the fruit it is not safe to do it. The Plum Curculio can be treated the same way, just as the trees go out of blossom because the Curculio eats the leaves.

The cut worm the Professor was unable to give any remedy for. The best way was to trap them. This worm does his damage in the night, returning to the earth very early in the morning. He had cut off the pie plant's broad leaves, and let them lie on the ground. The cut worm likes it because it is cold and will crawl in under it out of the sun and when uncovered, quantities of them can be destroyed.

The bark louse has ten generations in a year and if the product was stretched in one line it would reach around the world six million times. A long spell of rain would kill every one of them. Insects all have their diseases. The farmer should know enough about insects to tell his friends from his enemies. A professor in Maine noticed a bud moth with something across its neck, that did not belong there, on examination under the lens he found the worm which it carried was an external parasite that

was sucking the life blood of the bud moth. After it had killed the latter the larva spun its caecoon.

The bumble bee was another good friend to the farmer. There are several sizes and only the largest size, the female lives through the winter. He then described how they made their nests and bred and then said that they got their honey from the red clover, and then take their load to the next blossom. In this way they actually fertilize the red clover, being the only insect that does, and it is safe to say that but for them there would be no red clover for the farmer. An interesting description of the clothes moth and Buffalo carpet beetle followed.

In answer to inquiries the Professor stated he did not know the relative values of Paris green and London purple. The white froth on grass blades in haying time was due to a little grasshopper that sucks the sap. He said that a little black bug that Mr. Hazeltine, of Ayers Village, said that he found a pest in his potatoes was one of three or four species of beetles peculiar to certain localities. A minute orange colored insect, which Mr. Poor, of Andover, found on red top, inside the sheath, was a species of thrip. Thrip in the grapery could be smoked out by dropping Dalmation powder on live coals in a shovel. The long green worm found by Mr. Phippen, of Methuen, upon his tomatoes was probably the tobacco worm. It has a splendid moth. He had known of 42 parasites to be bred from one lava.

The squash bugs were then discussed. M. C. Andrews, of Andover, was troubled by a bug that worked up through the stem. Prof. Fernald thought it caused by striped bugs, they deposit their eggs, the eggs produce a maggot and eats the root. Mr. Ware said lime or any dust would keep off the bugs. Mr. Holt, of Andover, said that squashes planted as late as June, escaped the bugs. Mr. Kimball, of Bradford, raised the finest squashes by the use of coal ashes, which kept off the bugs.

THE 66TH INSTITUTE, and last of the season, was held at Town Hall, Peabody, March 12th, 1889. George M. Whittaker, of the "New England Farmer," Boston, opening the forenoon

subject, "The Profits of Farming," with an essay which he entitled a "A Business View of Farming," which was an offset to the present prevalent spirit of grumbling among farmers. He asserted that similar amounts of skill and capital pay as well in agriculture as in other kinds of business. Allusion was then made to the lack of precise debit and credit accounts among farmers, and therefore lack of statistics in regard to the earnings as a class. The only accurate information of the earnings of capital come from the reports of Corporations. In 1885, the railroads of the country earned 2.02 per cent. ; purchasers of bonds of conservative northern cities net from 2.75 to 3.50 per cent. ; the premiums on the stock of the best manufacturing or banking stocks bring their net profit to 3.50 or 4 per cent. The census reports the average farm investment to be \$5000, on which, assuming 4 per cent. as a fair rate of interest, \$200 is first to be charged to the farm ; second as to wages—taking into account the skill of the average farmer, a fair estimate would be \$800 per year, adding to that \$200 for farm labor that wife and children may do, aggregates \$1200. In 24 industries in Massachusetts, in 1885, public reports show average wages for a man \$11.85 per week, the highest \$25.

In estimating the matter of credits, the large proportion of the farmer's living that comes from his farm is an element of confusion to accuracy. A farmer supporting a family in good circumstances, but not getting ahead, too often claims that his farm is not paying at all.

In estimating the credits, the speaker frequently referred to reports of labor commissioners of Massachusetts and Connecticut. In Connecticut, the labor commissioner found that families of five persons of laboring men, with average income of \$1.74 per day, paid for food \$350 per year. In Massachusetts it was placed at \$370 per year, and this latter figure the speaker credited to the farm for the farmers food. In 1883, the Labor Bureau statistics found the average Massachusetts workman paid for rent \$140, and the speaker placed \$100 to the farms'

credit for rent. \$120 was reported as the average clothing bill of a mechanics' family, which amount is also placed to the credit of the farm. Then followed the following items :

For house-furnishings, making good, wear and tear of furniture, bedding, crockery, etc.,	\$30
For fuel,	50
For personal use of team,	40
Church, societies, education, including books, newspapers and music,	50
Luxuries, vacation, charity, medical attendance and sundries,	40

This estimated cost of an average farmer's living, aggregated \$800, which was moderate and reasonable, as the cost of a common laborer's family in Connecticut is estimated \$720, and in Massachusetts \$754, while the farmer lives much better than either.

On these estimates, with \$1200 charged the farm, and \$800 credited it for personal expenses, the average farmer should get ahead about \$400 per year to do as well as he would with his skill and investment in some other kind of business. This "getting ahead" was claimed to be the real criterion of financial prosperity of anyone, rather than the showing of large figures for salary or profits, and makes no estimate of such incidental benefits, as increased health, greater independence, and better moral and physical surroundings for the education of children.

This amount that the average farmer ought to get ahead need not be represented by actual cash, but if it exists in increased fertility of soil, new buildings, more stock or tools, it is as real profit as in any other form. The speaker was positive in his belief that the average farmer does get ahead the amount specified, and cited cases to prove his point. Where farmers fall below this average, it does not disprove it, for then arises the question whether those less successful do not have inferior skill, and are getting as good or better return for their labor and capital as they could anywhere.

The New York dairy commissioner shows by figures from 1200 butter and cheese factories, averaging 350 cows to a fac-

tory, that there are hundreds of cows that do not pay the cost of their food. A prominent Vermont dairyman says that one-half of the cows in that State are supporting the other half. These and other figures were quoted to show that there are many persons engaged in agriculture lacking sufficient skill, to secure success in that or any other business. If one-half of the cows in Vermont do not pay for themselves, the fact that the other half supported the whole, and the families of the owners shows that where there is a high degree of skill there must be a corresponding degree of profit.

The conclusion was that the hope of New England Agriculture depends upon increased skill more than anything else. Senseless, chronic grumbling—a yearning after the unattainable—is cheap and wicked; but we should encourage the reasonable, intelligent discontent, which creates a desire to improve, to increase a productiveness of fields and herds, which is never satisfied with present achievements, but is ever pressing on to better and better. The ambition that stimulates us to surpass ourselves is honorable and commendable.

Albert Kimball, of Bradford, said all the farmers he was acquainted with, made farming pay. On his farm of 15 acres he raised 100 bushels of corn to the acre, and the last year had sold \$1000 worth of fruit from it.

Wm. B. Carlton, of Danvers, believed in farming. He did not believe it true that farmers, as a class, have as good a living as like employment in the cities, and doubted if farm life as he had seen it all over New England, compared favorably with that of mechanical. Those who leave, very seldom return to the farm. He was surprised in looking over the record, at the number of farms mortgaged.

A. W. Cheever, of Dedham, said he had been satisfied from experience and his own standpoint, that farming pays. He believed in small farms for small men, and many men are not large. A man with a small farm, who is clothing and educat-

ing his family better than he was clothed and educated, is doing good work in the world.

Samuel Hawkes, of Saugus, thought that chance and accident occur and form a prominent part in all business, less perhaps in farming than other pursuits. He knew of men who had left the shoemaker's bench for the farm, and had grown rich by it.

B. P. Ware said that farmers generally are grumblers and think they are having a hard time. The intelligent farmer's employment brings more intelligence and science into his pursuit than other callings and he should be compared with professional and mercantile men, and he believed that the farmer lives as well and brings up his family as well as the professional man or merchant with a salary of \$2000 per year. James P. King of Peabody criticized a statement made by Mr. Carlton, that one-half the farms are mortgaged, he expressed the belief that if they were, one-half of those outside of Saving Banks were held by farmers. In his experience of thirty years as Overseer of Poor he had seen representatives of many callings brought to the Alms House, but never a farmer, and he never heard of a farmer failing.

Aaron Low thought we did not give sufficient credit for the products used on a farm. The bad crops of last year were no fault of the farmer. All callings have their dull seasons and thought the farming population had as much cause for encouragement as any other. The farmer works longer hours than those employed in manufactures, but has advantages in more freedom and in other ways and believed young men brought up on the farm have better morals than those in cities.

N. P. Perkins, of Wenham, doubted the statement that the average farmer could live well and lay by \$400 a year and thought \$100 would be nearer the figure. Again he didn't believe farmers live as well as other people. The market is particular and farmers have to sell the best they raise and eat what is left. Farmers do not plan enough and have not courage enough to stick to their venture. Don't touch anything that

you havn't time enough to devote to it to make it a success. He advocated greater variety of crops instead of depending on one or two products. In concluding he gave points in favor of farmers, of their conservative and moral influence in State affairs. It might be said of the farms, they produce *men*.

Rev. O. S. Butler of Georgetown, was not in accord with what had been said and did not hesitate to make it known. He said he liked to hear horny handed farmers defend their calling when called upon, but thought some of the rose-colored speeches he had listened to, the resources of imagination rather than that of the farm had been drawn upon. He had found farming profitable as long as he held a good government office. Farm accounts are not easy to keep, but a farmer who raises five or six boys, and perhaps a couple of girls, gives them a college education, and leaves them at death fifteen to twenty thousand dollars, may be said to show a pretty successful account. He said he used to raise four hogs a year, and supposed he cleared \$20, and when he kept account of expenses he found he was losing \$5 a year on each. Since then he hadn't kept hogs. He doubted the statement that only one business man in three succeeds, but thought less than that proportion of professional men achieve fame. The most successful farmers are men who make money at outside business, and have a little left them occasionally. About ten per cent. of the farms are mortgaged, mostly held by savings banks. In conclusion, he gave it as his opinion that any profession or business is successful, with the right man in the right place; it is the man, not the business. One man may get rich sawing wood, while another gets poor trading in gold; cream rises on top every time. The speaker believed in farming, and said that a good place to be born and to die, was on a farm.

IN THE AFTERNOON, Vice President, J. J. H. Gregory of Marblehead, presided and Rev. O. S. Butler took the floor to say a word in memory of the late CHARLES L. FLINT a member of this society, so widely known for his interest in, and his works

on agriculture, particularly in connection with his services of about quarter of a century as Secretary of the State Board of Agriculture. Mr. Butler paid a worthy tribute to the deceased and in conclusion offered the following resolution, which was adopted:

Resolved: That the members of the Agricultural Society have learned with most profound sorrow of the decease of Hon. Charles L. Flint, and hasten to record their high appreciation of his character as a man, of his literary qualifications and contributions to the agricultural literature of the country, and especially of his great service rendered to the development of agricultural science in our own State, while for twenty-five years he executed the duties of the office of first Secretary of the Board of Agriculture, devoting the best years of his useful life to that noble service.

Mr. David Stiles, since deceased, of Middleton (Mr. Flint's native town) and Mr. Gregory also spoke of Mr. Flint in feeling terms, the former speaking of his generosity to his native town, and the latter of his kindness to him personally.

Benj. P. Ware then spoke of a "Trip to Florida," and gave a very interesting account of it, describing points of interest on his journey thither and the features of the State which came under his notice.

After Washington is passed, said Mr. Ware, a change in the country is noticed. Fine isolated mansions of the former rich slave-holding planters are seen. The money producing crop is tobacco though other crops are also raised. The centre of the tobacco raising region is near Lynchburg, Va. Occasional farms are in better order than neighboring ones and inquiry generally reveals the fact that they are owned by New Englanders; about one-half the land is covered with wood.

A little further south is the cotton growing region. This region bears less evidence of thrift; the soil is red and in wet weather extremely muddy and sticky, but much of it is fertile and under favorable circumstances yields good crops.

Proceeding to Florida Mr. Ware described it as almost equal in extent to all New England. There are five kinds of land

there fit for cultivation, with the use of more or less fertilizers, low hammock, wet and covered with timber and thick undergrowth; high hammock, rich, drier soil and less undergrowth; flat pine, with low palmetto growth but no undergrowth; more elevated pine land, with clay sub-soil.

A peculiarity of the State is its springs, which gush out of the earth through the coral formation and form rivers at once. The great abundance of water is everywhere noticeable in the numerous rivers and lakes.

Mr. Ware believed the country to afford good facilities for dairying. Crab grass, Texas blue grass and Bermuda grass grows in abundance and make good feed; while beggar weed (a species of clover growing eight feet high) and cow peas may be added. Vegetables are grown successfully, except cabbages which are long in growing and small in size.

There are about a hundred and fifty different varieties of oranges grown in Florida. Mr. Ware then gave detailed descriptions of many of the orange groves and their productions; he estimated there was 400,000 acres devoted to their culture not more than one-thirtieth of the trees in bearing condition. At least 3,000,000 boxes of the fruit have been shipped from Florida this year and about the same number has been imported into this country from abroad.

Other crops may also be raised beside oranges and when the trees are young it is of advantage to plant vegetables among them as the ground has to be thoroughly cultivated. Strawberries have brought \$1 and \$2 per quart this winter, and the vines continue to bear for four months.

In regard to its being healthy, yellow fever has prevailed there lately and is liable to occur again. Malaria is said to exist only where rotten coral abounds in the soil. Consumptives go there and are restored to health, but it is useless for a man to go there with one foot in the grave. Some have gone there as invalids recovered and have gathered about them settlements

of northern people of their own selection numbering in some cases among the hundreds. Cases in particular were cited.

There are thousands of acres of land for sale ; but the speaker cautioned northerners not to buy any of it without seeing and investigating, for hundreds have been swindled.

A short discussion followed. J. J. H. Gregory spoke of the formation of the peninsula of Florida and the coral insect, and of the growth now progressing.

In regard to the negro question (which Mr. Ware had given the views of Southern men upon) the South had no occasion for fault finding ; it is an evil they have brought upon themselves. And the North has a right to ask the South to join in to a greater extent with the northern educational efforts. Mr. Gregory also expressed the belief that the orange business was greatly overdone.

In response to questions Mr. Ware said he himself preferred New England to Florida, and considered Essex County the best place in New England. Yet there are men with restless tendencies and consumptives for whom Florida is a good place.

A. W. Cheever of Dedham, did not take a very enthusiastic view of Florida, and thought New England a better place. In regard to cheap southern land, he said land could be bought here in Massachusetts within an hour's ride of Boston, at fifty cents an acre, land on which corn could be grown.

Dr. Goodale of Lynn, who owns a grove in Florida, was rather more sanguine of the future success of orange growing and in reply to Mr. Gregory's statement that "an orange is only an orange and can be eaten only as such" said, that oranges made as good wine as grapes ; and with better transportation and consequent lower prices and increased consumption, he believed the outlook to be promising.

REPORT ON ESSAYS AND REPORTS.

The committee on Essays and Reports, respectfully report

that they have awarded a premium of ten dollars (\$10), to M. Sumner Perkins, of Danvers, for an Essay on "Poultry Farming;" also a premium of six dollars (\$6), to George T. Morrill, of Amesbury, for a Report on "Carriages," and to Miss Mary E. Williams, six dollars (\$6), for a Report on "Works of Art."

The essay treats of one of the minor topics of agriculture, but one of growing interest and importance. It is doubtless useful to stimulate the interest of farmers in this subject, and to submit from time to time the correct information as to the points of new breeds of fowls. The essay submits reasons why farmers should pay more attention to poultry-raising. There are very few farmers without fowls of some sort, kept in some sort of way, usually not the best way. The "barn-yard fowl" is and always has been, the designation of birds kept in a promiscuous and unsystematic manner. One of the old English poets, John Dyer, in his "Country Walk," depicts happily a familiar scene :

"Before the yellow barn I see
A beautiful variety,
Of strutting cocks, advancing stont,
And flirting empty chaff about;
Hens, ducks, and geese, and all their brood,
And turkeys gobbling for their food,
While rustics thrash the wealthy floor,
And tempt them all to crowd the door."

Fowls have in fact always been reckoned among the domestic animals, essential to be kept on every well appointed farm. Milk and eggs, which are the recognized luxuries of country living, do not come without cows and hens. The matter of keeping these useful and profitable auxiliaries is, however, usually left to the women and boys of the family. This is all very well, but the farmer must provide the birds and the quarters to keep them in. And our essayist wishes to persuade the farmer that those which are recognized as "fancy breeds," have points of excellence, and that suitable quarters are not expen-

sive, and insure better results in a pecuniary sense. He describes a hen-house which may be easily and cheaply constructed.

Farmers ideas of this subject are usually quite different from that of amateurs and the fowl fanciers, but the experience of the latter is not without its value.

It is not the fault of the committee that no essays upon matters of leading importance to farmers are published in this number of the Transactions. The committee would say again, as they have said before, that they invite farmers and farmers' sons to supply this deficiency. May they not hope to receive this year, out of the whole of Essex County, several essays which will meet the popular demand for fresh thoughts from new writers.

For the committee,

G. L. STREETER, *Chairman*.

Daniel E. Safford, N. M. Hawkes, David W. Low, George W. Foster, N. A. Horton—*Committee*.

IN MEMORIAM.

In obtaining the names of members of the Society deceased, a list of members was sent to the Trustee in each town and city for revision, requesting date of death and age of each member deceased, with brief notice of each, in print or writing, from which, and from others, the following has been compiled by your committee :

ROBERT CALLAHAN, of Andover, died May 22, 1889, from the effects of a sun stroke, received while using a lawn mower. Although not a farmer, being a well known and respected sexton, he became a member of the Society in 1868, and was always interested in its affairs, and a constant attendant at its Annual Exhibitions.

J. J. DOWNING, of Andover, died Dec. 22, 1888. He was an enterprising farmer, and took great pains to improve his farm stock. He was one of the largest Apple growers in Essex County, and was often an exhibitor at our Annual Fairs. In 1875 he became a member of the Society.

CHARLES L. FLINT, of Boston, the subject of this notice, died February 26, aged 64 years, 9 months, while on a visit to Georgia, where he had gone in hopes of regaining his health, which had declined for a year or more. He was born in Middleton, May 8, 1824, on the old paternal farm that had been in the family for six generations; son of Jeremiah and Mary Howard Flint, and passed his early years on his father's farm; but soon developed a yearning for a more extended education than his native town afforded. He entered Phillips' Academy, in Andover, and by persistent effort and struggle, with very limited means, worked his way through the Academy and Harvard College, graduating in 1849, after teaching two years; studied two years in the Harvard Law school and in 1852 entered a law office in New York, under very favorable auspices, and was admitted to the bar.

At this time, the Massachusetts State Board of Agriculture was established, and in casting about for a suitable person for its first secretary, attention was directed to the young and promising New York lawyer, by his prize essay in 1849, entitled "History and Importance of Indian Corn or Maize," which took the first premium offered by this Society, on essays. Thus he became a member of this Society, and again received in 1850, the first premium for an essay entitled "Top Dressing for Mowing and Pasture Lands." He was chosen the first Secretary of the State Board of Agriculture, leaving his chosen profession, and devoting his untiring energy and brilliant talents to the cause of agriculture for the remainder of his useful life.

His history of Indian corn was the most exhaustive and complete that has ever been written upon that subject. His twenty-five volumes of Annual Reports of the State Board of Agricul-

ture, show great care and good judgment in compilation and selection, and are in fact an encyclopædia of agriculture for the times. During this time he wrote and published his books entitled "Grasses and Forage Plants," "Milk Cows, and Dairy Farming," a new edition of Dr. Harris' "Treatise on Insects Injurious to Vegetation," with suitable additions and illustrations, and with the assistance of Mr. George B. Emerson, "The Manual of Agriculture," all standard works. He for many years was the agricultural editor of the *Massachusetts Ploughman*, also editor of the *Old Farmers' Almanac*, which position he held at the close of his life.

During his life he was called to many important public positions, all of which he filled with honor and profit to the institutions with which he became connected. He was appointed a trustee of the *Massachusetts Agricultural College* at Amherst, from its first establishment, its secretary and lecturer until within a few years, and one year its president; also a trustee of the *Massachusetts Institute of Technology*, giving great assistance in its development. For many years he rendered efficient service to the educational interests of Boston, as chairman of the committee of the *English High School*. He was president at the time of his death, of the *Massachusetts Agricultural Club*, it being the oldest club in Boston, and from which has emanated several of the leading agricultural institutions and organizations of the country. He was a charter member of *Massachusetts Grange, No. 38*, and a member of the *New England Historic Genealogical Society*, and a director for many years of the *Society for the Prevention of Cruelty to Animals*. In 1862, he made an extended agricultural tour of Europe, and studied the methods of agricultural schools there, by which he was enabled to render important aid in the formation of such schools in his own country. In 1863, he attended the *International Exhibition* at Hamburg, as commissioner. The *Chilian government* at an *International Exposition*, held at Santiago, awarded him diploma and a bronze medal in recognition of the high quality

and value of his reports. He has rendered valuable service to our Society by several lectures at our Institutes, and at others in different parts of the state.

He married Miss Ellen E. Leland, of Grafton, in 1857, who died in 1875, leaving two sons, both graduates of the Massachusetts Agricultural College, and one daughter.

After his resignation of his office of Secretary of the State Board of Agriculture in 1878, he was chosen president of the New England Mortgage Security Company, of Boston, which he held at his death. By prudence and careful management of property left by his wife and his own earnings, he left a large property.

Charles L. Flint was a man of fine education, superior talents, a genial social companion, beloved and respected by all who knew him, and is a decided loss to this Society, and the community at large.

(See also, notice of his death and resolutions passed at Institute of Society held in Peabody, Page 150.)

A. LABURTON KIMBALL, of Bradford, died Feb. 23, 1889, aged about 50 years. He was a retired Shoe Manufacturer, and a citizen greatly respected. He became a member of the Society in 1870.

WILLIAM R. PUTNAM, died at Red Wing, Minn., Sept. 8, 1886, aged 75 years. He was for many years a trustee of the Society. During his residence in Danvers, where he was born, and spent a good part of his life, he cultivated the farm of his ancestors; this he did with a degree of intelligence and success attained by few in those days. He served as Chairman of committees, and has left many reports on our records, of great value to the Society.

Mr. Putnam made many contributions, showing much thought and knowledge of husbandry, to the agricultural papers of the day.

After his removal to Minnesota in 1873, although not a practical farmer, he took a deep interest in Western agriculture. It

was said of him "that his long Eastern experience made him a valuable advisor to the farmers of Goodhue County. He was an active member of the Farmers' Institute, a constant attendant at its meetings, aiding in discussions, and contributing valuable papers upon various subjects.

He was a man of marked probity, and was mourned by many friends. His remains were interred at the old farm, so much endeared to him in life.

(The above notice of Mr. Putnam's death was written by our late Secretary Charles P. Preston, deceased, for the "Transactions," but did not reach the Secretary. A copy is now printed.)

DAVID A. GROSVENOR, of Danvers, died Sept. 27, 1889, aged 77 years. Born in Manchester, Mass., in 1812. Received his diploma as Doctor of Medicine, from Dartmouth Medical School in 1835, came to Danvers in 1839, commencing here the residence and practice which terminated with life. In his early practice he was accustomed to ride to all the surrounding towns, and was in his day, one of the most popular and successful physicians, and known among a large circle of patients and friends. He joined this Society in 1856.

JOHN S. GROUT, of Danvers, died July 11, 1889, aged 82 years, 2 days. Born July 9, 1807, in Kirby, Vt., a village of East St. Johnsbury, and came to Danvers when about 19 years of age. At different times in his life engaged in brick-making, started the coach route from Danvers to Salem, at one time owned the Danvers and Boston express, and later engaged in farming and stock-raising in Danvers and Topsfield. Strong in his anti-slavery ideas, even before the question received a national agitation, and a pronounced temperance advocate. He was always well known by his townsmen, as a fearless and outspoken defender of both, and ready on all occasions, and on other matters as well, to let his opinions be known. He became a member in 1876.

RICHARD BRAINARD HOOD, of Danvers, died Aug. 16, 1889. A native of Danvers, always an active and industrious man, inter-

ested in the growth and welfare of the town, especially in its roads, with which he had much to do for many years, both as "Road Commissioner and Highway Surveyor." He became a member in 1875.

GEO. B. MARTIN, of Danvers, died April 26, 1889, aged 63 years. Born at Sandwich, N. H., Dec. 13, 1826, coming to Danvers when 17 years of age. He soon commenced to learn the shoemaker's trade, and from small beginnings, built up during his lifetime a large business in the manufacturing of shoes, principally for the Western trade. Quite a land owner in town, and for many years interested in the rearing of horses as his recreation, and often to much profit. Some noted trotting horses of the county a few years ago, were from his stables. Naturally a lover of the soil, he was interested in all that pertained to it, joining this Society in 1862.

GEORGE D. RICHARDS, of Danvers, died Jan. 1, 1889, aged 50 years, 4 months. Born in Danvers, Sept. 1838, where he spent the most of his life in the grocery business, first with his father, the late Daniel Richards, and later associated with his brother as his successor. Previous to 1865, he kept store two years in Wenham, and five years in North Andover. He joined the Society in 1875.

AARON W. WARREN, of Danvers, died Feb. 19, 1889, aged 70 yrs. 4 months, 5 days. A native of Danvers, born in Oct. 1818. For many years engaged in the grocery business, and a man of sterling integrity, held in much esteem by his fellow townsmen. The last few years of his life, having disposed of his business, he devoted himself to his home, and to the enjoyment of well earned leisure. A lover of the country, he frequently made use of the county roads and his span of horses for pastime, health and enjoyment, sharing with others his opportunities and appreciation of Nature's beauties.

WILLIAM L. WESTON, of Danvers, died Feb. 1, 1889, aged 71 years. Born in Brooklyn, April 17, 1817. He came to

Danvers in 1841, and was soon appointed Cashier of the Village Bank, now the First National Bank, a position that he held until within a few years. At the time that Danvers introduced its Water Works, Mr. Weston became much interested, and helped materially in placing its Water Bonds successfully upon the market.

JOSEPH ANDREWS, of Essex, died Feb. 25, 1889, aged 84 years. He was very successful as a farmer, and took great pride that everything should look neat and tidy about his farm. He retired from active farm life about twenty-nine years ago, and sold his farm some years later. He joined the Society in 1858.

WILLIAM NELSON, of Georgetown, died Feb. 6, 1889, aged 79 years. He was born Jan. 26, 1810, and married Mary S. Stickney Jan. 27, 1842, who died Aug. 24, of last year, leaving no children.

Years ago he carried on one of the largest tanneries, and was a pioneer in applying steam to the process. He abandoned that business, and engaged in trade and agriculture, which he followed until his death. He was socially one of the most companionable of men, with sterling sense, an oracle for old time history and tradition, and his mind was stored with interesting, valuable facts, and could relate them with a sparkle of the eye, and quaintness of expression. He was humane and benevolent, visiting his neighbors in sickness, condoling with them in bereavement, and contributing liberally from his subsistence to supply their needs. He gained his military title of Captain by serving in the Militia, in all the subordinate positions from that of private to head of the company. He commanded the "Lafayette Guards," when the change in the militia laws caused its disbandment, and later assisted in forming the Citizens' Guard.

He encouraged good citizenship, helped many to found homes for themselves, and found them employment. He was progressive, public spirited, and as liberal in his religious views, as he

was liberal in his charities, and will be greatly missed. He became a member of the Society in 1870.

JOHN PRESTON, of Georgetown, died July 20, 1889, 69 years of age. He was born in Topsfield in 1820. He went to Georgetown over forty years ago, a shoemaker by trade, afterwards managed a department of a shoe-factory, since which time he has given attention to fancy and landscape gardening, having fine taste for the beautiful, and skill in raising odd vegetables, he was also an apiarist of great skill, producing large amounts of honey.

He has held every office in town that he would accept, Selectman, Overseer, Assessor, School Committee, Auditor, Constable, Fence Viewer, and for many years Treasurer of the Peabody Library Trustees.

He was identified with every institution, which improved the town or its inhabitants. In the fire department he served from private to engineer. In Masonic, Odd Fellow, Grand Army and Temperance organizations, he was a useful, hard-working member. He was courteous, considerate and benevolent, a profound reasoner, close student, and an industrious omnivorous reader of standard literature of the best authors.

He served during the war as Corporal in Co. M., 4th Regt. Heavy Artillery, respected by his officers and loved by his comrades. His name was changed from Spiller to Preston by authority of the Legislature in 1850. He became a member of this Society in 1863.

EBEN DALE, of Gloucester, died in Gloucester Sept. 8th, 1889. He was of an old Gloucester family, and engaged in Mercantile business of large extent, in Boston. He became a member of the Society over twenty years ago, and assisted as Marshal when the Society held its Fair in Gloucester in 1872 and 1873.

ELBRIDGE G. FRIEND, of Gloucester, died Oct. 27, 1889, in his 79th year. He was a mason by occupation, retiring in middle

life, serving the town as Overseer of the Poor, four years, Assessor, seven years, Auditing, 3 years, and Town Treasurer, one year. In 1852 he was on committee to prosecute liquor sellers, and beside other positions of trust and responsibility he was, at time of death, an Associate Justice of the Police Court. He was a devoted free soiler, a strong Republican, and a liberal christian. He became a member of the Society in 1872.

SAMUEL E. SAWYER, of Gloucester, died in Gloucester, in Dec. 1889, 72 years of age, in the home of his ancestors of 1734. He received his education and early business training in Gloucester, and made a fortune in Boston amounting to a million or more, leaving no wife or children. He has been generous to his native city, and by his will provides for a public park, and generously endows the Sawyer Free Library already established, and remembered the charitable institutions of that city as well as those of Boston also. He became a member of this Society in 1872.

EDWIN T. CURTIS, of Groveland, died March 2, 1889, aged 69 years. Mr. Curtis was born in Maine, came to Bradford when a boy, in that part of the town now Groveland. He became a member of this Society about 1870. Although never taking an active part in its affairs, he always manifested an interest in its prosperity. He was one of the most active men in town affairs, serving as Treasurer in 1853, and as Selectman in 1852, '68, '70 and '72. He was Chairman of the committee of the Congregational Church Society, at the time of his death, and was a member of the Masonic Fraternity.

JOSEPH KNOWLTON, of Hamilton, died Dec. 20, 1888, aged 79 years. He was a farmer greatly interested in fruit culture, and rendered services to this Society, which he joined over thirty years ago, as exhibitor and on committees.

WILLIAM CALDWELL, of Haverhill, who became a member in 1855, died Oct. 26, 1889. He was born in Newburyport, Dec.

20, 1806, and was educated there, moving to Haverhill when 15. He went to sea at 18, and soon became Master. At the end of twenty years he retired and became a clerk at the State House, and was afterwards Cashier of the Essex National Bank in Haverhill, for thirty-six years. The "Captain" was universally respected for his rugged integrity, acumen, and kindness of heart. He leaves a widow and son. He was constant at the Unitarian Church.

SAMUEL N. CURRIER, of Haverhill, died March 7, 1889. A native of Hill, N. H., where he was born Jan. 10, 1822, came to Haverhill in 1855 permanently, having been there employed previous in shoe manufacture, which business he followed until entirely burned out in the great fire of 1882. He was a Director of the Merrimack National Bank, Vice President and Trustee of Five Cents Savings Bank, a Trustee of the City Hospital, was an Alderman in 1872. In fraternal association he was member of Lodge, Chapter and Commandry of Masons. In religion his home was the First Baptist Society. As a citizen he was a man of high integrity, and greatly esteemed.

JOHN BROWN, of Ipswich, became a member in 1869. He died Feb. 12, 1889, aged 74 years. He was a successful farmer, and a kind neighbor.

JOHN J. ENGLAND, of Merrimac, who became a member of the Society in 1884, died Aug. 14, 1889, aged 68 years, 8 months, 12 days.

CHARLES H. NICHOLAS, of Merrimac, who joined the Society in 1868, died Jan. 13, 1889, aged 72 years.

GEORGE WASHINGTON GAGE, of Methuen, who became a member in 1848, died in 1889, was very much interested in the Society, serving on many committees, Trustee for several years, a frequent exhibitor, his services, reports and papers to the Society, and before its Institutes, have been of much value. He made a

specialty of grape culture, and was quite successful. As an exhibitor of grapes, always taking the premium offered by the Society for the varieties he exhibited. As a citizen, he was greatly respected, and served his town officially in an able manner.

DAVID STILES, of Middleton, long a member of this Society, and one of its Trustees, died at Sodus, N. Y., Aug. 7, 1889, aged 76 years, having been born in Middleton, June 19, 1813. He was a farrier by occupation, and conducted it in a most neat shop, next to his residence, for fifty-four years. His papers on horse-shoeing, and the horse, published in the Society's Transactions, or read before its Institutes, have shown he was a master of his profession, and a great lover of the horse. He was thrifty, saving and forehanded, and a good type of the old-fashioned New England life and character. He was public spirited, and a Deacon and earnest supporter of the Congregational Church, of which he had been a member since 1832. He was a Justice of the Peace, and local agent of the Society for the Prevention of Cruelty to Animals, and was generally interested in genealogical, historical and agricultural matters. He married Rebecca Perry, of Danvers, by whom he had five children, and with whom he celebrated their golden wedding, April 21, 1886. She died nine months after.

LORING B. REA, of Miles City, Montana, died in 1889, about 40 years of age. He was a very enterprising farmer in North Andover, where he was born, and joined the Society about twenty years ago. He moved West from North Andover, in 1885, that he might carry on farming and stock raising on a more extensive scale, which he made successful. While a resident of Montana, he served in its Legislature.

JOHN NOYES KENT, of Newbury, a member of this Society since 1856, was born Feb. 21, 1809, and died March 17, 1889, aged 80 years and 24 days.

He was a descendant of Richard Kent, who came from the

County of Kent, England, in 1630, as a grantee of the entailed estate of Kent's Island, and was the oldest representative of the name in Newbury.

In his younger days he was a skilled mechanic, and was one of three Newbury men, (John Dummer and Paul Moody being the other two), who built the first machinery in the new city of Lowell.

Half a century ago he was Captain of a Cavalry Company in the Massachusetts Militia, and at the time of the "Aroostook War" was called out by the Governor, and held his command in readiness thirty days at Col. Savory's tavern in New Rowley, now called Georgetown.

He was a practical farmer owner of a respectable estate, and was one of the few men, who by shrewd speculations, turned the Newbury silver fever to his material advantage.

JOSIAH CROSBY, of North Andover, died in Lawrence in 1889, aged — years, became a member of this Society in 1840, receiving an award the same year for a milch cow. He has served as Trustee of the Society several years, first in 1853, and was often on committee, many times as Chairman, and his reports on stallions in 1854, '56, are worthy of note.

JAMES MARSH, of Peabody, died Feb. 11, 1889, at the ripe age of 85 years and 11 months; has been a member since 1847.

He was a marked type of a thorough and progressive farmer, a man who cultivated well and made selection, on his lands, of the best to cultivate.

He was not satisfied with average crops, but aimed for larger harvests and got them. His buildings met the needs of his farm, and his name will go down in the history of the county, as one of the raisers of sheep until within a short time of his decease, cows and the usual proportion of horses was among his live stock.

He was a believer in allowing the trees to gain possession of land, too poor for tillage or pasture, when gauged by a fair standard; and he judiciously planted trees and shrubs for shade and beauty. His apple orchard at the east side of his home, with the rich clover blossoming under them at the ripening season, and between the years when hoed crops were under them, was a sight well worth a visit to see.

The writer looks back with pleasure to one of the last Institutes at Danvers, when Mr. Marsh expressed much interest in the subject of tree planting, and advocated a greater appreciation of its value. He was a frequent attendant at the Society's winter Institutes, and his opinion was often given.

A remarkable feature of his life was the spirit of progress that he showed during even the last years of his life, when by his energy and direction, several fields of low, as well as upland, were cleared and planted. At his decease his farm was left in good condition. A better proof of a wise farmer will not be found. His death will be a loss to the agriculture of Essex County.

JOHN W. MARSHALL, of Rockport, died June 9, 1889, in his 80th year. He became a member in 1872, has been a Trustee for several years, and Chairman or member of important committees. He was much interested in fruit culture. He first served his town as Selectman, in 1836, when it was part of Gloucester, and thirteen times since. He was on School Committee five years, Moderator of many Town Meetings, and an Auditor several years. He was Assistant Assessor of Internal Revenue, from 1862 to 1873, and Deputy Collector until 1882.

He was a public spirited man, and earnest in every work that advanced the progress of his town financially and morally, and through a long life of public services has everywhere held an honored and respected name.

WILLIAM H. FOSTER, of Salem, a member from 1855, died Nov. 27, 1888, aged 90 years, 11 months, 7 days. In early life

he was bookkeeper of the old Eastern Stage Co., and also manager of the Commercial news room, then located in the building with the East India Marine Society.

He entered the Asiatic Bank as bookkeeper in 1824, and was made Cashier in 1829, continuing in the active occupation of the office until 1884, and nominally Cashier until the day of his death, making almost daily visits to the bank until within six days previous to his death.

He was at one time clerk of the Eastern Railroad Company, a promoter of the Salem Gas Light Co., a trustee of the Salem Savings Bank, and the most efficient and interested man connected with the Harmony Grove Cemetery Corporation.

He was very warmly and actively interested in the Old Ladies' Home and Old Men's Home. Being imbued with a genuine love for works of active benevolence, he derived no greater pleasure than that which comes from making others happy. A very genial, social and companionable man.

His life was honorable as it was long. He never allowed up to the time of his death his active interest to subside in the affairs of the community with which his life had been identified.

CALEB NEWCOMB, a member from 1868, died in Salem, April 20, 1889. He was formerly head of the old hardware firm of Newcomb & Farless, and was an esteemed citizen. He was in the 89th year of his age.

WM. PICKERING, JR., a member from 1875, died in Salem, very suddenly, of heart disease, at the age of 50 years. He was a member of the Boston Coal Exchange, Odd Fellows, Workmen and Knights of Pythias:

JOHN GIBNEY, a member from 1875, one of the oldest of the Salem tanners, died at his farm in Hamilton, Oct 28, 1889, at the age of 74 years. He came to Salem at an early age and learned the leather business, establishing an extensive tannery which he conducted with great success during the war period,

obtaining a competency. Subsequently he retired to his farm at Hamilton where he has resided for some years and was an exhibitor and otherwise interested in the society.

JOHN KINSMAN, a member from 1850, died in Salem, Nov. 16, 1889. Born in Ipswich Sept. 3, 1810, he came to Salem to learn the carpenter's trade, and subsequently was in business for himself, displaying much energy of character.

He succeeded Stephen A. Chase as superintendent of the Eastern Railroad, afterwards became interested in Western enterprises, and removed to Ohio, returning to Salem in 1864, where he has resided until his decease.

MOSES WILDES, of Topsfield, a member from 1838, died Nov. 5, 1889, aged 80 years. He was born and resided in that town during his minority, afterwards associated with his uncle, Solomon Wildes, of Boston, in the management of the "Wildes Hotel." About the year 1848 he returned to his native town and settled down upon his ancestral acres, frequently visiting his Boston associates in regard to the best paying securities, the fastest horses, etc.

Mr. Wildes was not a farmer within our meaning, but nevertheless he liked to see his stock develop. The Abdallah horse and the Jersey cow were his choice pets; a business man of large views, a thorough grasp of details, giving to the prosecution of his financiering that personal attention that insures success. Mr. Wildes not only achieved his fortune but he dispensed it with a liberal hand, leaving an illustration, the devise of one thousand dollars to this society.

CONSTITUTION

OF THE

ESSEX AGRICULTURAL SOCIETY.

ARTICLE 1. There shall be a President, four Vice Presidents, a Secretary, and a Treasurer, who shall be Trustees, *ex-officio*. The President, Vice Presidents and Secretary shall be elected at the annual meeting by ballot and the Treasurer by the Trustees, annually, at their meeting in November. In addition to these, one Trustee shall be elected annually for each town in the County, and the Trustee for each town shall be elected by members of the Society in said town, at a meeting called for that purpose,* in accordance with notice issued by the Secretary, and shall continue in office until another is elected in his stead; and such election shall be final, and shall constitute the Trustee so elected a member of the Board of Trustees of the Society; and the result of the election in each town shall be communicated as early as possible to the Secretary.

ART. 2. There shall be an Annual Meeting of the Society, at such time as the Trustees shall determine; at which all officers shall be elected. Twenty members at least shall be necessary to constitute a quorum for the transaction of business.

ART. 3. If at any meeting of the Society, or the Trustees, the President and Vice Presidents shall be absent, the members present may appoint one from among them to preside at such meeting.

ART. 4. The President, or, in case of his absence, either of the Vice Presidents, with the advice of the Trustees, may call

*These meetings are held the last Tuesday of October, and the Trustees elected, commence their duties at the November meeting of Trustees.

a special meeting of the Society ; or whenever a written application, with the reason assigned therefor, shall be made by any twelve members of the Society, to the Presidents and Trustees, they shall call such meeting.

ART. 5. The meetings of the Trustees shall be held at such time and place as they shall from time to time agree upon ; seven of whom with the presiding officer shall make a quorum.

ART. 6. The Trustees shall regulate all the concerns of the Society, during the intervals of its meetings ; propose such objects of improvement to the attention of the public, publish such communications, and offer premiums in such form and value as they think proper, (provided the premiums offered do not exceed the funds of the Society) ; and shall lay before the Society, at each of its meetings, a statement of their proceedings and of the communications made to them.

ART. 7. The Secretary shall take minutes of all the votes and proceedings of the Society and of the Trustees, and enter them in separate books ; and shall record all such communications as the Trustees shall direct. He shall write and answer all letters relating to the business of the Society.

ART. 8. The Treasurer shall receive all monies due or payable to the Society, and all donations that may be made to it, for which he shall give duplicate receipts, one of which shall be lodged with the Secretary, who shall make a fair record thereof. The Treasurer shall from time to time pay out such monies as he shall have orders for from the Trustees ; and shall annually, and whenever thereto required, render a fair account of all his receipts and payments to the Society or a committee thereof. He shall give bonds for the faithful discharge of his duty, in such sum as the Trustees shall direct, and with such sureties.

ART. 9. A committee shall be appointed annually by the Trustees, to audit the Treasurer's accounts, who shall report to the Society ; and the same being accepted, shall be entered by the Secretary in his books.

ART. 10. In case of the death, resignation, incapacity, or

removal out of the County, of the Secretary or of the Treasurer, the Trustees shall take charge of the official books, papers, and other effects, belonging to the office that may be vacated, and give receipts for the same; which books, papers, etc., they may deliver to some person whom they may appoint to fill the office until the next meeting of the Society, at which time there shall be a new choice.

ART. 11. *Any citizen of the County may become a member of the Society, by paying the sum of THREE DOLLARS to increase the permanent fund of the institution.

ART. 12. A committee shall be raised from time to time, to solicit and receive subscriptions for raising a fund for encouraging the noblest of pursuits, the Agriculture of our country; the same to be sacredly appropriated to that purpose.

ART. 13. All ordained ministers of the Gospel who reside within the County, shall be admitted honorary members of the Society.

ART. 14. In addition to the usual number of Trustees annually elected, the past Presidents of the Society shall be honorary members of the Board of Trustees.

ART. 15. The foregoing constitution may be amended by a proposition of the amendment in writing by a member at a regular meeting; the same to lie over for the action at the next annual meeting of the Society.

* Members will receive from the Secretary a "certificate of membership." No fines or assessments are ever imposed. Members are entitled to vote in all its transactions, with free use of the Library and a copy of the printed "Transactions" each year.

A premium of six dollars is now offered to the resident of the County obtaining the largest number of new members during the year ending Nov. 1st.

DR. GILBERT L. STREETER, TREAS., IN ACCOUNT WITH THE ESSEX AG'L SOCIETY. CR.

1888.

Oct. To Balance of previous account,	\$ 32.68
To Bank Dividends for October,	387.55
To State Bounty.	600.00
To Bank Dividends for April, 1889,	374.35
To Cash received for New Members,	237.00
To Cash received for the Exhibition in Peabody,	14.61
To State Tax on Bank Stocks refunded,	245.88
To Rent of the Treadwell Farm,	100.00
To Special Award by Mr. N. N. Dummer,	8.50
To Unclaimed Premiums,	69.25
To Donation by Mrs. Anna T. Phillips, of North Beverly	50.00
To Balance due the Treasurer,	372.46
	<hr/>
	\$2492.88

1888.

By amount of Premiums and Gratuities awarded by the Trustees,	\$1609.75
By Bills paid for Printing and Advertising,	294.82
By Account paid to Salem Athenaeum,	25 00
By Expenses of Farmers' Institutes,	124.97
By Expenses at Treadwell Farm,	18.85
By Expenses at Peabody Exhibition,	55.25
By Miscellaneous Expenses,	7.50
By Interest paid on temporary loans,	41 09
By the Secretary's account,	263.65
By the Treasurer's account,	52.00
	<hr/>
	\$2492.88

Funds Belonging to the Society, December, 1889.

	<i>Amount brought forward.</i>
10 shares in National Hide and Leather Bank, Boston,	\$1101.87
3 shares in National Revere Bank, Boston,	377.62
18 shares in First National Bank, Salem,	1914 65
18 shares in Salem National Bank, Salem,	2000.00
42 shares in Asiatic National Bank, Salem,	1281.25
12 shares in Mercantile National Bank, Salem,	1226.50
23 shares in Merchants' National Bank, Salem,	1189.50
5 shares in First National Bank, Danvers,	375.00
8 shares in National Exchange Bank, Salem,	800.00
16 shares in Warren National Bank, Peabody,	1595.40
16 shares in South Danvers National Bank, Peabody,	1471.25
	<hr/>
	\$13333.05

Loss.

G. L. STREETER, Treasurer.
SALEM, Dec. 30, 1889.

The above account has been examined this day, and is found correctly added and properly vouched, and the securities as stated.

Jos. H. PHIPPEN, Auditor.

Total,

OFFICERS OF THE SOCIETY FOR 1889-90.

PRESIDENT.

BENJAMIN P. WARE, OF MARBLEHEAD.

VICE PRESIDENTS.

JAMES J. H. GREGORY, of Marblehead,
THOMAS C. THURLOW, of West Newbury.
JAMES P. KING, of Peabody.
HARRY H. HALE, of Bradford.

SECRETARY.

DAVID W. LOW, of Gloucester.

TREASURER.

GILBERT L. STREETER, of Salem.

HONORARY TRUSTEE.

JOSEPH HOW, of Methuen.

DELEGATE TO THE STATE BOARD OF AGRICULTURE.

BENJAMIN P. WARE, of Clifton, Marblehead.

TRUSTEES.

Charles C. Blunt, Andover.	Sherman Nelson, Georgetown.
J. Henry Hill, Amesbury.	Alonzo F. Harvey, Gloucester.
Andrew Dodge, Beverly.	Abel Stickney, Groveland.
George B. Austin, Boxford.	Alvin Smith, Hamilton.
Edwin V. Gage, Bradford.	E. A. Emerson, Haverhill.
Edward E. Woodman, Danvers.	Alonzo B. Fellows, Ipswich.
Elias Andrews, Essex.	Horatio G. Herrick, Lawrence.

Asa T. Newhall, Lynn.	Francis H. Appleton, Peabody.
John M. Danforth, Lynnfield.	Andrew Lane, Rockport.
John Baker, Manchester.	George B. Blodgett, Rowley.
Amos P. Alley, Marblehead.	Henry A. Hale, Salem.
George W. Sargent, Merrimac.	John F. Smith, Salisbury.
George B. Bradley, Methuen.	Samuel Hawkes, Sangus.
Lyman S. Wilkins, Middleton.	David Warren, Swampscott.
Daniel D. Adams, Newbury.	Salmon D. Hood, Topsfield.
Wm. H. Bayley, Newburyport.	Henry Hobbs, Wenham.
Albert Berry, North Andover.	Oscar Gowen, West Newbury.

NEW MEMBERS—1889.

Lewis B. Davis, Amesbury.	Albert Perry, Beverly.
Joseph F. Andrews, Beverly.	John W. Raymond, Jr., Beverly.
Charles E. Caldwell, Beverly.	Stephen W. Roberts, Beverly.
Arthur E. Clark, Beverly.	George Roundy, Beverly.
Aug. N. Clark, Beverly.	George W. Stickney, Beverly.
Fred. A. Dodge, Beverly.	Samuel H. Stone, Beverly.
Israel W. Dodge, Beverly.	Darling L. Trafton, Beverly.
Lucius B. Dodge, Beverly.	Albert Vittum, Beverly.
Robert R. Endicott, Beverly.	Joseph A. Wallis, Beverly.
William H. Gray, Beverly.	Augustus Williams, Beverly.
Thomas W. Howse, Beverly.	Horace W. Woodbury, Beverly.
Charles W. Killam, Beverly.	Rufus Woodbury, Beverly.
William H. Lovett, Beverly.	Charles F. Austin, Boxford.
Charles A. Mason, Beverly.	William Bent, Danvers.
James A. Marsters, Beverly.	Oliver N. Fernald, Danvers.
William C. Morgan, Beverly.	Jacob Marston, Danvers.
Charles Moulton, Beverly.	M. Sumner Perkins, Danvers.
John A. Moulton, Beverly.	A. P. Gardner, Hamilton.
John M. Murney, Beverly.	Daniel A. Nason, Hamilton.
Francis Norwood, Beverly.	Marcus L. Emerson, Haverhill.
Ezekiel F. Obear, Beverly.	Joseph Shattuck, Lawrence.

Charles H. Derby, Lynnfield.	Richard T. Jaques, Jr., Newbury
Elbridge F. Gerry, Lynnfield.	Cornelius Moynihan, Newbury.
George F. Griffin, Lynnfield.	H. C. Strout, Peabody.
J. Winslow Perkins, Lynnfield.	Zeno A. Appleton, Rockport.
Walter E. Bates, Lynn.	Stephen Dodd, Rockport.
William H. Bates, Lynn,	Loring Grimes, Rockport.
Mrs. J. A. Cain, Lynn.	James B. Merridew, Rockport.
James A. Crouse, Lynn.	William McNeil, Rockport.
Joseph W. Goodwin, Lynn.	Story D. Pool, Rockport.
John C. Haskell, Lynn.	Amos Rowe, Rockport.
William H. Joint, Lynn.	Lyman Holman, Salem.
David Knox, Lynn.	Reuben W. Ropes, Salem.
Edward A. Richards, Lynn.	Austin I. Batchelder, Wenham.
A. B. Forbes, Newbury.	S. R. Prince, Wenham.

CHANGES REPORTED BY TRUSTEES IN 1889.

Edgar J. Bliss, Salem, from Beverly.
D. Brainard Burnham, Chelsea, from Essex.
Joseph D. Abbott, Ipswich, from Hamilton.
Isaiah A. Rogers, Somerville, from Ipswich.
Thomas C. Sawyer, Lowell, from Merrimac.
William Jones, Newburyport, from Newbury.
George Little, Boston, from Newbury.
J. P. Blake, Newton, from North Andover.
John O. Goodwin, Haverhill, from North Andover.
James H. Reynolds, Andover, from North Andover.
T. Wilson Batchelder, Wenham, from Topsfield.
Augustus T. Billings, Malden, from Topsfield.
George H. Poor, Newburyport, from West Newbury.
Henry H. Johnson, Haverhill, from West Newbury.

CORRECTIONS OF 1888—LIST.

John Mitchell, Beverly, should be John E. Mitchell.

Samuel H. Elliot, Haverhill, dead more than 5 years.

C. E. Morse, Haverhill, dead several years.

Amos Haseltine, Jr., Haverhill, should be Amos Hazeltine.

M. W. Harrison, Haverhill, should be M. W. Hanscom.

W. F. Poore, Haverhill, should be F. W. Poor.

Jos. N. Ridgeway, Haverhill. should be Joseph Ridgeway.

List of Premiums Awarded in 1889.

FAT CATTLE.

James C. Poor, North Andover, for oxen, first premium,	\$8.00
James P. Little, Amesbury, for oxen, second premium,	6 00
James P. Little, Amesbury, for oxen, third premium,	3 00

BULLS.

Harry H. Hale, Bradford, for Guernsey, two years old and upward, first premium,	8 00
Harry H. Hale, Bradford, for Ayrshire, under 2 years old, first premium,	4 00
Harry H. Hale, Bradford, for Short Horn, under 2 years old, first premium,	4 00
Shattuck Brothers, Lawrence, for Holstein, 2 years old, second premium,	2 00
Shattuck Brothers, Lawrence, for Holstein Bull Calf, first premium,	4 00
Mrs. J. C. Phillips, Beverly, for Jersey, over 2 years old, first premium,	8 00
Wm. A. Russell, Lawrence, for Holstein, over 2 years old, first premium,	8 00
Arthur E. Clark, Beverly, for yearling Jersey, first premium,	4 00

MILCH COWS.

Wm. A. Russell, Lawrence, for best record milch cow, any age or breed, Holstein, first premium,	15 00
Wm. A. Russell, Lawrence, for Holstein, 4 years old and upwards, first premium	10 00

Wm. A. Russell, Lawrence, for milch cow, over 4 years old, foreign, native or grade, Holstein, first premium,	\$10 00
Wm. A. Russell, Lawrence, for milch cow, foreign, native or grade, Holstein, second premium,	4 00
John S. Ives, Salem, for grade Ayrshire, over 4 years old, first premium,	10 00
Mrs. J. C. Phillips, Beverly, for best Jersey, first premium,	10 00
Mrs. J. C. Phillips, Beverly, for Jersey, second premium,	4 00
Shattuck Brothers, Lawrence, for Holstein, second premium,	4 00

HERDS OF MILCH COWS.

Wm. A. Russell, Lawrence, for Holstein, first premium,	18 00
Harry H. Hale, Bradford, for Ayrshire, first premium,	18 00
Harry H. Hale, Bradford, Guernseys, first premium,	18 00
Mrs. J. C. Phillips, Beverly, for Jerseys, first premium,	18 00

HEIFERS—FIRST CLASS.

Wm. A. Russell, Lawrence, for Holstein in milk, first premium,	8 00
Harry H. Hale, Bradford, for Short Horn, 2 years old, first premium,	4 00
Harry H. Hale, Bradford, for Short Horn yearling, first premium,	4 00
Harry H. Hale, Bradford, for Short Horn Calf, first premium,	4 00
Harry H. Hale, Bradford, for Ayrshire 2 years old in milk, first premium,	8 00
Harry H. Hale, Bradford, for Ayrshire 2 years old in milk, second premium,	5 00
Mrs. J. C. Phillips, Beverly, for yearling Jersey, first premium,	4 00

Mrs. J. C. Phillips, Beverly, for Jersey Calf, first premium,	\$4 00
James C. Poor, North Andover, for Holsten Calf, first premium,	4 00

HEIFERS—SECOND CLASS.

John S. Ives, Salem, for grade Ayrshire, 3 years old in milk, first premium,	8 00
City Farm, Salem, for grade Holstein, 2 years old, first premium,	4 00
Francis O. Kimball, Danvers, for grade Holstein, 2 years old, second premium,	3 00
City Farm, Salem, for grade Holstein yearling, first premium,	4 00
T. C. Durkee, Peabody, for grade Jersey yearling, second premium,	3 00
City Farm, Salem, for grade Holstein calf, first premium,	4 00
John S. Ives, Salem, for grade Ayrshire calf, second premium,	3 00

WORKING OXEN AND STEERS.

B. H. Farnum, North Andover, for oxen, first premium,	12 00
Lyman S. Wilkins, Middleton, for oxen, second premium,	10 00
Peter E. Clark, Beverly, for oxen, third premium,	8 00
B. H. Farnum, North Andover, steers, second premium,	6 00

STEERS.

J. P. Little, Amesbury, for 3 years old, first premium,	8 00
B. W. Farnum, North Andover, for 2 years old, second premium,	5 00
B. W. Farnum, North Andover, for yearling, second premium,	4 00
W. P. Christopher, Middleton, for steer calves, first premium,	4 00

STALLIONS—DRIVING PURPOSES.

A. B. Forbes, Newbury, Byfield, for "Lombardy," first premium,	\$10 00
John P. Conant, Wenham, for "Don Juan," second premium,	6 00

BROOD MARES.

First Class, for Farm and Draft Purposes,	
H. H. Hale, Bradford, first premium,	10 00
Calvin Putnam, Danvers, second premium,	6 00
S. F. Newman, Newbury, third premium,	4 00
Second Class, for Driving Purposes,	
H. H. Hale, Bradford, first premium,	10 00
O. N. Fernald, Danvers, second premium,	6 00
Michael Looney, Salem, third premium,	4 00

FAMILY HORSES.

H. H. Hale, Bradford, first premium,	10 00
H. H. Pillsbury, Danvers, second premium,	6 00
Richard T. Jaques, Newbury, third premium,	4 00

GENTLEMEN'S DRIVING HORSES.

Jacob Marston, Danvers, first premium,	10 00
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FARM HORSES.

A. F. Lee, Beverly, first premium,	10 00
B. H. Farnum, North Andover, second premium,	6 00
J. H. Perkins, Lynnfield, third premium,	4 00

PAIRS OF FARM HORSES—FIRST CLASS.

A. P. Gardner, Hamilton, first premium,	10 00
H. H. Hale, Bradford, second premium,	8 00

PAIRS OF FARM HORSES—SECOND CLASS.

Mrs. J. C. Phillips, Beverly, first premium,	10 00
M. H. Poor, West Newbury, second premium,	8 00

COLTS FOR DRAFT PURPOSES—FIRST CLASS.

Cornelius Moynihan, Newbury, first premium,	\$8 00
James G. Abbott, Andover, second premium,	5 00

COLTS FOR DRAFT PURPOSES—SECOND CLASS.

H. H. Hale, Bradford, for 2 years old, first premium,	8 00
A. P. Gardner, Hamilton, second premium,	5 00
Cornelius Moynihan, Newbury, third premium,	3 00
R. T. Jaques, Jr., Newbury, for yearling, first premium,	5 00

COLTS FOR GENERAL PURPOSES—FIRST CLASS.

Edwin Bates, Lynnfield, for 4 years old, first premium,	8 00
H. H. Hale, Bradford, second premium,	5 00
D. G. Tenney, Newbury, for 3 years old, first premium,	6 00
F. H. Poor, West Newbury, second premium,	3 00

COLTS FOR GENERAL PURPOSES—SECOND CLASS.

W. McNeil, Rockport, for 2 year old, first premium.	8 00
Edwin Bates, Lynn, second premium,	5 00
H. H. Hale, Bradford, third premium,	3 00
John Swinerton, Danvers, for 1 year old, first premium,	5 00
H. H. Hale, Bradford, second premium.	3 00

SWINE—FIRST CLASS.

Simon P. Buxton, Peabody, for Yorkshire breeding sow, first premium,	8 00
Simon P. Buxton, Peabody, for Yorkshire boar, first premium,	8 00
Simon P. Buxton, Peabody, for litter of Yorkshire weaned pigs, first premium,	8 00
H. H. Hale, Bradford, for litter of Berkshire pigs, first premium,	8 00
John Mahoney, Rowley, Berkshire Boar, first premium,	8 00
H. H. Hale, Bradford, Berkshire boar, second premium,	5 00
John Mahoney, Rowley, Berkshire sow, first premium,	8 00
John Mahoney, Rowley, Berkshire sow, second premium,	5 00

SWINE—SECOND CLASS.

H. H. Hale, Bradford, weaned pigs, first premium,	\$8 00
James C. Poor, North Andover, second premium,	5 00
Arthur C. Buxton, Peabody, breeding sow, first premium,	8 00
H. C. Strout, Peabody, second premium,	5 00

SHEEP.

H. H. Hale, Bradford, for best flock,	10 00
H. H. Hale, Bradford, for best buck,	8 00
H. H. Hale, Bradford, for best lambs,	4 00

PLOUGHING WITH DOUBLE TEAM.

Benj. H. Farnum, North Andover, first premium,	10 00
Edward Whipple of Hamilton and George Brown of Peabody, second premium,	8 00

PLOUGHING WITH SINGLE TEAM.

Peter E. Clark, Beverly, first premium,	10 00
Samuel Thayer, Andover, second premium,	8 00

PLOUGHING WITH HORSES.

Moses H. Poor, West Newbury, first premium,	10 00
Wm. Bent, Danvers, second premium,	7 00
Mrs. J. C. Phillips, Beverly, third premium,	5 00

PLOUGHING WITH SWIVEL PLOUGH.

Robert F. Dodge, Wenham, first premium,	10 00
Lyman S. Wilkins, Middleton, second premium	8 00
Solomon W. Weston and William P. Christopher, of Middleton, third premium,	6 00

PLOUGHING WITH SULKY PLOUGH.

S. R. Prince, Wenham, first premium,	10 00
Lyman Holman, Salem, second premium,	8 00

IMPROVING WASTE LANDS.

N. N. Dummer, Rowley, first premium,	\$15 00
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GRAIN CROP.

Oliver P. Killam, Boxford, corn crop, first premium,	10 00
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ROOT CROPS.

John H. George, Methuen, onion crop, first premium,	10 00
John H. George, Methuen, potato crop, first premium,	10 00
Daniel Carlton, North Andover, cabbage crop, first premium,	10 00
David Warren, Swampscott, squash crop, first premium,	10.00
Cornelius Moynihan, Newbury, turnip crop, second premium,	5 00

SMALL FRUITS.

Lewis B. Davis, Amesbury, strawberry crop, first premium,	10 00
Daniel Stiles, North Andover, blackberry crop,* first premium,	10 00

NEW MEMBERS.

Andrew Dodge, Beverly, for most new members, premium,	6 00
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ESSAYS AND REPORTS.

M. Sumner Perkins, Danvers, essay, second premium,	10 00
George T. Morrill, Amesbury, report on carriages, premium	6 00
Miss Mary E. Williams, Salem, report on works of art, premium	6 00

*This certifies that I have measured the land owned by Daniel Stiles and occupied by the blackberry vines entered with the Essex County Agricultural Society for premium, and that it measures thirty six square rods.

NO. ANDOVER, Oct. 7, 1889.

ALBERT BERRY.

REPORT OF AWARDS BY COMMITTEE ON MANUFACTURES
AND GENERAL MERCHANDISE.

C. H. & J. Price, Salem, Hygienic Wine, gratuity	\$.50
C. H. & J. Price, Salem, for Fancy goods, gratuity,	1.00
L. D. Haskell, Salem, for Anti-rattler, gratuity,	2.00
J. A. Room, Peabody, for Horse shoes, gratuity,	1.00
R. B. Pray & Co., Danvers, for Cigars and Tobacco, gratuity,	2.00
R. E. Woollard, Amesbury, for Type Writer, gratuity,	2.00
L. M. Marshall, Manchester, for Engine Clock, gratuity,	2.00
I. T. Webber, Beverly, for Gent's Clothing, gratuity,	1.00
Newell & Jewett, Ipswich, for Horn Novelties, gratuity,	3.00
H. P. Woodbury, Beverly, for groceries, gratuity,	.50
J. M. Byrne, Salem, for Horse Shoes, gratuity,	1.00
Snow Rich, Salem, for Candy, gratuity,	.50
F. H. Burnham, Ipswich, for Feed Bags, gratuity,	.50
Murray & Carroll, Salem, for Hoof Expander, gratuity,	3.00
C. E. Marsh & Co., Lynn, for Soap, gratuity,	.50
C. E. Brown, Beverly, for Birds and Animals, gra- tuity,	2.00
E. A. Tierney, Salem, for Furniture, gratuity,	1.00
E. L. Blake, Peabody, for Canes, gratuity,	.50
W. C. Bradstreet, Beverly, for Horse Shoes, gratuity,	1.00
Alden Webb, Beverly, for Electric Bells, gratuity,	.50
I. R. Phelps, Salem, for Trimmings, gratuity,	.50
C. Toppan, Salem, for Flax, Cotton and Ramie, gratuity,	1.00

James W. Bond, Aaron Sawyer, P. A. True, G. B.
Bradley.—*Committee.*

OTHER AWARDS.

Awarded by Committee on Poultry,	67 00
“ “ “ “ Harrows,	10 00
“ “ “ “ Agricultural Implements,	40 00

Awarded by Committee on Carriages,	\$30 00
“ “ “ “ Dairy,	18 00
“ “ “ “ Bread, Honey, etc.,	23 00
“ “ “ “ Pears,	87 00
“ “ “ “ Apples,	58 50
“ “ “ “ Peaches, Grapes, etc.,	44 00
“ “ “ “ Plants and Flowers,	50 00
“ “ “ “ Vegetables,	141 00
“ “ “ “ Grain and Seed,	26 00
“ “ “ “ Counterpanes and Afghans,	25 00
“ “ “ “ Carpets and Rugs,	30 00
“ “ “ “ Manufactures from Leather,	31 00
“ “ “ “ Fancy Work,	27 75
“ “ “ “ Art Work,	30 00
“ “ “ “ Children’s Work,	13 00
	<hr/>
	\$1653 25

RECAPITULATION.

FARMS,

Awarded for improving Waste Land,	\$15 00
“ “ Ploughing,	100 00
	<hr/>
	\$115 00

FARM STOCK.

Awarded for Fat Cattle,	\$17 00
“ “ Bulls,	42 00
“ “ Milch Cows,	139 00
“ “ Heifers,	55 00
“ “ Heifer Calves,	19 00
“ “ Working Oxen and Steers,	36 00
“ “ Steers,	21 00
“ “ Horses,	222 00
“ “ Swine,	84 00
“ “ Sheep,	22 00

Awarded for Poultry,	\$67 00	
“ “ Bees,	5 00	
	<hr/>	\$729 00

FIELD AND EXPERIMENTAL CROPS.

Awarded for Grain Crops,	\$10 00	
“ “ Root Crops,	45 00	
“ “ Fruit Crops,	20 00	
	<hr/>	\$75 00

FARM AND GARDEN PRODUCTS.

Awarded for Grains and Seed,	\$26 00	
“ “ Vegetables,	131 00	
“ “ Fruits,	189 50	
“ “ Plants and Flowers,	50 00	
“ “ Honey,	3 00	
	<hr/>	\$409 50

DAIRY PRODUCTS.

Awarded for Butter,	\$18 00
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DOMESTIC MANUFACTURE.

Awarded for Bread, Canned Fruits, etc.,	\$15 00	
“ “ Counterpanes and Afghans,	25 00	
“ “ Carpetings and Rugs,	30 00	
“ “ Articles M'f'd from Leather,	31 00	
“ “ Manufactures and General Mdse.,	27 00	
“ “ Fancy Work,	27 75	
“ “ Works of Art,	30 00	
“ “ Childrens' Work,	13 00	
	<hr/>	\$198 75

MISCELLANEOUS.

Awarded for Agricultural Implements,	\$50 00	
“ “ Carriages,	30 00	
“ “ Obtaining New Members,	6 00	
“ “ Essays and Reports,	22 00	
	<hr/>	\$108 00
		<hr/>
		\$1653 25

The amount of \$1653.25 was awarded to 362 different individuals and firms in 30 different cities and towns in the county, as follows, viz :—Amesbury, \$71.50 ; Andover, \$13 ; Beverly, \$279.25 ; Boxford, \$32 ; Bradford, \$178 ; Danvers, \$157 ; Essex, \$17.75 ; Georgetown, \$1 ; Gloucester, 50 cents, Groveland, \$6 ; Hamilton, \$19.50 ; Ipswich, \$5.25 ; Lawrence, \$86 ; Lynn, \$62.75 ; Lynnfield, \$5.50 ; Manchester, \$3.50 ; Marblehead, \$20 ; Methuen, \$20 ; Middleton, \$45 ; Newbury, \$79.50 ; Newburyport, 50 cents ; North Andover, \$86 ; Peabody, \$148.50 ; Salem, \$144.75 ; Swampscott, \$22 ; Rockport, \$9.50 ; Rowley, \$44.50 ; Topsfield, \$6.50 ; Wenham, \$46 ; West Newbury, \$42.

FINANCIAL STATEMENT.

FAIR AT BEVERLY 1889.

Receipts for Admissions to Hall,	\$1559 35
“ “ Dinner,	147 00
“ “ Grounds for Caterers, Swings, etc.,	142 50
“ “ Donations,	59.00
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	1907 85
Expenses, including Tent hire and Dinner,	1119 87
	<hr/>
Amount paid Treasurer,	787 98

CORRECTIONS.—On Page 70, award to J. N. Burbeck \$2, instead of \$1.

Page 86.—\$1.00 gratuity ; it should be to Mrs. Wilmot Vivian.

Page 89.—Near bottom of page—read cactus for caeties.

Page 108.—Near bottom—read blackberries for strawberries.

1890.

PREMIUM LIST OF

ESSEX AGRICULTURAL SOCIETY,

FOR THE

Seventieth Annual Cattle Show and Fair,

To be held September 23d and 24th, in Beverly.

Duties of Trustees.

The Trustee of each town is instructed to see the several members of Committees in his town previous to the Show, and urge upon them the importance of attending to their duties. Also impress upon exhibitors from localities near to the Exhibition, the importance of entering their exhibits the afternoon and evening of Monday, in fairness to those from a distance, who are obliged to come Tuesday.

To be prompt at the meeting in June for filling Committees, and at the meeting of the society for filling vacancies in committees on the first day of the Exhibition, making sure that the names proposed at those meetings are of persons who will serve.

Duties of Committees.

Committees on live stock and articles exhibited on the Fair Grounds should appear at the Secretary's office on the grounds, at one o'clock, punctually, on the first day of the Exhibition, and there organize, take the books of entry, and proceed at once to business. Committees in Hall should take the books of entry from the Superintendent, promptly after the entries close.

Full reports of awards by Committees, on the blanks furnished by the Secretary, to be signed by all the members acting on the same, are required of each committee.

Three members of any committee consisting of more than that number are authorized to act.

No member of the Society shall act on any committee of which he is an exhibitor in the same class.

The Diploma of the Society being considered the highest premium that can be awarded, no committee is authorized to award it, except for animals and articles *of special merit*, deserving of endorsement and recommendation by the Society.

No committee is authorized to award gratuities, except the committee on agricultural implements, carriages, bread, honey, and canned fruits, domestic manufactures, fruits, vegetables in Hall, and flowers; or any premium, unless the rules of the Society have been strictly complied with. Neither shall they award premiums or gratuities in excess of the amount appropriated.

No gratuity is to be awarded of less than fifty cents.

The several committees are requested to affix premium cards, and also on animals, blue, white, and red printed premium ribbons (which may be had of the Secretary or assistant on the grounds and at the hall), for the several animals or articles designating the grade of premium awarded each, and the name of the person to whom awarded, and special care should be taken that the cards issued correspond with the awards in their report to the Society.

The reports of award of premiums on ploughing and on animals and articles exhibited at the Show, must be delivered promptly to the Secretary for announcement on Wednesday.

The Society offers liberal premiums for the best reports of committees; and the chairman of the several committees are requested to present to the Secretary a full report explanatory of the opinions of the committee on the matter referred to them, within two weeks after the awards are made at the Show, for publication in the Transactions. *

Reports on farms, crops, etc., to be presented previous to the meeting of the Trustees in November.

Any member of a committee who cannot serve on the same is requested to give notice to the Secretary, before the Show, so that the vacancy may be filled.

Each member of the several committees will receive a ticket of admission to the hall of exhibition, on application to the Secretary.

*Chairman of committees will please notice this request,

General Rules.

Competitors are requested to carefully read the rules and premium list before making entries.

Claims (entries) for premiums to be awarded at the Exhibition on the Fair Grounds, must be entered with the Secretary of the Society, or his agent, on or before 9 o'clock, A. M., and in the Exhibition Hall, on or before 11 A. M., of the first day thereof.

All claims (entries) for premiums on Fair Grounds, must be handed or forwarded to the Secretary or his agent, in writing, previous to the day of the Fair, if possible, or on or before 9 o'clock, A. M., of the first day thereof.

Any person *not a member of the Society*, awarded seven dollars and upwards, shall receive a certificate of membership, for which three dollars of his award will be taken to increase the funds of the Society.

Diplomas awarded will be delivered and premiums paid, to the person to whom the premium or gratuity is awarded, or an agent duly authorized, on application to the Treasurer, at First National Bank, Salem.

All premiums and gratuities awarded, the payment of which is not demanded of the Treasurer on or before the first day of September next succeeding the Exhibition, will be considered as given to increase the funds of the Society.

In all cases the reports of award of premiums and gratuities made by the several committees and adopted by the Society shall be final. *Committees should see that the premium cards issued, correspond with the premiums and gratuities awarded in their reports.*

No person shall be entitled to receive a premium, unless he complies with the conditions on which the premiums are offered, and by proper entry as required, gives notice of his intention to compete for the same; and committees are instructed to award no premium unless the animal or article offered is worthy.

No animal or object that is entered in one class, with one committee shall be entered in another class, except town teams, fat cattle, working oxen, working steers, and farm horses, which may be entered for ploughing, and milch cows, which may be entered with a herd.

In regard to all subjects for which premiums are offered it is to be distinctly understood that the Trustees reserve to themselves the right of judging the quality of the animal or article offered; and that no premium will be awarded unless the objects of them are of decidedly superior quality.

Pure Bred Animals, defined by the State Board of Agriculture.

The *proof* that an animal is so bred should be a record of the animal or its ancestors, as recorded in some herd book, recognized by leading breeders and the public generally, as complete and authentic.

Standards adopted:—American Jersey C. C. Register and American Jersey Herd Book, Ayrshire Record and Holstein Herd Book.

Premiums to be Awarded at the Show.

The Committees will take notice that no premium will be awarded unless the animals or objects are of a decidedly superior quality.

DIPLOMAS may be awarded for ANIMALS OR ARTICLES of *special* merit, in all departments of the Fair.

Cattle and Other Farm Stock.

TO BE ENTERED IN THE NAME OF THEIR REAL OWNER.

All animals, to be eligible to a premium, shall have been raised by the owner within the County, or owned by the exhibitor within the County, four months previous to the date of Exhibition, except Working Oxen, and Working Steers.

All animals, whether teams for ploughing, or animals entered for premium or exhibition, will be fed during the Exhibition, and longer when they are of necessity prevented from leaving, at the expense of the Society.

FAT CATTLE.

Fat Cattle, fatted within the County, regard being had to manner of feeding and the expense thereof, all of which shall be stated by the exhibitor in writing, and returned to the Secretary, with committee's report.

For Pairs of Fat Cattle, premiums,	\$8, 6, 3
For Fat Cows, premiums,	\$7, 5

BULLS.

*Ayrshire, Jersey, Short Horn, Devon, Holstein, Guernsey, or of any other recognized breed, for each breed.

Two years old and upwards, premiums,	\$8, 4
Under two years, premiums, for each breed,	\$4, 3
Bull Calves under one year old, premium for each breed,	\$2

BULLS OF ANY AGE OR BREED.

For the best Bull of any age or breed, with five of his stock not less than one year old, quality and condition to be taken into account, and especially the adaptability of the animal to the agriculture of the County, diploma and \$10.

NOTE.—Competitors are required to give a written statement of pedigree, and committees are requested to be particular in this respect, and return them to the Secretary with report.

MILCH COWS.

For the best Milch Cow any age or breed, with satisfactory record in quarts or pounds by her daily yield of milk for one or more years, premium, \$15

For Milch cows, either Foreign, Native or Grade, not less than four nor more than ten years old, with satisfactory evidence as to quantity and quality of milk, either by weight or measure, during the evening or morning of the first and last ten days of any month, premiums, \$10, 4

Milch Cows, Ayrshire, Jersey, Devon, Short Horn, Holstein, Guernsey, or any other recognized breed, four years old and upwards, premiums, for each breed, \$10, 4

For Native or Grade Cows, four years old and upwards, premiums, \$10, 4

For the Cows that make the most butter in an single week from June 1st to September 15th, premiums, \$10,4

NOTE.—A written statement will be required of the age and breed of all Milch Cows entered, and time they dropped their last calf, and when they will next calve, the kind, quality and quantity of their food during the season, and the manner of their feeding, which statement is to be returned to the Secretary with Committee's report.

HERDS OF MILCH COWS.

For herds of Milch Cows, not less than five in number, to be exhibited at the Show, and a correct statement of manner of keeping and yield for one year preceeding the show, premiums, \$18, 12

For the greatest produce of milk on any farm, in proportion to the number of cows producing it, not less than four, from April 1, 1889, to April 1, 1890, statement to be made of the exchanges made, manner and

expense of food, use made of milk, and such other facts as will illustrate the entire management, special regard being had to the mode in which the account is kept, premium, Diploma, and \$15

NOTE.—The above mentioned statements are to be returned to the Secretary with Committee's report. The Committee can accept statements dating from January 1st, preceeding the show.

HEIFERS.

FIRST CLASS.—Ayrshire, Jersey, Short Horn, Devon, Holstein, Guernsey, or any other recognized breed, under four years old, in milk, premiums, for each breed, \$9, 6

Two year olds of each breed, that have never calved, premiums, \$5, 4

One year olds of each breed, premiums, \$5, 4

Heifer Calves, under one year, premiums for each breed, \$5, 4

SECOND CLASS.—Native or Grade Milch, under four years old, premiums, \$9, 6

Two years olds, that have never calved, premiums, \$5, 4

One year olds and less than two, premiums, \$5, 4

Heifer calves, Native or Grade, under one year old, premiums, \$5, 4

WORKING OXEN AND STEERS.

Stags excluded. For pairs of Working Oxen under eight and not less than five years old, taking into view their size, power, quality, and training, premiums, \$12, 10, 8

For pairs of Working Steers, four year old, to be entered in the name of the owner, premiums, \$10, 6

NOTE.—The Committee are required to consider the quality and shape of the cattle as well as their working capacity. The training of working oxen and steers will be tested by trial on a cart or wagon containing a load weighing two tons for oxen, and 3000 pounds for steers. At the time of entry a certificate of the weight of the cattle must be filed with the Secretary.

TOWN TEAMS.

For Town Teams of Oxen, ten yoke or more in a team, premiums, \$20, 12

For Town Teams of Horses, ten or more pairs in a team, premiums, \$20, 12

STEERS.

For pairs of three year old Steers, broken to the yoke, premiums, \$8, 6

For pairs of two year old Steers, premiums,	\$6, 5
For pairs of yearling Steers, premiums,	\$5, 4
For pairs of Steer Calves, premiums,	\$4, 2

STALLIONS.

FIRST CLASS.—For Stallions for Farm and Draft purposes, four years old and upwards, diploma or premiums, \$10, 6, 4

For Stallions for Farm and Draft purposes, three years old, premiums, \$8, 5

For best Stallion of any age, and five colts of his stock, not less than one year old, quality and condition to be taken into account, Diploma and \$15

SECOND CLASS.—For Stallions for Driving purposes, four years old and upwards, premiums, \$10, 6, 4

For Stallions for Driving purposes, three years old premiums, \$8, 5

For best Stallion of any age and five colts of his stock, not less than one year old, quality and condition to be taken into account, Diploma and \$15

NOTE.—No stallion will be entitled to a premium unless free from all apparent defects capable of being transmitted. All stallions entered in either class must have been owned by the exhibitor four months previous to the exhibition.

BROOD MARES.

FIRST CLASS.—For Brood Mares for Farm and Draft Purposes, with their foal not more than eight months old, by their side, premiums, \$10, 6, 4

SECOND CLASS.—For Brood Mares for Driving Purposes, with their foal not more than eight months old by their side, premiums, \$10, 6, 4

NOTE.—No brood mare will be entitled to a premium unless free from all apparent defects capable of being transmitted.

FAMILY HORSES.

For Family Horses, premiums, \$10, 6, 4

NOTE.—No horse will receive a premium unless free from all unsoundness.

GENTLEMEN'S DRIVING HORSES.

For Gentlemen's Driving Horses, premiums, \$10, 6, 4

FARM HORSES.

For Farm Horses, weighing 1200 lbs. and over, premiums,	\$10, 6, 4
For Farm Horses weighing less than 1200 lbs. premiums,	\$10, 6, 4

NOTE—No horse will be allowed except those actually used on farms, whether the owner has a farm or not. The weight of load to be used in trial of Farm Horses is to be fixed upon by the committee of arrangements for drafting, the difference in the load for horses of 1200 lbs. and over, and those under 1200 lbs. to be 1000 lbs., and between the two classes of pairs 2000 lbs. No obstruction shall be placed either before or behind the wheels in trials of Draft horses of either class. If this rule is not complied with the premiums shall be withheld

PAIRS OF FARM HORSES.

FIRST CLASS.—For pairs of Farm Horses, weighing 2500 lbs. and upwards, (see above note) premiums, \$10, 8

SECOND CLASS.—For pairs of Farm Horses, weighing less than 2500 lbs. (see above note) premiums, \$10, 8

COLTS FOR DRAFT PURPOSES.

FIRST CLASS.—For Mare or Gelding four year old Colts, \$8, 5, 3

For Mare or Gelding three year old Colts, premiums, \$6, 3

SECOND CLASS.—For Stallion, Gelding, or Mare, two year old Colts, premiums, \$8, 5, 3

For Stallion, Gelding or Mare, yearling Colts, premiums, \$5, 3

COLTS FOR GENERAL PURPOSES.

FIRST CLASS.—For Mare or Gelding four year old Colts, premiums, \$8, 5, 3

For Mare or Gelding three year old Colts, premiums, \$6, 3

SECOND CLASS.—For Stallion, Gelding, or Mare, two year old Colts, premiums, \$8, 5, 3

For Stallion, Gelding or Mare yearling Colts, premiums, \$5, 3

SWINE.

FIRST CLASS.—Large breeds, viz: Cheshire, Berkshire, Chester County Whites, Poland China, Large Yorkshire, and any other breed or grade weighing more than 300 lbs. at maturity.

For Boars, premiums, \$8, 5

For Breeding Sows, with their pigs by their side, premiums, \$8, 5

For Litters of Weaned Pigs, not less than four, between two

and four months old, premiums, \$8, 5

SECOND CLASS.—Small breeds, such as Suffolk, Essex, Small Yorkshire, China, and any other breed or grade weighing less than 300 lbs. at maturity.

For Boars, premiums, \$8, 5

For Breeding Sows, with their pigs by their side, premiums, \$8, 5

For Litters of Weaned Pigs, not less than four, between two and four months old, premiums, \$8, 5

SHEEP.

For flocks of sheep not less than ten in number, premiums, \$10, 6

For best Buck, premium, \$8

For lots of Lambs, not less than four in number, between four and twelve months old, premiums, \$6, 4

POULTRY.

For pairs of Fowls, Light Brahmas, Dark Brahmas, Buff Cochins, Partridge Cochins, Black Cochins, White Cochins, Plymouth Rocks, Dominiques, White Leghorns, Brown Leghorns, Dominique Leghorns, Black Spanish, Hamburgs, Polish, Games, Dorking, Bantams, Black, White, and Mottled Javas, Wyandottes, White Wyandottes, Andalusian, Erminet, Langshangs, and Frizzle, and other recognized varieties, each variety, premiums, \$2, 1

For pairs of Chickens of above varieties, premiums, \$2, 1

For the best breeding pen of each variety—Diploma of the Society.

For the best pairs of Native Fowls, premiums, \$2, 1

Pairs can be exhibited in "breeding pens," by marking the competing female (with a ribbon or colored string), which, with the male will form the pair.

For lots of Turkeys, and Aylesbury, Rouen, Caouga, Pekin, White and Colored Muscovy, and Brazilian Ducks, and Toulouse, Emden, Brown China, and African Geese, premiums, \$2, 1

For 10 or more Fowls exhibited, whether thoroughbreds, crossed or mixed, with an account for one year, showing cost and method of keeping, production and profit, premiums, \$8, 6, 5

As above, with an account for six months, premiums, \$5, 3, 2

For the best pair of dressed Fowls, Chickens, Ducks, and Geese, weight to be given, premium for each pair, \$2

For the best 12 Eggs from Asiatic, American, Game, French and Spanish classes (Hamburgs, Polish, Dorkings to compete in the Spanish class), premium for each class, \$1

Any exhibitor interfering with the Judges in the discharge of their duties or interfering with, or handling any specimen on exhibition, other than his own, shall forfeit all claim he may have in the premium list.

All breeds exhibited separately and to be judged by the rules of the "American Standard of Excellence."

For best exhibit of Poultry Appliances, \$5

PLOUGHING.

GENERAL NOTE ON PLOUGHING.—Stags are excluded. Teams must be entered in the names of their owners, and only double ox-teams to have drivers. A team consisting of one pair of oxen and a horse will be considered a double team. The owners of separate teams may unite the same and be allowed to compete for premiums. The ploughmen and drivers must have been residents of the County at least three months before the exhibition. Those who intend to be competitors must give notice to reach the Secretary on or before Saturday previous to the show. The lands will be staked, but each ploughman will be required to strike out his own lands in the presence of the "Committee on Striking out Grounds for Ploughing," after half-past nine o'clock on the morning of the trial. Ploughmen with land side ploughs are to back furrow three furrows on each side of the stakes set, the last furrow to be of the depth required in the class. Ploughmen with swivel ploughs to turn the outside of their furrow to the stakes on one side, and to finish one foot from the stake on the other. Committees to note and report the kind of plough used.

PLOUGHING WITH DOUBLE TEAMS.—One-eighth of an acre, at least eight inches deep, premiums, \$10, 8, 6

PLOUGHING WITH SINGLE TEAMS.—One-eighth of an acre, at least six inches deep, premiums, \$10, 8, 5

PLOUGHING WITH HORSES.—With any form of Plough, except Swivel, one-eighth of an acre, at least six inches deep, premiums, \$10, 7, 5

PLOUGHING WITH THREE HORSES.—One-eighth of an acre, eight inches deep, without driver, premium, \$10

Same with four horses, with driver, premium, \$10

PLOUGHING WITH SWIVEL PLOUGH.—One-eighth of an acre, with double ox-teams, at least eight inches deep, premiums, \$10, 8

Same with single ox-teams at least six inches deep, premiums, \$10, 8

Same with Horse teams, consisting of two horses, ploughing at least six inches deep, premiums, \$10, 8

PLOUGHING—SULKY PLOUGH.—For the best performances, taking into account ease of draft, amount and quality of work, premiums, \$10, 8

HARROWS.

For the best Harrow exhibited and its merits shown by actual test upon the ploughed ground, \$10, 8

NOTE.—Entry must be made with the Secretary before the day of the trial with description of Harrow.

AGRICULTURAL IMPLEMENTS.,

For the best collection of Implements and Machines (no article offered in *collection* will be entitled to a separate premium) Diploma and \$10

Best Market Wagon, premium, \$5

Best Farm Wagon, for one or two horses, premium, \$3

Best Horse Cart, premium, \$5

Best Hay, Straw, or Corn Cutter, premium, \$1.50

Best Ox Yoke, complete, premium, \$1.50

Best Fruit Evaporator, with sample of work, premium, \$5

Best set of Horse Shoes, including those for over-reaching, interfering, and stumbling horses, premium, \$5

For implements not specified above, the Committee may at their discretion award \$40.

No premium or gratuity will be awarded for any Mower, Horse Rake, Tedder, or other Machine or Implement, the merit of which can be known only by actual trial in the field; but manufacturers are invited to offer the same for exhibition and inspection.

CARRIAGES.

For carriages built in the County, and exhibited by the manufacturer. Diploma, and thirty dollars in gratuities, may be awarded by the Committee.

In Exhibition Hall.

Committees on articles exhibited in the hall should be especially careful that the premium or gratuity cards issued with the names, and sums awarded them, correspond with those in their reports to the Society.

Committees and Exhibitors will be governed by instructions, under heading of "Duties of Committee," "General Rules," "Premiums to be awarded at the Show," see first pages, and under "Fruit," "Domestic Manufactures," and "Flowers."

DAIRY.

For specimens of Butter made on any farm within the County the present year, samples of not less than five pounds to be exhibited, with a full account of the process of making and management of the Butter, premiums, \$8, 6, 4

For specimens of New Milk Cheese, made on any farm in the County the present year, samples of not less than fifty pounds to be exhibited, with statement in writing of the method of making and preserving the same, premiums, \$8, 6, 4

NOTE.—Each lot presented for premium and the statement accompanying it, must be numbered, but not marked so as to indicate the claimant; any public or known mark must be completely concealed; nor must the competitors be present at the examination.

To the person who shall furnish to the Society satisfactory evidence of the greatest quantity of Butter made from any quantity of milk, being the whole produce of any single cow, for the first week of June, July, August and September next, stating the whole amount of Butter produced in each week, also the time when the cow dropped her last calf, and her feed and management all to be taken into account in making the award, premiums, Diploma and \$10, 5

NOTE.—The object in offering these last premiums is to elicit inquiry as to the value and quality of milk for the production of butter. As far as practicable it is desirable that the race and pedigree of the cow shall be given.

BREAD, AND CANNED FRUIT.

For White Bread made of wheat flour, premiums, \$3, 2 1

For bread made from Graham flour, premiums, \$2, 1

For bread made from other grains, or other grains mixed with wheat, premiums, \$1.50, 1

All bread, entered for premiums, to be in loaves weighing not less than one pound each, and to be not less than twenty-four hours old, with a full written statement over the signature and address of the maker, stating the kind of flour used, quantity of each ingredient, how mixed, and length of time kneaded and raised, and how long baked, *which statements on all premium bread are to be sent to the Secretary with report of the Committee for publication.*

For first and second best collection of Pickles, Preserved Fruits and Jellies, made from products of the County, *when premiums are awarded, the method of making to be sent to the Secretary by the Committee, for publication,* premiums, \$3, 2

For the first and second best five pounds of Dried Apples, grown and dried within the County, with statements of process used and amount of labor and time required in preparing and drying, *such statement on premium fruit to be given to the Secretary for publication,* premiums, \$3, 2

In addition to the above, are placed in the hands of the Committee for gratuities on other articles entered in this department, products of this County deemed worthy, \$5

BEES, HIVES, AND HONEY.

For first and second best display of Bees, Hives and Apiarian Implements, accompanied with a written description of the bees, hives, etc., number of hives in use and amount of surplus honey taken from them during the season, premiums, \$5, 3

First and second best Honey, ten pounds in comb and one pound of same extracted, made in the County, with statement signed of kind of bees and hive, and time of year when honey was made, premiums, \$3, 2

Fruit.

All fruit must be entered in the name of the grower before 11 o'clock on the first day of the exhibition, and each exhibitor must certify to the same on the Entry Book, or on lists of the varieties of each class of fruit, or be filed when entry is made. (Committees are not authorized to make awards to those who do not comply with this rule)

Tables will be labelled in a *conspicuous manner* by the hall committee, *before the entry of exhibitors*, with the names of fruit, for which premiums are offered, all others of same class of fruit to be labelled miscellaneous. Exhibitors must place their several varieties of each class of fruit where indicated by such labels, or be considered by the committee as not competing for premium.

Plates of collections of fruit, when premiums are offered therefor, must be entered and placed by the exhibitor on the table assigned for the exhibit of collections of fruit.

To entitle exhibitors to receive premiums and gratuities awarded, they are required (when requested by the committee) to give information in regard to the culture of their fruit.

PEARS.

For best twelve specimen of the following varieties, which are recommended for cultivation in Essex County: Bartlett, Belle Lucrative, Bosc, Anjou, Angouleme, Dana's Hovey, Lawrence, Louise Bonne, Onondaga, Paradise d'Automne, Seekle, Sheldon, Urbaniste, Vicar, Comice, Howell, and Clairgeau, each, premium, \$3

Doyenne d'Ete, Gifford and Clapp's Favorite (ripening early), are recommended for cultivation, but no premium is offered.

For each dish of twelve best specimens of any other varieties, deemed worthy by the committee, premium, \$1.50

For best collection of Pears, recommended for cultivation, premium, \$6

In addition to the above, are placed at the disposal of the committee, to be awarded in gratuities of not less than \$1 each, \$20

APPLES.

For best twelve specimens of the following varieties, which are recommended for cultivation in Essex County: Baldwin, Danvers Sweet, Tompkins King, Granite Beauty, Red Russet, Tolman's Sweet, Bailey Sweet, Drap d'Or, Hubbardston, Hurlburt, Porter, Pickman Pippin, Roxbury Russet, Rhode Island Greening. Sweet Baldwin, Gravenstein, Hunt Russet, Smith's Cider, Snow, premium for each, \$3

Red Astrachan, William's Favorite, Tetofsky and Sweet Bough are recommended for cultivation, but no premium is offered (ripening early).

For best twelve specimens of any other varieties deemed worthy by the committee, premium for each variety, \$1.50

For best collection of Apples, recommended for cultivation, premium, \$6

For best twenty-four specimens of any variety of Crab Apple deemed worthy by the committee, \$1.50

In addition, are placed at the disposal of the committee, to be awarded in gratuities of not less than 1 each, \$20

PEACHES, GRAPES, AND ASSORTED FRUITS.

For best nine specimens of Freestone, White Flesh, Yellow Flesh, Essex County Seedling, each variety, \$2

For best collection of Peaches, premium, \$3

For best four bunches of Concord, Worden's Seedling, Brighton, Hartford Prolific, Delaware, Martha, Moore's Early, Niagara, Grapes, each variety, premium, \$3

For Cold House Grapes, produced with not over one month's artificial heat, premiums, \$4, 3

For best collection of ten varieties, not less than ten pounds in all, premiums, \$7

For best specimens of four bunches of Grapes, varieties other than above, deemed worthy by the committee, premiums, \$1.50

For baskets of Assorted Fruits, premiums, \$4, 3

In addition, are placed at the disposal of the committee, to be awarded in gratuities of not less than 50 cents each, \$25

PLANTS AND FLOWERS.

RULES AND REGULATIONS.

1. All Plants and Flowers for competition and exhibition must be entered for examination by the Committee on or before eleven o'clock, on the first day of the Fair, and all such Plants and Flowers must have been grown by the competitor, except native plants and flowers, and flowers used in bouquets, and baskets of flowers and floral designs, all of which (plants and flowers), must have been grown within the County.

2. When a certain number or quantity of Plants and Flowers is designated in the schedule, there must be neither more nor less than that number or quantity of specimens shown.

3. When only one premium from each exhibitor is offered for any article, only a single specimen or collection can compete, but when a second or third premium is offered, one, two or three specimens or collections may be exhibited for competition, but no variety can be duplicated.

4. No premium shall be awarded unless the specimens exhibited are of superior excellence, possessing points of superiority and worthy of such premium, not even if they are the only ones of their kind on exhibition.

5. No specimen entered for one premium shall be admitted in competition for another different premium.

6. Competitors will be required to furnish information (if the committee so request), as to their modes of cultivation, or in the case of Native Plants and Flowers, where such were found.

7. All Plants exhibited for premiums must have the name legibly and correctly written on stiff card, wood or some other permanent and suitable substance, and so attached to same as to be easily seen. Flowers when specified to be named to comply also with above rule.

8. Plants in Pots to be entitled to premiums must show skilful culture in the profusion of bloom and in the beauty, symmetry and vigor of the specimens; also Bouquets, Baskets, Design work, etc., must show taste, skill, and harmony in arrangement, both as to colors and the material they are made of, and purposes for which they are intended.

9. All flowers exhibited must be shown upon their *own stem*, flowers in "Design" work alone excepted; and this exception if overcome and avoided, to be taken into account by the committee in awarding the premiums.

10. The Committee are authorized to award gratuities for any new and rare plants and flowers or "Designs" of merit for which no premium

is offered, but in no case shall the total sum (premiums and gratuities together), exceed the amount, \$150,00, limited by the Society for this department.

11. No member of the Committee for awarding premiums or gratuities shall in any case vote or decide respecting an award for which such member may be a competitor, or in which he may have an interest, but in such case such member shall *temporarily* vacate his place upon the Committee, and such vacancy for the time being may be filled by the remaining members of the Committee, or they may act without.

12. Attention is again called to above Rules and Regulations for Plants and Flowers, and General Rules of the Society, and all articles not entered in conformity therewith will be disqualified, and premiums will be awarded only to exhibitors who have complied with said Rules, etc.

PLANTS.

Plants competing for these premiums must have been grown in pots, Native Plants excepted, named, etc. See Rules.

For collections Flowering and Ornamental Foliage Plants, at least 25 specimens, premiums, \$10, 5

For collection Palms, at least 5 specimens, 5 varieties, premium, \$1

For collection Ferns (cultivated), at least 5 specimens, 5 varieties, premium, \$1

For collection Dracenas, at least 5 specimens, 5 varieties premium, \$1

For collection Crotons, at least 5 specimens, 5 varieties, premium, \$1

For collection Fancy Caladiums, at least 5 specimens, 5 varieties, premium, \$1

For collection Gloxinias, at least 5 specimens, 5 varieties, premium, \$1

For collection Begonias, tuberous rooted, at least 5 specimens, 5 varieties, premium, \$1

For collection Begonians, 5 specimens, 5 varieties, premium, \$1

For collection Coleus, 10 specimens, 10 varieties, premium, \$1

For collection Fuchsias, 5 specimens, varieties, premium, \$1

For collection Cyclamen, 5 specimens, 5 varieties, premium, \$1

For collection Geraniums, double, 10 specimens, 10 varieties, prem., \$1

For collection Geraniums, single, 10 specimens, 10 varieties, prem., \$1

For collection Geraniums, fancy, 10 specimens, at least 5 varieties, premium, \$1

For collection Hibiscus, 5 specimens, 5 varieties, premium, \$1

For collection Carnation Pinks, 10 specimens, at least 5 varieties, premium, \$1

For collection Calla Lilies, 5 specimens, premium, \$1

For specimen English Ivy, premium, \$1

For collections of wood of native trees in sections, suitable for exhibition, showing bark and the grain of the wood, all correctly named with botanical and common name, at least 50 varieties, each variety to be shown in two sections, one of which to be a cross section and neither to be more than four inches in length or diameter, premiums, \$5, 3

FLOWERS.

For collections of Cut Flowets, cultivated, 100 specimens, at least 50 varieties named, \$5, 3

For collections of Cut Flowers, native, 100 specimens, at least 50 varieties, named, \$5, 3

For pair of Bouquets, for vases, green-house flowers, premiums, \$2, 1

For pair of Hand Bouquets, green-house flowers, premiums, \$2, 1

For pair of Bouquets, for vases, of native flowers, premiums, \$2, 1

For pair of Bouquets, for vases, of garden flowers, premiums, \$2, 1

For Basket of green-house flowers, premiums, \$2, 1

For Basket of native flowers, premiums, \$2, 1

For Basket of garden flowers, premiums, \$2, 1

For arrangement of Native Flowers and Autumn Leaves prems., \$3, 2

For Floral Designs, choice cultivated flowers, premiums, \$5, 3

For Floral Designs, native flowers, premiums, \$3, 2

For collections Japan Lilies, hardy, named, premiums, \$3, 2

For collections Phlox, hardy perennial, named, premiums, \$2, 1

For collections Pansies, at least 50 specimens, neatly and artistically arranged, premiums, \$2, 1

For collections of Native and Introduced Weeds, with common and botanical name attached, premiums, \$3, 2

For twelve Dahlias, large flowering, at least six varieties named, premium, \$1

For twelve Dahlias, Pompon or Lilliputian, at least six varieties, named, premium, \$1

For twelve Dahlias, single, at least six varieties, named, premium, \$1

For twelve Petunias, double, at least six varieties, named, premium, \$1

For twelve Gladiolus (spikes) at least six varieties, named, premium, \$1

For twelve Japan Lilies, at least six varieties, named, premium, \$1

For twelve Geraniums, double, at least six varieties, named, prem., \$1

For twelve Geranium, single, at least six varieties, named, prem., \$1

For twelve Phlox, hardy perennial, at least six varieties, named, premium, \$1

For twelve Cannas, at least six varieties named, premium, \$1

For twenty-four Carnation Pinks, at least six varieties, named, premium,	\$1
For twenty-four Verbenas, at least six varieties, named, premium,	\$1
For twenty-four Roses, at least six varieties, named, premium,	\$1
For twenty-four Garden Annuals, at least twelve varieties, named, premium,	\$1
For twelve Calendulas, at least two varieties, named, premium,	\$1
For twelve Asters, Double Victoria, premium,	\$1
For twelve Asters, Double, Truffaut's Peony flowered, premium,	\$1
For twelve Asters, Pompone, premium,	\$1
For twelve Phlox, Drummondii, in variety, premium,	\$1
For twelve Nasturtiums, at least six varieties, premium,	\$1
For twenty-four Pansies, in variety, premium,	\$1
For twenty-four Zinnias, double in variety, premium,	\$1
For twenty-four Marigolds, African, in variety, premium,	\$1
For twenty-four Marigolds, Dwarf French, in variety, premium,	\$1
For twenty-four Petunias, single, in variety, premium,	\$1
For display of Coxcombs, in variety, premium,	\$1
For twelve Scabiosas, in variety, premium,	\$1
For twelve Delphiniums, in variety, premium,	\$1
For twelve Dianthus, (double, annual), in variety, premium,	\$1
For twelve Salpiglossis, in variety, premium,	\$1
For collection of Sweet Peas, premium,	\$1

VEGETABLES.

Rules for Fruit apply to Vegetables.

Beets—For best twelve specimens, Eclipse, Dewing, and Edmands, premiums, each variety,	\$3
Carrots—For best twelve, short top, long Orange and Danvers Intermediate, premium, each variety,	\$3
For best twelve, Short Horn Orange carrots, premium,	\$3
Mangold Wurtzels—For best six specimens, premium,	\$3
Flat Turnips—Twelve specimens. For best Purple Top and White Flat, premium, each variety,	\$3
Ruta Bagas—Twelve specimens. For best Yellow and White, premium, each variety,	\$3
Parsnips—For the best twelve specimens, premium,	\$3
Onions—One peck. For best Danvers, Yellow Flat, and Red, premium, each variety,	\$3
Potatoes—One peck. For best Early Rose, Beauty of Hebron, Clark's No. 1, Pearl of Savoy, Early Maine, premium, each variety,	\$3

Cabbages—For best three specimens, Savoy, Fottler's Drumhead, Stone Mason Drumhead, Red Cabbage. All Seasons, Deep Head, each variety, premium, \$3

For next best, each variety, premium. \$2

Cauliflowers—For best three specimens, premium. \$3

For next best, premium. \$2

Celery—For best four roots, premium. \$2

Sweet Corn—For twelve ears ripest and best Early, premium, \$3

For best twelve ears in milk. Late, premium, \$3

Squashes—For best three specimens, Marrow, American Turban, Hubbard, Marblehead, Essex Hybrid, Bay State, Sibley, Butman, each variety, premium, \$3

Melons—For best three specimens Nutmeg, Musk, Cassaba, Salmon Flesh, each variety, premium, \$2

For best two specimens Watermelons, premium, \$2


Tomatoes—For best twelve specimens, Acme, Emery, Cardinal, Essex Hybrid, Livingston, or any other variety, each variety, premiums, \$3

For exhibition of greatest variety of Tomatoes, premium, \$3

Cranberries—For pecks of cultivated. premiums, \$3, 2, 1

For collection of vegetables, not less than three of a kind, premiums, \$8, 6, 4, 2

Placed at the disposal of the committee for whatever appears meritorious, \$30

 No competitor for premium to exhibit more or less number of specimens of any vegetables than the premiums are offered for.

Collections of Vegetables, where premiums are offered for a number of varieties, must be entered and placed, not less than three of a kind, by themselves on the tables assigned for collections. No collection shall receive but one premium. Specimens of any varieties in such collections are not to compete with specimens of the same variety placed elsewhere. Exhibitors of such collections, however, are not prevented from exhibiting *additional* specimens of any variety with and in competition with like variety. All vegetables must be entered in the name of the grower of them.

Size of Vegetables.—Turnip Beets to be from 3 to 5 inches in diameter; Onions, 2 1-2 to 4 inches in largest diameter; Potatoes to be of good size for family use; Squashes to be pure and well ripened - Turban, Marrow, Hubbard, Marblehead, each to weigh 8 to 16 lbs.

GRAIN AND SEED.

For best peck of Shelled Corn, Wheat, Oats, Barley, Rye, Buckwheat, and Field Beans, each, premium. \$1

For 25 ears of Field Corn, premiums, \$5, 3, 2

For 25 ears of Pop Corn, premiums.	\$3, 2
For collections of Field and Garden Seeds, premiums.	\$8, 6, 4, 2
All grain or seed <i>must have been grown by the exhibitor in the County</i> to receive premium.	

Domestic Manufactures.

Contributors must deposit their articles at the Hall before 11 o'clock on the first day of the Exhibition. Articles not thus deposited will not be entitled to a premium. Gratuities will be awarded for articles of special merit for which no premium is offered; but no premium or gratuity will be awarded for any article manufactured out of the County, or previous to the last exhibition of the Society.

COUNTERPANES AND AFGHANS.

For Wrought Counterpanes having regard to the quality and expense of the material, premiums.	\$4, 2
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Gratuities will be awarded for articles belonging to this department, the whole amount of gratuities not to exceed	\$25.
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CARPETINGS AND RUGS.

For Carpets, having regard to the quality and expense of the material, premiums,	\$4, 2
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For Wrought Hearth Rug, having regard both to the quality of the work and expense of the materials, premiums,	\$3, 2
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Gratuities will be awarded for articles belonging to this department, the whole amount not to exceed	\$25
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ARTICLES MANUFACTURED FROM LEATHER.

For best pair hand made and machine made Men's Boots. Women's do., Children's do., each, premium,	\$2
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Best Team, Carriage, and Express Harness, each, premium,	\$5
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\$10 are placed at the disposal of this committee, to be awarded in gratuities.

For the best exhibitions of Boots, and Shoes, manufactured in the County, each, premium,	Diploma of the Society.
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MANUFACTURES AND GENERAL MERCHANDISE.

For displays of Bonnets, premiums,	\$4, 3
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For Horn Combs, not less than one dozen, premium,	\$2
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At the disposal of the committee in this department, to be awarded in gratuities not exceeding \$3 in any one gratuity, \$20

FANCY WORK.

of Domestic Manufacture not included in the above.

At the disposal of the committee in this department, to be awarded in gratuities not exceeding \$3 in any one gratuity, \$50

WORKS OF ART.

At the disposal of the committee in this department, to be awarded in gratuities not exceeding \$3 in any one gratuity, \$50

WORK BY CHILDREN.

For specimens of work performed by children under 12 years of age exhibiting industry and ingenuity, premiums, \$3, 2

At disposal of committee to be awarded in gratuities, \$10

List of Premiums to be Awarded by the Trustees in November.

FARMS.

Competitors for this premium must give notice of their intention to the Secretary on or before June 15th, and the farms entered for premium will be viewed by the committee twice during the year. Crops growing on farms that are entered for premium, cannot be entered with another committee for separate premiums—except crop specimens exhibited at the Fair.

Any person desirous of having *his farm inspected, without entering it for premium*, may make application to the Secretary, and it will be viewed and reported upon by the committee.

For the best conducted and most improved farm, taking into view the entire management and cultivation, including lands, buildings, fences, orchards, crops, stock, and all other appendages, with statements in detail, relating thereto, premium, \$30

IMPROVING WET MEADOW AND SWAMP LANDS.

For best conducted experiments relating to wet meadow or swamp lands, on not less than one acre, the course of management, and the

produce, etc., for a period of two years at least, to be detailed, with a statement of all the incidental expenses, premiums, \$15, 10

NOTE.—The Committee is instructed to ascertain how many, if any, reclaimed swamps in this County have been abandoned or have returned to natural grasses. Persons knowing of such are requested to notify the Secretary or Committee.

IMPROVING PASTURE AND WASTE LANDS.

For best conducted experiments in renovating and improving pasture land, other than by ploughing, so as to add to their value for pasturage, with a statement of the same, premiums, \$15, 10

For best conducted experiments renovating and improving waste lands, so as to add to their agricultural value, with statement of the same, premiums, \$15, 10

No premium to be awarded to any person for a repetition of an experiment in meadow, swamp or pasture lands, for which he has already received a premium.

UNDER-DRAINING LAND.

For best conducted experiments in under-draining land, regard being had to the variety of soil, sub-soil, and other local circumstances, premiums, \$15, 10

NOTE.—The same instructions under "Improving Wet Meadow and Swamp Lands" apply to this Committee.

MANURES.

For most exact and satisfactory experiments, in the preparation and application of manures, whether animal, vegetable or mineral, premiums, \$15, 10

COMPARATIVE VALUE OF CROPS AS FOOD FOR CATTLE.

For most satisfactory experiments upon a stock of cattle, not less than four in number, in ascertaining the relative value of different kinds of fodder used in feeding stock for milk and other purposes, with a statement in detail of the quantity and value of the same, as compared with English hay, premium, \$25

FATTENING CATTLE AND SWINE.

For most satisfactory experiments in Fattening Cattle or Swine, with a statement in detail of the process and result, premiums, \$10, 5

GRAIN AND OTHER CROPS.

Claimants on Grain and Root Crops will be required to state the size of the piece of land, when they enter, and conform to the following rules: Entries of Grain Crops to be made on or before September 10th; Root Crops on or before October 10; giving ample time for the crops to be examined by the committee before harvesting. Statement to be made in conformity with the following form, must be forwarded to the Committee previous to November 1st.

All calculations and figures given in reports of, and statements of Crops are to be made on the *basis of an acre*, results in all cases, to be given at the rate per acre.

In pursuance of authority delegated to the Board of Agriculture by Chap. 24 of Acts 1862, Agricultural Societies receiving the bounty of the State are required to make use of the following form, and be governed by its conditions in the mode of ascertaining the amount of crops entered for premium.

ESSEX AGRICULTURAL SOCIETY.—Statement concerning a crop of ———, raised by Mr.———, in the town of———, ——, 1890.

What was the crop of 1888? What manure was used and how much? What was the crop of 1889? What manure was used and how much? What is the nature of the soil? When, and how many times ploughed, and how deep? What other preparation for the seed? Cost of ploughing and other preparation? Amount of manure, in loads of thirty bushels, and how applied? Value of manure upon the ground? (What amount of Commercial Fertilizer used? How used? Value of same when applied?) When and how planted? The amount and kind of seed? Cost of seed and planting? How cultivated, and how many times? Cost of cultivation, including weeding and thinning? Time and manner of harvesting? Cost of harvesting, including the storing and husking or threshing? Amount of crop, etc. Signed by———, Competitor.

The committee, to whom is entrusted the award of the premiums on field crops, may award them according to their judgment, but for the purpose of furnishing accurate statistics for the benefit of agriculture, shall select certain of the crops, and require the owners thereof to measure the land and weigh the crops accurately, giving to the committee a certificate of the same, and give all possible information thereon over their own signatures, and return the same to the Secretary of the Society. to be published in the annual transactions.

In ascertaining the amount of crop, any vessel may be used and the

weight of its contents once, multiplied by the number of times it is filled by the crop.

In measuring the land or weighing crops, any competent person may be employed, whether a sworn surveyor or not, and must give certificate.

The certificate shall state the weight of all crops only in a merchantable state.

In ascertaining the amount of a hay crop entered for premium, the measurement of the hay in the barn may be employed.

RULES OF MEASURE PRACTICED AND ADOPTED BY THE STATE BOARD OF AGRICULTURE.

	60 lbs. to bush.
White Beans and Peas,	62 “ “
Corn, Rye,	56 “ “
Oats,	32 “ “
Barley, Buckwheat,	48 “ “
Cracked Corn, Corn and Rye, and other meal, except Oat,	50 “ “
Parsnips, Carrots,	55 “ “
Onions,	52 “ “

1. For the best conducted experiments of Rye, not less than twenty bushels to the acre, fifty-six pounds to the bushel, on not less than one acre, premiums, \$10, 5

2. For best conducted experiments of Wheat, not less than thirty bushels to the acre, sixty pounds to the bushel, on not less than one acre, premiums, \$10, 5

3. For best conducted experiments of Oats, not less than fifty bushels to the acre, thirty-two pounds to the bushel, on not less than one acre, premiums, \$10, 5

4. For best conducted experiments of Barley, not less than forty bushels to the acre, forty-eight pounds to the bushel, on not less than one acre, premiums, \$10, 5

5. For best conducted experiments of Indian Corn, not less than one acre, premiums, \$10, 5

6. For largest quantity and best quality of English Hay, on not less than one acre, regard being had to the mode and cost of cultivation, premiums, \$10, 5

7. For best yield of Field Beans, on not less than one-half acre, and not less than twenty-five bushels per acre, premiums, \$10, 5

ROOT CROPS.

1. For best conducted experiments in raising Carrots, fifty-five pounds to the bushel, premiums, \$10, 5
2. For best conducted experiments in raising Parsnips, fifty-five pounds to the bushel, premiums, \$10, 5
3. For best conducted experiments in raising Ruta Bagas, sixty pounds to the bushel, premiums, \$10, 5
4. For best conducted experiments on raising Mangold Wurtzels, sixty pounds to the bushel, premiums, \$10, 5
5. For best conducted experiments in raising Sugar Beets, sixty pounds to the bushel, premiums, \$10, 5
6. For best conducted experiments in raising Onions, fifty-two pounds to the bushel, premiums, \$10, 5
7. For best conducted experiments in raising Potatoes, sixty pounds to the bushel, premiums, \$10, 5
8. For best conducted experiments in raising Cabbages, premiums, \$10, 5
9. For best conducted experiments in raising Squashes, premiums, \$10, 5
10. For best conducted experiments in raising Summer English Turnips for the market, premiums, \$10, 5

Raised on not less than half an acre, and the quantity of crop to be ascertained by weight; so far as practicable the crop to be free from dirt, without tops, and in a merchantable condition at the time of measurement.

Claimants for premiums on Grain or Root Crops must forward statement to chairman of committee *before Nov. 1st.*

FOREST TREES.

1. For plantation of either of the following species of forest trees, viz: White Oak, Yellow Oak, Locust, Birch, White Ash, Maple, Walnut, or White Pine, not less than three years old, and not less than 1000 trees. premium, \$20
2. For plantation of not less than 600 trees, premium, \$10
3. For ornamental trees, ten or more set on any street, road or farm, and cared for five years, premium, \$10

CRANBERRIES.

For best conducted experiment in the cultivation of the Cranberry, at least two summers, on not less than twenty rods of land, with written

statement of the quantity and quality of the land, expense of planting, weeding and culture, and amount of crops produced. Premium to be paid in 1890 or 1891, \$15

For best experiment, do., on not less than ten rods of land, prem. \$10

For best do., on not less than five rods of land, premium, \$5

STRAWBERRIES AND OTHER SMALL FRUITS.

For best crop of Strawberries, on not less than twenty rods of land, expense of planting, culture, crop, etc., stated in writing, premium, \$10

For best crop of Currants, Raspberries and Blackberries, with statement as above, premiums, each, \$10

NEW WINTER APPLES.

For a new variety of Winter Apple, originated in this County, equal or superior to the Baldwin, premium, \$100

For a new variety of like character originating elsewhere, provided it has been cultivated in the County sufficiently to prove it equal or superior to the Baldwin for general purposes, premium, \$20

For a successful experiment in destroying the codling moth and other worms destructive to the apple, premium, \$25

NOTE.—Persons who consider themselves competitors will send Post Office address to Secretary, and others in the County wishing to compete for above must notify Secretary, and furnish a full statement of their apple, and also scions when called for under his directions, to be tested by the Society.

SEEDLING POTATOES AND EXPERIMENTS.

For best Seedling Potato, originating in Essex County, to equal in yield, earliness, and quality, the Early Rose, and to surpass it in one or more of these particulars, premium paid after three years' trial, \$25

In testing the value of a Seedling Potato, the committee are instructed to take sworn testimony of the cultivator with regard to the yield, after having inspected the crop.

For the most satisfactory experiment to extend through five consecutive years, to settle the following facts relative to raising potatoes:—premium, \$50

1st. Will whole, medium sized Potatoes, yield better results than pieces cut to two eyes?

2nd. What will be the result of continuously planting small-sized potatoes of the same strain a series of years?

3rd. Difference between hilling and flat cultivation.

4th. Effect, if any, of cutting off seed ends before planting.

5th. Effects of deep and shallow planting.

- 6th. Raising from sprouts alone from same strain.
- 7th. Can potatoes having dwarf vines be planted nearer than others?
- 8th. Best distances apart for seed in the drill.
- 9th. To show the effect of covering the top with earth at several times after they had come up.

To be raised on not less than a half acre of land, uniform in character, and all to receive the same kind and quality of manure and cultivation, and to be inspected by the committee at the time of gathering the crops.

ESSAYS AND FARM ACCOUNTS.

The Essays must be transmitted to the Secretary by the 1st of November, with sealed envelopes containing the names of their authors, respectively, which shall not be opened by the committee, nor shall the names be known to the committee until they shall have decided upon the merits of the Essay.

For original Essays on any subject connected with Agriculture, in a form worthy of publication, premiums, §15, 10, 8

For best statement of Actual Farm Accounts, drawn from the experience of the claimant, in a form worthy of publication, premium, §10

For Reports of Committees upon subjects for which premiums are offered, premiums, §10, 8, 6

Committee—G. L. Streeter, Salem; N. M. Hawkes, Lynn; D. E. Safford, Hamilton; N. A. Horton, Salem; Geo. W. Foster, Andover; D. W. Low, Gloucester.

LIBRARY.

Committee—Henry Wheatland, George M. Whipple.

Special Committee—Benj. P. Ware, David W. Low.

ENCOURAGING AGRICULTURAL LIBRARIES.

It shall be the duty of the Committee to communicate with such persons in the several cities and towns in the County, as, in their judgment, will best encourage the establishment of, or improvement of, collections of books, pamphlets, reports, essays, newspapers, etc., relating to agriculture, and request their aid in thus advancing the cause of agriculture, and co-operate with such persons in promoting the object herein referred to.

Committee—Francis H. Appleton, Peabody; Henry Wheatland, Salem; James J. H. Gregory, Marblehead.

NEW MEMBERS.

For the person who obtains the largest number of new members for

the Society from any Town or City before the first day of November next, premium, 86

NOTE.—Names of new members, with name of person procuring them, can be sent as fast as obtained, to the Secretary of the Society, who will make a record of them.

Persons paying three dollars will receive a "Certificate of Membership" which is for life. No fines or assessments are ever imposed and members are entitled to vote in all its transactions, with the free use of the Library and a copy of the publication of the Society's transactions each year.

Committee—Secretary, David W. Low, Gloucester.

TREADWELL FARM.

Committee—Benj. P. Ware, Marblehead; C. C. Blunt, Andover; B. P. Pike, Topsfield; Wm. Cogswell, Bradford; George B. Bradley, Methuen; David W. Low, Gloucester.

AUDITORS.

Committee—J. Hardy Phippin, Salem; Benj. P. Ware, Marblehead; E. Pope-Barrett, Peabody.

FARMERS' INSTITUTES.

Committee—Benjamin P. Ware, James P. King, C. C. Blunt, O. S. Butler, Andrew Lane, D. W. Low.

DELEGATES.

From the Essex Agricultural Society to attend Exhibitions of Societies, Farmers' Clubs and Fruit Growers' Associations in Essex County, and report any information that shall seem valuable for publication.

The Secretary to be notified of time of holding their exhibition, who will notify the chairman of Committee to assign Delegate.

COMMITTEES.

All Committees, including committees to judge of Crops, of Exhibits at Fair, and of the Arrangements for the Fair, are chosen by the Trustees at their June meeting.

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TRANSACTIONS
FOR THE YEAR 1890,
OF THE
ESSEX AGRICULTURAL SOCIETY,
(ORGANIZED 1818.)
FOR THE
COUNTY OF ESSEX,
IN MASSACHUSETTS,
AND ITS
Sixty-Eighth Annual Address,
BY
Prof. JOHN W. PERKINS,
OF DUMMER ACADEMY, NEWBURY.
With the Premium List for 1891.

PUBLISHED BY ORDER OF THE SOCIETY.

SALEM, MASS. :
OBSERVER BOOK AND JOB PRINT,
1890.

ADDRESS.

The membership of this Society has never, I believe, been strictly confined to farmers. It has cordially welcomed those of other pursuits who have been sufficiently interested in matters pertaining to agriculture to enjoy the exhibits, the discussions, or even the companionship of those whose business it is to cultivate the soil. And so the Society embraces representatives of many callings ; and its orator might choose any one of a wide range of subjects, with a reasonable expectation of speaking to some who would be especially interested in his theme.

Those who have addressed you in previous years, however, seem very properly to have remembered that, however hospitable the Society may have been in entertaining strangers, it had maintained a loyalty to the purposes which gave it birth. The subjects treated have been closely and specially related to the farmer's interest.

I propose, on the present occasion, to speak of "Our Common Roads," believing it to be a subject of great importance to the farmer, and one that touches the interest of every pursuit, even though it be no other than the pursuit of pleasure.

The statement that "the standard of a people's civilization may be known by their roads," has been often quoted and almost as frequently endorsed ; as have also the words of Macaulay, that "Of all inventions, the alphabet and printing press alone excepted, those inventions which

abridge distance have done most for the civilization of our species." "Every improvement," he adds, "of the means of locomotion benefits mankind morally and intellectually as well as materially."

Judged by this criterion, our claims to civilization must rank below that of other centuries: and this is the more remarkable from the fact that we are accustomed to pride ourselves upon our superiority in the affairs of practical convenience.

A former Governor of our Commonwealth, in his inaugural address to the Legislature, used the following words: "Closely connected with our agricultural and other prominent interests is the system of public highways. Few things are of greater importance to a community, or a surer test of civilization, than good roads." "Those of our citizens who have visited Europe are unanimous in the opinion that our public roads are far inferior to those of other countries, where the means of easy and safe communication are better appreciated. The science of road-making is apparently not well understood; or, if it is, the present modes of superintending the construction and repair of roads are so defective that the public suffers to an extent of which few are aware. It may be found, upon investigating the cause of our miserably poor and ill-constructed roads, that the laws relating to this subject need revision, so as to give more uniformity in the construction and repair of our highways. It is evident, also, that the science of road-making should have a prominent place in the course of applied mathematics at the Massachusetts Agricultural College." The United States Commissioner of Agriculture, in his report for 1888, made a similar comparison, using the following language: "While our railway system has become the most perfect

in the world, the common roads of the United States have been neglected, and are inferior to those of any other civilized country in the world. They are deficient in every necessary qualification that is an attribute to a good road; in direction, in slope, in shape and service, and, most of all, in want of repair. By the improvement of these common roads, every branch of our agricultural, commercial and manufacturing industries would be materially benefitted. Every article brought to market would be diminished in price, the number of horses necessary as a motive power would be reduced, and, by these and other retrenchments, millions of dollars would be annually saved to the public."

Testimony to the same effect might be multiplied at great length. There are, to be sure, extenuating circumstances in the rapid and comparatively scattered nature of our growth, which furnish sound reason why some parts of our land should yet be far short of having perfected their highways; but Eastern Massachusetts should be among the last to offer any such excuse for her neglect.

The history of road-making has been a curious one, presenting, as it does, long intervals when the application of scientific principles, once far advanced, seems to have been for centuries in a state of arrested development, or even to have become one of the "lost arts."

More than two thousand years ago, Rome had constructed a system of roads which, under constant and trying use, with comparatively little repairs, lasted for centuries, and parts of which still exist, a monument to the engineering skill of that early period. But even the Romans are not permitted to have the honor of originating this art, which they so magnificently developed. The inhabitants of Carthage, we are told, stimulated by

the necessity of their sandy soil, had anticipated the Romans by some centuries, and, according to some authorities, Carthage had been anticipated by Egypt. I believe that it is undisputed that the earliest road-maker of whom we have any account was an Egyptian Pharaoh, who constructed by forced labor a gigantic causeway to convey materials for the erection of a pyramid.

The excellence of the Roman roads can be estimated by the fact that travellers upon them could, it is said, accomplish with ease a hundred miles a day. No less an authority than Pliny relates that a Roman nobleman, in a case of great emergency, drove two hundred Roman miles in twenty-four hours. It has been cited as evidence of the barbarism of succeeding centuries, that these roads, constructed by consummate skill, were abandoned to the destructive agencies of time and of the elements. When the unity of the Imperial Power had been broken, the unity of action in preserving the means of intercourse between distant regions began to decay, and the mutual independence of the governments which followed was unfavorable to that concerted effort which might have wrought to the great advantage of all.

In the course of centuries, however, the love of gain and religious ardor manifested respectively in expanding commerce and in long pilgrimages, made their demands for improved means for traffic and travel. It is probable that the spirit of the crusades may have done something in this direction, in which the Roman love of conquest had achieved so much ten centuries before. The prevailing purpose of each epoch made the military chieftains appreciate the value of good roads for the march of armies. There seems, however, to have been little uniformity of system, and small progress in the art of road-making until near the beginning of the present century.

In Mexico and Peru, we are informed that the Incas, being destitute of beasts fitted for draught, had carried mere foot-roads to the highest degree of excellence ; that, in their construction, the builders had overcome great natural obstacles by means of high embankments, tunnels through living rock, long flights of steps hewn in solid stone, and bridges, some of which were of masonry and others proper suspension bridges of the tough fibre of some of their native woods ; that these roads were so nearly perfect that runners, relieving one another at intervals of five miles, were able to convey light burdens one hundred and fifty or two hundred miles a day. We read that in France, to the end of the sixteenth century, “all travelling was performed on horseback, the slowness and discomfort of wheeled conveyances confining their use to the transport of goods.” An act passed in the reign of Henry VIII. indicates that, in certain countries of England, it was easier to open a new road than to repair an old one. Between 1760 and 1774, four hundred and fifty-two turnpike acts were passed; and from 1785 to 1809, a period of twenty-four years, no less than one thousand and sixty-two more. A perusal of the acts of the English Parliament, concerning the matter of highways from this time on, brings to view many curious and complicated devices for distributing the responsibility of their maintenance. The enumeration of some of these, did our present limits permit, would be found interesting and amusing ; and they seem likely to impress one with the conviction that the problem of maintaining a system of public roads upon an equitable basis of expenditure, has troubled our ancestors, for many generations, quite as much as it troubles us, having ever been among the most difficult in which to achieve satisfactory solution.

An especial feature of English legislation upon this subject, during recent years, seems to be in the direction of centralizing the responsibility more than formerly ; that is, instead of leaving the duty to the decision of each parish, it has made it possible for several parishes to combine into a district to be placed under boards of superintendence, who are expected to employ professional surveyors. Another noticeable tendency has been that of changing the English turnpike to a free highway. This latter change has no practical suggestion for us, as all our county roads have for years been free.

The other tendency, however—that of distributing the responsibility over a wider area—suggests a measure which has long seemed to us worth a careful consideration, as one which, for our main thoroughfares, might be adopted with more of justice than that of our present custom, and with a prospect of better results than those we now experience.

Instituting a comparison between the English roads and those in our own State, a late distinguished citizen of this Commonwealth expressed the conviction that the English horse, employed on the streets of a city or the roads of the country, did twice as much work as is done by our own horses similarly employed in this State ; and he goes on to say that this is not because the English horse is superior, or overworked, but because Englishmen have invested in perfect and permanent roads what we expend in perishable horses that require to be fed. Whatever a people who have reached a desired result may think that they have learned by experience in its achievement, is worthy of the attention of others who aim at the same end.

As our own system is now administered, it is possible,

and a thing not altogether unknown, for a town, by its neglect, practically to nullify, in a great degree, the liberal and intelligent expenditure of neighboring towns. The worst part of a road, like the weakest link of a chain, compels one to adapt his load to that particular locality ; and, since the conclusions of practical scientific engineers inform us that the amount of tractive force necessary to draw a load of a certain weight over a level surface, newly covered with gravel of four to six inches in depth, is six times as great as that required to draw the same upon a road of broken stone in good condition, we may clearly see how one town may, by the bad condition of its roads, be the means of laying a heavy tax upon all who team through it. An enlarged area of authority would certainly tend to relieve this troublesome lack of uniformity. It would also aid in giving to each town its just proportion of the burden of repairs—a burden which at present, for at least two reasons, is very unequally borne. One part of this inequality lies in the fact that the material for making good roads is much less easily obtained in some localities than in others ; another, that the amount of “through travel” varies greatly in various towns. This kind of travel seldom brings any benefit to the town through which it passes, while, if it be that of heavily loaded teams, as it often is, the damage it does to the main thoroughfares may equal, or even exceed, that done by the citizens of the place who have to repair the roads.

Another consideration in favor of a larger organization for road repairs, is in the greater facility with which several towns might combine in the ownership or employment of the most improved but somewhat expensive machinery, such as stone crushers and steam rollers, and also in the employment of trained professional skill in superintending repairs.

As another point in favor of this change, we would suggest that it would be likely to lead to something like constant repairs, instead of the custom now common of doing all this work within a few consecutive weeks, and for the rest of the year practically letting the roads deteriorate as they may. By repairing only once or twice a year, the result is that we have a thoroughly good road at no time. It is so bad, just after repairs, that every one tries to avoid the mended portions, as far as practicable; but after a time they become passable, and perhaps satisfactory, and then too often are permitted to deteriorate, until they reach the state which had before made repairs a necessity. By a more constant supervision, might we not have a good road the year round, and at even less expense?

The tables of results given by engineers, where the two systems have been tried, are significant and seem conclusive. One of these authorities, speaking of this change in the system of repairing roads in a part of Germany, said some years ago: "It costs no more to keep the roads in repair now than it did twenty years ago, when this method of continual repairs was not in use, although labor is more than three times, and materials are twice as dear as they then were."

To attempt to point out in detail the present prevailing defects in our highways, may appear hardly modest in one who has to confess that he never had more than a very limited experience in road-making or road-repairing. But there are some faults so obvious and so common, that for one, in speaking on the subject of roads, to leave them unmentioned might seem a neglect of duty.

What has ever appeared to us one of the most exasperating pieces of folly in the labor upon our highways, is a

species of work which, though less common than formerly, we still see done somewhere in our county almost every spring. We allude to the custom of ploughing up the roadside, and spreading the loosened material on the roadbed, irrespective of the consideration whether the material be gravel, sand, clay or loam; or, if there be stones amongst it, whether these be smooth or broken. That this curious method of repairs is not confined to any one locality, would appear, aside from our own observation, from an article in the *New York Nation*, which, though not very recent, sets forth this process so graphically that I will ask your pardon if I quote in part the author's words. After stating that the season for riding had set in, the writer goes on to say :

"The road-makers, contractors and selectmen accordingly go to work with great zeal and assiduity to put the public highways in order, and the way in which they attempt to do this is so extraordinary that nothing but long habit prevents the public from enjoying the absurdity. Most city readers, even, are probably aware that roads being slightly elevated, there runs along on each side of them a hollow or ditch, into which the rains sweep most of the mud from their surface, as well as the mould from the adjoining fields, the dead leaves from the trees, and a large quantity of other decaying or decayed vegetable matter. These form, consequently, on the roadside, deposits of soil or manure of great value for agricultural purposes, and which farmers, if they are wise, would cart away and spread over their weary fields. It accumulates without disturbance through the summer, fall and winter, and in the spring comes the road-mender, with a plough and yoke of oxen, and carefully spreads it on the middle of the highway, wherever he sees a hollow place.

"Most intelligent foreigners who witness this process, and are not familiar with the agricultural theory of roads, are apt to imagine that it is dictated by malice or carelessness — that the farmer wants to clean his ditches out, and, to save himself trouble, dumps the contents in the road, in sheer indifference to the comfort or convenience of travellers. And nobody who was familiar with the result could honestly say that the suspicion was entirely unjustifiable, for the stuff that is thus put on never hardens. After rain, it becomes quagmire; two or three days of sun converts it into dust, which horses and wheels raise into thick clouds, rendering driving in dry weather something only to be undertaken under pressure of necessity. It is not unnatural to ascribe the putting of it in to malignity or selfishness."

These words, as applied to our general system of repairs, are of course exaggerated. But for what we may still too frequently witness every year, they are much nearer to a faithful description than to an extravagant caricature. If, in palliation, some one pleads with the player in Shakespeare, "I hope we have reformed that indifferently with us," let us unite to reply, in the words of Hamlet, "O reform it altogether."

Another fault, far less offensive, though more common among us than the preceding, is that of excessively crowning or rounding up the centre of our roadbeds. The objection to such a construction is, that it makes an equitable distribution of the travel over the surface impossible, and, after a time, by compelling the wheels to go in nearly the same place, produces ruts ; or if for any reason loaded teams are compelled to turn aside, the peculiar shape of the road-bed throws an undue pressure upon the outer wheels, subjecting them to a severe strain, while the sliding sidewise pressure thus produced increases both the draught and the wear of the road. Besides, if the loads be bulky, like hay, they are in danger of being seriously racked on one side, or of being upset on the spot. That particular kind of abomination which we call "cradle-holes," you will notice, are most likely to appear on roads where there is a considerable amount of travel. So we come across them more frequently in or near our villages, and the unpaved portions of our cities, than in the remote byways of country towns. These should always be attended to when they begin to appear, and, in fact, furnish one of the most striking illustrations of the necessity for that constant supervision of which we have spoken before. The deeper these become, the greater the force of the impact with which every passing wheel goes

thumping to their bottom ; and thus they grow worse in a constantly increasing ratio the longer they are neglected.

Another and somewhat widely prevalent evil in our roads, especially where the material which enters into their construction is largely clay, is the lack of adequate under drainage. We are disposed to think that in surface drainage there has been improvement. Long rains or sudden showers do not so frequently as in former years reduce our hillside roads to a state well nigh impassable. But there are miles upon miles of road in our county, some of them in thoroughfares much travelled, where for several weeks in the year one can with difficulty trot his horse in a light buggy, and where the trouble could be largely and permanently removed by a skilful employment of the means of which we are now speaking. We believe the expense would, in a very few years, be more than compensated by the removal it would bring of that indirect tax which we all have to pay whenever we ride or team over these roads. We know of such a road in one of the thriving towns of this county. It is perhaps an eighth of a mile in length, and lies near the centre of the town's population. Over it there pass and repass scores of vehicles, some light and others heavily loaded, almost every day of the year. If you were to view that spot a few hours about the first of next April, unless the spring should be an exceptionally favorable one, you would be likely to witness vehicles sunk nearly or quite half to the axles in adhesive mud, horses having to struggle to get through with even empty wagons, harnesses strained and snapping asunder, parts of loads thrown off or entire loads abandoned in despair, and men expressing their objurgations of the town authorities in terms which strongly imply the hope that they might not be

with them in the world to come. And yet this piece of road is so situated that an underdrain throughout its entire length could find a favorably inclined outlet at either end. The difficulty concerning such an abominable state of things as we endure in cases like this, seems to be that we have no proper standard of what a road should be. Whenever a traveller complains, he is reminded by some one that it is the spring of the year, that the frost is coming out, that there is a good deal of clay in the road, that the weather is unfavorable for roads, and other similar explanations are given. But rarely is it implied that man could do more than has been done to abate the annual blockade.

As one antidote to such supineness, we would recommend the reading of the report of the committee of the town of Newton made to a town meeting some years ago. The committee had been raised to bring in a report upon the appointment of an engineer, and it reported favorably. Some years previous, the town of Waltham had made liberal expenditures upon its roads, macadamizing its principal streets, and had adopted a system of constant repairs. In making a comparison between the roads of the two towns, the committee say that the year before it had cost the town of Waltham, for repairs and cleaning off snow, not over \$80 a mile, while the town of Newton had expended for the same purpose \$176 a mile. "It will be seen," say the committee, "that our system of partial or incomplete repairs is twice as expensive." The report further says: "Your committee visited Waltham and found the broken stone road dry and hard. It will sustain loads of six tons without being cut into ruts. Returning, we came through Waltham street, and, observing the instant we passed from town to town in the

changed character of the road, we passed on to Newtonville over our fine old avenue. The first road required scarcely any mending. The last one was cut up with ruts, and full of mud, and workmen were dumping gravel from four to six inches deep on it. On the Waltham road it required one fortieth the weight of the load (say twenty pounds) in tractive force to draw it, while on the main road of Newton it would have required one eighth of the load (100 lbs.) in tractive force to draw it. That this criticism is not especially in the interest of persons driving in light carriages and for pleasure, may be seen from the fact—as demonstrated by careful and extended experiment—that the resistance to the onward motion of the carriage, arising from roughness of the road, is always in proportion to the weight of the carriage. A double weight will offer double resistance, a triple weight triple resistance, and so on.” Now when, in the face of facts like these, some good citizen implies that the explanation of the intolerable state of some of our roads, for some weeks of the year, is in so-called “natural causes,” we demur.

We somehow strongly suspect that human inefficiency in the matter has something to answer for, and with only a change of the proper name would reply, in the words of Cassius,

“The fault, dear Brutus, is not in our stars,
But in ourselves.”

We ought not to be satisfied with the condition of any main road, on which any day of the year when it is free from snow drifts, a horse may not travel at very near his ordinary speed. So obvious and manifold are the benefits which good roads bring to a community that from very early times men have regarded those associated with their projection with the highest honor and gratitude.

Among the ancient Greeks the care of the roads was one of the specified, personal duties of kings; while the Romans testified to the veneration with which they regarded those who opened this means of intercourse, by giving to their highest religious officer a name derived from this service,—the word, Pontifex, which was the regular title of the Roman High Priest, and is the word from which we have the English word pontificate, literally meaning bridge builder. Among the Mohammedans and in mediæval Europe to make such provision for the safety of wayfares was esteemed an act of charity and devotion which ranked with the establishment of temples and hospitals, and constituted a claim to the honors of canonization.

We once heard America's most famous pulpit orator of his time specify the making of good roads as among the natural fruits of the Christian spirit. For us who are to-day citizens of the cities and towns of this county, the improvement in our roads means, as it ever meant for other people in other lands, a more advantageous interchange for purposes of traffic and a closer union of fellowship. In some degree it helps to solve the problem of bringing into nearer relations the producer and consumer of the products of our farms.

The lines of railroad have in a great measure superseded the custom of a generation ago, when the farmer sold his produce from door to door to his city customer. But there are still considerable numbers who insist upon receiving their farm commodities, as far as possible, from the hand that produces them. Within a very few years we have known of some who carried this preference so far that they willingly paid their market man a greatly advanced price, even for such a commodity as corn meal,

for the sake of having that which they could be sure was of eastern production. And it is safe to say that almost every family has something of a similar preference and would gladly pay for its gratification.

But not less would such improvements be for the mutual advantage of city and country by the increased inducement it would open to our city friends to make their homes for a shorter or longer period of each year among the natural attractions of our country towns. No public expense can do more to make our towns attractive to this class of people than just this improvement of which we speak. Very few people ever ride in the steam cars for pleasure. In a certain pretty direct way the modern applications of steam and other appliances by which the rapid transaction of business is facilitated, all contribute towards making the increasing use of our roads for the purpose of pleasure-driving almost a necessity. A century ago whenever a man had pressing business in a distant city, he was obliged by some sort of conveyance to take a journey over the road. This gave him a somewhat protracted outing. Now, however, he does not perhaps go from his office. He simply dictates a telegram, or presses a button and talks through a telephone. So far as the necessities of traffic are concerned the habits of business men have been growing more sedentary.

Meantime the physical and mental necessities of man have not greatly changed, one of these being, as it ever has been, that for his best condition, he must be much in the open air. For increasing numbers this demand is most pleasantly met behind a free horse on a good road. It is related of Dr. Johnson, that as he was once being whirled in a post-chaise over a beautiful road, he declared he was enjoying one of the greatest pleasures of life.

And in this taste, we fancy that the eccentric doctor was much like the majority of men.

In one very important respect the common roads of this county are particularly inviting to those who ride for pleasure, in that so many are winding in their course. For, however convenient a straight road may be for purposes of business, when it comes to pleasure-driving most of us prefer a road that winds and curves and seems to lead nowhere in particular.

“ Round and round, over valley and hill
Old roads winding, as old roads will,
Here to a ferry and there to a mill.”

Not long since a citizen of this county, who had been invited to consider the question of accepting a position possessing many attractions elsewhere, gave as one of his strongest reasons for his reluctance to make the change that he and his family would feel homesick without the winding driveways of Old Essex. The keeping these roads in a state of thoroughly good repair would make the pleasure of driving over them equal to that enjoyed in the most elaborate parks. For it is altogether doubtful whether our parks became popular resorts for driving so much for anything else that the hand of man has done in them, as because of the perfection of the roads which are found there. In this connection account must be taken of those modern inventions—the bicycle and tricycle. The great improvement in these machines and their reduced price are bringing them into popular use among people of all ages and both sexes. They are sensitive detectives of any imperfections in their path. And towns which would win the favor of the numerous multitude already using them must attend to the condition of their roads.

As an additional ground for improving our highways, we would urge that such improvement would be directly in the interest of harmony between different classes of citizens. We all know that among those who dwell in the more thinly populated regions of our towns and cities, there often exists a feeling that in proportion to the advantage they receive from the public expenses, they have to bear more than their share of the burden of taxation. Regarded with perfect candor this feeling is not altogether unnatural. In many of these places a considerable amount of the public funds is appropriated for sewerage, for sidewalks, for street lighting, for water works, for the fire department, and for an expensive town hall.

Those at the centre have the direct advantage of all these, while that obtained by those living more remote is indirect and often next to nothing at all.

The latter class, however, for the most part, own property which cannot easily escape taxation, while many at the centre pay only a poll tax, and some of the more wealthy are suspected of holding property which does not appear upon the books of the assessor. In this state of things there is a demand on the part of the farmers that they have in their own locality, at the public expense, two things—good schools and good roads. The demand is a just one, and should always be met with a liberal spirit.

Now the one serious question in regard to what has been said is one concerning the increased expenses of the desired improvement. And in reply we would say that it is not altogether certain, indeed it is hardly probable, that through a series of several years even the direct cost would be greater than it now is.

And if we consider the indirect tax in the way of

horses, harnesses and loss of time which bad roads impose upon us, it is altogether probable that the best roads may prove the least expensive. As a further reply we would suggest that the expenses might be greatly reduced by employing upon the needed improvements the labor of our convicts in our houses of correction. The proper employment of convict labor has ever presented a somewhat difficult problem. In recent years it has become more complicated by the demand made concerning it on the part of labor reformers. The kind of employment we now speak of is recommended for consideration on the ground that it would require little expense in the way of machinery or tools ; that it is so simple that all could engage in it who are able to perform manual labor of any kind ; that it would be easily supervised, and that in the least degree, if at all, would it come in conflict with the interests of free labor. I am informed that we have in this county not far from three hundred convicts who could be at once available for such work. Probably the average number would not be much less. It seems hardly too much to assume that such a force properly employed, might in a few years at no great increase of expense, give throughout our county, macadamized thoroughfares and a system of cross roads which should be equal to the best now seen in any part of the State.

With this suggestion we take leave of our theme, fully aware that we have not treated it exhaustively though we begin to fear that we may have done so exhaustingly. Our aim has been to throw out some hints, familiar to us all as separate facts, in the hope that when presented together they might possibly start trains of thought that would lead to practical measures for our common good.

Annual Cattle Show and Fair.

Show and Fair of this Society opened Tuesday, Sept. 23rd, 1890, for the second time at Beverly, under the most favorable circumstances, the weather being all that could be desired and the people of the town doing what they could to make it a success.

The entries on the show grounds and in the hall were in excess of last year, and there was a large attendance of people to witness the different trials of draft, &c.

In the ploughing match this year there were fifteen entries and all seemed to be interested in the active competition among the ploughmen, and some excellent work that was a credit to the farmers of Essex County was done.

In the exhibition hall, the entries and exhibits were up to the usual standard with the exception of apples, and the show of them was good, considering the season.

On Sept. 24th, the annual address was delivered by Prof. John W. Perkins of Dummer Academy, Newbury, before a large gathering of members and others in the First Baptist Church, and although not pertaining strictly to agriculture, but treating of something that every farmer likes, "good roads," was very interesting and instructive.

The Scripture reading and prayer by Rev. Mr. Hoyt of Beverly Farms, was appropriate for the occasion, as was also the excellent singing by the choir.

After the conclusion of the services in the church, the annual dinner was served in the vestry, after which President Ware made some introductory remarks, and introduced Hon. Daniel Needham of Groton, Dr. William H. Bowker, delegate from the State Board of Agriculture, Hon. William R. Sessions, Secretary of the State

Board of Agriculture, Hon. O. B. Hadwin of Worcester, Hon. George B. Loring, Hon. Warren Brown, President of the New Hampshire Agricultural Society, Prof. John W. Perkins and Rev. Mr. Hoyt, all of whom contributed very pleasant remarks in praise of the Society and its work, adding greatly to the entertainment.

The entries in the several departments of the Fair for 1890 and 1889 at Beverly, are tabulated for comparison as follows :

STOCK, IMPLEMENTS, ETC. ON FREE SHOW GROUNDS.

Class.	Entries in 1890.	From Different Places in 1890.	Entries in 1889.	From Different Places in 1889.
Fat Cattle,	2	2	5	3
Bulls,	5	3	10	5
Milch Cows,	13	3	22	7
Herds of Milch Cows,	1	1	4	3
Heifers, First Class,	16	5	10	3
Heifers, Second Class,	12	5	11	4
Heifer Calves, First Class,	3	2	4	3
Heifer Calves, Second Class,	6	3	4	2
Working Oxen and Steers,	9	5	7	5
Town Teams,	1	1	0	0
Steers,	2	2	4	3
Stallions, First Class,	1	1	0	0
Stallions, Second Class,	12	8	3	3
Brood Mares, First Class,	3	3	6	4
Brood Mares, Second Class,	6	5	9	7
Family Horses,	8	6	10	7
Gentlemen's Driving Horses,	7	4	1	1
Farm Horses,	12	7	10	7
Pairs of Farm Horses, weighing 2500 lbs. and over,	3	3	3	2
Pairs of Farm Horses weighing less than 2500 lbs.,	6	3	2	2
Colts for Draft Purposes,	10	5	12	7
Colts for General Purposes,	28	14	21	12
Swine, First Class,	16	2	13	3
Swine, Second Class,	6	1	7	3

Class.	Entries in 1890.	From Different Places in 1890.	Entries in 1889	From Different Places in 1889.
Sheep,	2	1	5	2
Poultry,	109	9	92	7
Harrows for trial,	2	2	3	2
Agricultural Implements,	234	4	120	5
Carriages,	8	3	28	5
Ploughing,	15	5	14	9
	—	—	—	—
Total on Free Show Grounds	458	23	440	25

EXHIBITS IN HALL AND ANNEX.

Class.	Entries in 1890.	From Different Places in 1890.	Entries in 1889.	From Different Places in 1889.
Dairy,	7	3	8	5
Bread, Canned Fruit and Pre- serves,	65	12	60	8
Bees, Hives and Honey,	19	4		
Pears,	216	17	207	16
Apples,	178	17	125	17
Peaches, Grapes and Assorted Fruit,	105	10	105	13
Flowers,	155	11	70	13
Vegetables,	327	22	317	21
Grain and Seed,	14	7	25	12
Counterpanes and Afghans,	119	11	111	14
Carpetings and Rugs,	103	11	63	8
Articles Manufactured from Leather,	21	6	18	4
Manufactures and General Mdse.,	29	7	20	8
Fancy Work,	329	13	306	16
Work of Art,	178	10	153	9
Work of Children under 12 years of age,	60	12	38	10
	—	—	—	—
	1925	32	1633	29

Grand total, 2383 entries from 31, out of 35 towns and cities in Essex County, against 2073 entries from 30 cities

and towns last year. Georgetown, Methuen, Merrimac and Nahant did not have exhibits this year. The entries were from Andover, 18; Amesbury, 28; Beverly, 811; Boxford, 30; Bradford, 8; Danvers, 333; Essex, 14; Gloucester, 6; Groveland, 8; Hamilton, 16; Haverhill, 15; Ipswich, 20; Lawrence, 6; Lynn, 104; Lynnfield, 2; Marblehead, 26; Manchester, 6; Middleton, 32; Newburyport, 11; Newbury, 64; North Andover, 35; Peabody, 253; Rockport, 7; Rowley, 18; Salem, 374; Salisbury, 2; Saugus, 6; Swampscott, 15; Topsfield, 18; Wenham, 58; West Newbury, 39.

REPORT OF THE ANNUAL MEETING.

The Society met in the vestry of the First Baptist Church in Beverly, Sept. 23, at 10 o'clock, A. M., President Ware in the chair.

Andrew Nichols was appointed secretary pro. tempo.

The marshals with Col. John W. Raymond as chief, were sworn in by the president.

Vacancies in committees were filled.

Messrs. Rolf, Faxon and Fellows were appointed a committee to receive, sort and count votes for officers of the Society.

The question of voting for the president of the Society, upon a separate ticket was declared lost by a vote of 53 yes and 76 no.

A vote by ballot upon a single ticket was then taken for the officers usually chosen at this meeting with the following result.

FOR PRESIDENT.

Benjamin P. Ware of Marblehead, had 95 votes and elected; George B. Loring of Salem, 21; Asa T. Newhall of Lynn, 10; James C. Poor of North Andover, 4; Scattering, 4.

FOR VICE-PRESIDENTS.

James J. H. Gregory of Marblehead had 97 votes and elected; George B. Loring of Salem, 97, elected; James P. King of Peabody, 138, elected; Oliver S. Butler of Georgetown, 85, elected; B. P. Ware of Marblehead, 35; T. C. Thurlow of West Newbury, 44; Thomas Sanders of Haverhill, 34; Scattering, 13.

FOR SECRETARY.

John M. Danforth of Lynnfield, had 65 votes and elected; David W. Low of Gloucester, 48; Andrew Nichols of Danvers, 26.

At the close of the polls while the committee were counting the votes, Rev. O. S. Butler of Georgetown made appropriate remarks regarding members who have died since the last annual meeting as follows:—viz: Hon. Levi Taylor of Haverhill, William Jones of Newburyport, Moses Wildes of Topsfield.

He was followed by Dr. Loring who added the name of Jacob Farnham of North Andover. Mr. Thurlow spoke of Thomas G. Ordway of West Newbury; Mr. Hill of Amesbury with the name of Luther Noyes of Newbury; Mr. Winkley of Newburyport in regard to Mr. Paul T. Winkley of Newburyport; President Ware spoke in praise of Mrs. Mary E. Fuller of Middleton, chairman of the Committee on Counterpanes and Afghans, although she was not a member of the Society, she took an active part in the Society's exhibitions.

Mr. King in regard to Jacob P. Goodale of Peabody; and upon motion of Mr. Butler, it was voted that the President and Secretary be a committee to have appropriate mention made of deceased members in the Transactions.

On motion of Sidney C. Bancroft, Esq., of Peabody, it was voted that the doings of the annual meeting be printed in the Transactions.

On motion made by Sidney C. Bancroft, Esq., of Peabody, and amended by Mr. Sanders of Haverhill, and the amendment accepted, it was voted, That hereafter in the

choice of all officers of this Society a majority shall elect instead of a plurality.

On motion of Asa T. Newhall of Lynn, it was voted that the vote for the President, Mr. Ware, be made unanimous. Voted to adjourn this meeting to the call of the President at the dinner to-morrow, Sept. 24.

Sept. 24, after the annual dinner and speeches the President called the adjourned meeting to order and on motion of Mr. Rolf, the following votes of thanks were passed.

To the town officers and citizens of Beverly, the chief marshal and his aids, and all others who had contributed to make this second gathering in Beverly a success.

To the officers and members of the First Baptist Church for their freely tendered use of the church and vestry.

To Prof. John W. Perkins for his instructive address, with a request for a copy for publication in the Transactions.

To Henry W. Peabody, Esq., of Beverly, for the use of his land for ploughing, and other generous offers to the Society.

To the Boston & Maine Railroad for its transportation facilities. Voted, That the reports of committees making awards to exhibitors and competitors be accepted and confirmed, provided the rules of the Society have been complied with.

REPORT OF COMMITTEES,

1890.

FAT CATTLE.

The Committee on Fat Cattle have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

\$8. First premium to J. P. Little, Amesbury, for 1 pair Hereford and Devon steers, 4 years old ; weight, 3960 lbs.

\$6. Second premium, to John H. Dodge, Wenham, for 1 pair Devon oxen, 6 years old ; weight, 4353 lbs.

James Noyes, Henry Patch, Chas. P. Mighill — *Committee.*

BULLS.

The Committee on Bulls have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

\$8. First premium, to Peter E. Clark, Beverly, for Jersey bull, 2 years old.

\$6. Second premium, to A. P. Gardner, Hamilton, for Jersey bull, 2 years old

\$4. First premium, to J. O. Edwards, Beverly, for bulls under 2 years old, for Jersey bull, 14 months old.

\$8. First premium, to Wm. A. Russell, North Andover, for Holstein-Fresian bull, "Nitalias Andinus," No. 6910, H. F. H. B. dropped April 11, 1887. Sire, "Andinus of Peterboro," No. 3059, H. H. B. Dam, "Nitalia," No. 7028, H. H. B.

E. S. Parker, Henry A. Hayward, Benj. F. Barnes — *Committee.*

MILCH COWS.

The Committee on Milch Cows have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$10. First premium, to John S. Ives, Salem, for grade Ayrshire.
- \$15. First premium, to Wm. A. Russell, North Andover, for the best milch cow of any age or breed.
- \$10. First premium, to Wm. A. Russell, North Andover, for best Holstein cow, 4 years old and over.
- \$10. First premium, to Wm. A. Russell, North Andover, for best cow, foreign, native or grade, not less than 4 nor more than 10 years old.
- \$4. Second premium, to James H. Flynn, Salem, for grade Jersey.

There were fourteen entries of milch cows. The exhibitors above named were the only ones who made any statement of any kind whatever concerning the cows entered. The rule of the Society is, "No person shall be entitled to receive a premium unless he complies with the conditions on which the premiums are offered."

H. G. Herrick, John Swinerton, Addison M. Robinson—*Committee.*

STATEMENT OF JOHN S. IVES, OF SALEM.

I enter for the consideration of your committee my grade Ayrshire cow, 7 years old. She calved April 1st, and is due to calve March 7th. She milked, the first and last week in June, an average of 21 quarts of strained milk per day; is giving now (Sept. 22nd) 15 quarts. Her feed has been pasture only, without grain of any kind.

Respectfully submitted,

JOHN S. IVES.

STATEMENT OF WM. A. RUSSELL, NO. ANDOVER.

To the Committee on Milch Cows:

I enter, for best milch cow of any age or breed, the Holstein-Fresian cow, "Belle Fairfax," No. 1117, 11 years old.

She dropped her last calf Jan. 25, 1890. Due to calve, Feb. 3, 1891. For the season of 1887-8 she gave 14,500 lbs. milk; for the season of 1889, 15,157½ lbs. milk; from Feb. 1 to Sept. 1, 1890, she gave 10,027 lbs. milk.

For best milch cow 4 years old and upwards, I enter the Holstein-Fresian cow "Jacoba Alexander," No. 4437, 5 yrs. old. She calved Dec. 29, 1889, and is due to calve Feb. 2, 1891. Her milk record from Jan. 1st to Sept. 1st is 10,578½ lbs.

For best milch cow, either foreign, native or grade, not less than 4 nor more than 10 years old, I enter the Holstein-Fresian cow "Lady Shepard," No. 1586, 8 years old. She calved Aug. 30, 1890, and for twenty days in September has given 1206 lbs. of milk.

For statement of feed and manure, see "Herd of Milch Cows."

Respectfully submitted,

WM. A. RUSSELL,

By Jas. C. Poor, Manager.

STATEMENT OF JAMES H. FLYNN, SALEM.

To the Committee on Milch Cows :

I enter for premium my grade Jersey cow, 14 years old, which I raised. She gave, through the months of June and July, 1890, an average of 14 quarts daily.

Respectfully submitted,

JAMES H. FLYNN.

HERDS OF MILCH COWS.

The Committee on Herds of Milch Cows have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

\$18. First premium, to Wm. A. Russell, North Andover, for herd of Holsteins.

J. Otis Winkley, Israel Herrick, Edward Kent— *Committee.*

STATEMENT OF WM. A. RUSSELL.

To the Committee on Herds of Milch Cows :

I enter for herd of milch cows: Holstein-Fresian cows, "Maud Clay," No. 390; "Lady Shepard," No. 1586; "Belle Fairfax," No. 1117; "Jacoba Alexander," No. 4437, and "Emma Bess," No. 9715.

"Maud Clay" calved Aug. 30, 1890. "Lady Shepard" calved Aug. 30, 1890. "Belle Fairfax" calved Jan. 25, 1890; is due Feb. 3, 1891. "Jacoba Alexander" calved Dec. 29, 1889; is due Feb. 2, 1891. "Emma Bess" calved Aug. 3, 1889; is due Oct. 15, 1890.

Maud Clay's milk record, from Sept. 2nd to the 20th, inclusive, is 1066 lbs.; for the season of 1888-9, 14,055 lbs.

Lady Shepard's milk record, from Sept. 1st to 20th, inclusive, is 1206 lbs. milk; and from Sept. 1, 1889, to June, 1890, 12,274 lbs.; from Sept. 1, 1888, to June, 1889, 13,168 lbs.

Belle Fairfax's milk record, from Feb. 1 to Sept. 1, 1890, is 10,027 lbs.; from Jan. 1 to Dec., 1889, 15,157 lbs.; from Sept. 1, 1887 to Sept. 1, 1888, 14,500 lbs.

Jacoba Alexander's milk record, from Jan. 1 to Sept. 1, 1890, is 10,578½ lbs.

Emma Bess' milk record, from Sept. 1, 1889, to Sept. 1, 1890, is 8,672 lbs.

The summer feed of these cows has been pasture which is small for the number of cows kept, but it has an abundant supply of pure water, and plenty of shade trees; and they have been fed with 2 qts. gluten meal and 2 qts. shorts in morning, and with 2 qts. corn meal in evening, with dry hay or corn fodder twice a day.

The winter feed consists of ensilage (corn) feed in morning, and good English hay feed in afternoon, with 4 qts. bran and 2 qts. meal fed with the ensilage, and same quantity of grain fed dry, before giving them the hay, in afternoon; and watered twice a day in the barn, and carded and brushed once a day. Those cows giving a heavy flow of milk are milked three times a day, and fed grain three

times a day. The milk is weighed, and recorded at each milking.

The above is the grain feed for cows. Young cows are fed from one-half to three-fourths the above amount.

Respectfully submitted,

WM. A. RUSSELL,

By Jas. C. Poor, Manager.

HEIFERS — FIRST CLASS.

The Committee on Heifers, first class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- #9. First premium, to Wm. A. Russell, North Andover, for Holstein heifer in milk, "Grace Wonder," 4 years old.
- #5. First premium, to James C. Poor, North Andover, for yearling Holstein heifer, "Beth Lincoln."
- #5. First premium, to James C. Poor, North Andover, for Holstein heifer calf, "Mira W. Archer."
- 6. Second premium, to James C. Poor, North Andover, for Holstein heifer, "Pride of Riverside," under 4 years old.
- #4. Second premium, to James C. Poor, North Andover, for yearling Holstein heifer, "Daisy Ferron."
- #4. Second premium, to Lyman Holman, Salem, for Holstein heifer, 2 years old.
- #5. First premium, to A. P. Gardner, Hamilton, for Jersey heifer, 2 years old.
- #4. Second premium, to A. P. Gardner, Hamilton, for Jersey heifer.
- #5. First premium, to Mrs. W. D. Pickman, Beverly, for Guernsey heifer calf.
- #6. Second premium, to Mrs. W. D. Pickman, Beverly, for Guernsey heifer, under 4 years old.

George R. Dodge, John A. Hoyt, George Haskell—*Committee.*

HEIFERS — SECOND CLASS.

The Committee on Heifers, second class, have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$9. First premium, to the City Farm, Salem, for heifer in milk, under 4 years old.
- \$6. Second premium, to James C. Poor, North Andover, for grade Holstein heifer in milk.
- \$5. First premium, to Wm. A. Foster, Beverly, for 2 year old heifer.
- \$5. First premium, to John S. Ives, Salem, for yearling heifer.
- \$5. First premium, to John S. Ives, Salem, for heifer calf.
- \$4. Second premium, to Aug. P. Prince, Beverly, for heifer calf.
- \$4. Second premium, to I. O. Edwards, Beverly, for 2 year old heifer.
- \$4. Second premium, to I. O. Edwards, Beverly, for yearling heifer.

Sidney F. Newman, Daniel D. Adams, N. W. Moody —
Committee.

STATEMENT OF JAMES C. POOR.

To the Committee on Heifers, 2nd Class :

I enter, for your consideration, a grade Holstein, 3 years old. She is three fourths Holstein and one fourth Jersey and Durham. Dropped her last calf August 25th. From Sept. 5th to 15th, she gave 480 lbs. milk—an average of 48 lbs. per day. Has been kept in the barn, and fed three qts. of gluten meal, with hay and green corn fodder.

Respectfully submitted,

JAS. C. POOR.

WORKING OXEN AND STEERS.

The Committee on Working Oxen and Steers have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

Diploma, to J. P. Little, of Amesbury, for display of working oxen, he having three yoke of fine cattle.

§12. First premium, to S. W. Weston, Middleton, for one yoke of working oxen, 6 years old, weight 3000 lbs.

§10. Second premium, to R. F. Dodge, Wenham, for one yoke working oxen, 6 years old, weight 3010 lbs.

§8. Third premium, to Wm. P. Christopher, Middleton, for one pair working oxen, 7 years old, weight 2665 lbs.

Your Committee regret there were not more premiums to be awarded, as there was a fine display of working oxen, and the Committee found it hard to determine who were entitled to the premiums, and would make especial mention of Mr. Massey's oxen backing.

John M. Danforth, A. B. Fellows, C. J. Peabody, N. P. Perkins — *Committee*.

STEERS.

The Committee on Steers have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

§5. First premium, to Wm. P. Christopher, Middleton, for one pair yearling steers.

§4. Second premium, to Herbert W. Patch, Hamilton, for one pair yearling steers.

Wm. B. Carlton, S. Longfellow, R. Jaques — *Committee*.

TOWN TEAMS.

The Committee on Town Teams have attended to their duty, and respectfully report to the Secretary that they have made the following award:

§20. First premium, to Beverly Town Team, for team of 14 pair of oxen.

JAMES P. KING,

For the Committee.

STALLIONS — FIRST CLASS.

The Committee on Stallions, first class, 4 years old and upwards (farm and draught purposes), have attended to their duty, and respectfully report to the Secretary that they have made the following award :

\$4. Third premium, to John Parkhurst, Boxford, for grade Percheron stallion, 6 years old.

M. C. Andrews, Moses A. Plummer, Albert Kimball — *Committee.*

STALLIONS — SECOND CLASS.

The Committee on Stallions, second class (for general purposes), have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

\$10. First premium, to H. H. Demsey, Wenham, for bay stallion "Harry Dictator," 4 years old, weight 1100 lbs.

\$6. Second premium, to A. B. Forbes, Byfield, Newbury, for bay stallion, "Callisto," 4 years old, weight 1100 lbs.

\$4. Third premium, to A. B. Forbes, Byfield, Newbury, for bay stallion, "Lombardy," 6 years old, weight 1100 lbs.

\$8. First premium, to L. H. Jones, Middleton, for 3 year old stallion, "Wilkes."

\$4. Second premium, to C. A. Lunt, Newbury, for 3 year old stallion, "Gladstone."

B. W. Bartlett, Thomas Sanders, O. S. Butler, Peter Holt, Jr. — *Committee.*

BROOD MARES.

The Committee on Brood Mares have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

FIRST CLASS.

- §10. First premium, to Richard T. Jaques, Newbury, for bay mare, "Bess."

SECOND CLASS.

- §10. First premium, to Edwin Bates, Lynn, for sorrel mare, "Nellie Eaton."
 §6. Second premium, to Wm. H. Joint, Lynn, for Messenger mare, "Bessie."
 §4. Third premium, to Willis E. Churchill, Newbury, for gray mare, "Nellie."

Mr. Bates' sorrel mare was the one with twin colts—the first, we think, that have been on exhibition at our fair since 1856 or 1857.

The Committee would say that there were several mares entered as of the second class, that, in their estimation, were well worthy of a premium, had they been entered in the first class; hence we would suggest some different arrangement as to the entries in the two classes. Perhaps it would be well to try the experiment of allowing the Committee to divide the entries into the two classes, as to them may be deemed expedient.

Respectfully submitted,

William Little, J. Henry Gould, B. N. Dodge — *Committee.*

FAMILY HORSES.

The Committee on Family Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- §10. First premium, to D. J. Harrigan, Danvers, for family mare.
 §6. Second premium, to C. Moynihan, Newbury, for steel-gray 5 year old gelding.
 §4. Third premium, to S. F. Newman, Newbury, for bay mare "Kittie."

CHAS. SANDERS,
 For the Committee.

GENTS' DRIVING HORSES.

The Committee on Gents' Driving Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

\$10. First premium, to George Brewer, Beverly, for his horse, "Harry."

\$6. Second premium, to Wm. P. Bailey, West Newbury, for his horse, "Dick."

\$4. Third premium, to Wm. P. Bailey, West Newbury, for his horse, "Tom."

The class of horses entered was very fine, and the Committee commend the remainder of the entries — "Eaton Wilkes," entered by Edwin Bates of Lynn, and "Dolly" and "Bess," Morgan mares entered by Ware and Rose of Clifton, Marblehead.

Geo. B. Loring, M. H. Connor, Ebenezer Webster, M. Perry Sargent — *Committee*.

FARM HORSES.

The Committee on Farm Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

HORSES WEIGHING OVER 1200 LBS.

\$10. First premium, to John H. Perkins, Lynnfield, for roan horse, "Juno," weight 1275 lbs.

\$6. Second premium, to H. C. Strout, Peabody, for bay mare, "Kate," weight 1400 lbs.

HORSES WEIGHING LESS THAN 1200 LBS.

\$10. First premium, to Hugh Hill, Beverly, for black horse, weight 1140 lbs.

\$6. Second premium, to W. J. Currier, Danvers, for farm horse, weight 1100 lbs.

\$4. Third premium, to F. W. Lyford, Danvers, for buckskin horse, weight 1180 lbs.

Asa T. Newhall, James B. Smith, Horace F. Longfellow, Walter F. Dodge — *Committee*.

PAIRS OF FARM HORSES — FIRST CLASS.

The Committee on Pairs of Farm Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

\$10. First premium, to A. P. Gardner, Hamilton, gray team, weight 2800 lbs.

\$8. Second premium, to Wm. Tucker, Andover, for grade Percherons, weight 2805.

Asa F. Lee, John Parkhurst, Geo. B. Dodge, Geo. M. Roundy — *Committee*.

PAIRS OF FARM HORSES — SECOND CLASS.

The Committee on Pairs of Farm Horses (second class) have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

\$10. First premium, to Moses H. Poor, West Newbury, for pair horses, weight 2130 lbs.

\$8. Second premium, to Fred. A. Dodge, Beverly, for pair horses, weight 2060 lbs.

RICHARD S. BRAY,

For the Committee.

COLTS FOR DRAFT PURPOSES, SECOND CLASS

The Committee on Colts for Draft Purposes (second class) have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

\$8. First premium, to S. F. Newman, Newbury, for 2 years old colt, weight 1078.

\$5. First premium, to Calvin Putnam, Ipswich, for black colt, 15 months old, weight 960.

\$5. Second premium, to R. Jaques, Jr., Newbury, for bay colt, 2 years, 5 months old, weight 1295 lbs.

\$3. Second premium, to S. F. Newman, Newbury, for gelding colt, 14 months old.

\$3. Third premium, to J. P. Kinnear, Ipswich, for Percheron colt, 2 years old, weight 1065 lbs.

But one entree in first class : Committee did not think worthy of a premium.

F. P. Harriman, F. M. Bates, Amos Hasletine, David Warren, T. K. Leach — *Committee*.

COLTS FOR GENERAL PURPOSES — FIRST CLASS.

The Committee on Colts for General Purposes (first class) have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

\$8. First premium, to A. B. Forbes, Newbury, for bay mare colt, "Hypatia," 4 years old, weight 1050 lbs.

\$5. Second premium, to Ware & Rose, Clifton, Marblehead, for Morgan colt, "Charlie," 4 years old, weight 980 lbs.

\$6. First premium, to Edwin Bates, Lynn, for 3 year old colt, "Daisy Wilkes."

\$3. Second premium, to C. Moynihan, Newbury, for 3 year old colt, "Bess."

Geo. W. Chadwick, Samuel B. George, Nathan Bushby, George Chase — *Committee*.

COLTS FOR GENERAL PURPOSES — SECOND CLASS.

The Committee on Colts for General Purposes (second class) have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

\$8. First premium, to W. F. Kinsman, Ipswich, for Knox colt, 2 years, 3 months old, weight 1095 lbs.

\$5. Second premium, to C. Moynihan, Newbury, for 2 year old chestnut colt.

- \$3. Third premium, to James Manning, Topsfield, for 2 year old colt.
- \$5. First premium, to M. H. Connor, West Newbury, for 1 year old colt.
- \$3. Second premium, to W. H. & L. P. Tufts, Middleton, for black stallion colt, S. X., 16 months old.
- E. S. Keyes, Geo. B. Blodgette, John Muhoy — *Committee.*
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SWINE — FIRST CLASS.

The Committee on Swine (first class) have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- \$8. First premium, to Harvey C. Strout, Peabody, for Jersey red sow and pigs.
- \$8. First premium, to Harvey C. Strout, Peabody, for Cheshire sow and pigs.
- \$8. First premium, to Harvey C. Strout, Peabody, for Chester white boar.
- \$5. Second premium, to Harvey C. Strout, Peabody, for Chester white boar.
- \$8. First premium, to Harvey C. Strout, Peabody, for Poland China sow and pigs.
- \$8. First premium, to Simon P. Buxton, Peabody, for Chester white sow and 6 pigs.
- \$8. First premium, to Simon P. Buxton, Peabody, for litter of Yorkshire weaned pigs.
- \$8. First premium, to Wm. A. Fisher, Jr., Peabody, for Chester white sow and 10 pigs.

John Mahony, Geo. B. Blodgette, Jacob F. Choate — *Committee.*

SWINE — SECOND CLASS.

The Committee on Swine (second class) have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- \$8. First premium, to Harvey C. Strout, Peabody, for sow and 7 pigs.
- \$8. First premium, to Harvey C. Strout, Peabody, for boar.
- \$8. First premium, to Harvey C. Strout, Peabody, for litter of weaned pigs.
- \$5. Second premium, to Simon P. Buxton, Peabody, for sow and 8 pigs.
- \$5. Second premium, to Simon P. Buxton, Peabody, for boar.

N. Longfellow, John Barker. George A. Dow — *Committee*.

SHEEP.

The Committee on Sheep have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$10. First premium, to Charles S. Emerton, Peabody, for flock of 10 sheep.
- \$8. First premium, to Charles S. Emerton, Peabody, for best buck.

POULTRY.

The Committee on Poultry have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$2. First premium, to John Prince, Beverly, for pair Langshan chicks.
- \$1. Second premium, to John Prince, Beverly, for pair Langshan chicks.
- \$2. First premium, to Wm. B. Foster, Beverly, for pair White Minorca fowls.
- Diploma, to Wm. B. Foster, Beverly, for pen White Minorca fowls.

- §1. Second premium, to Wm. B. Foster, Beverly, for pair White Leghorn chicks.
- §2. First premium, to E. R. Perkins, Salem, for pair Golden Wyandotte chicks.
- §1. Second premium to E. R. Perkins, Salem, for pair Golden Wyandotte chicks.
- §2. First premium, to E. R. Perkins, Salem, for pair Red Wyandotte chicks.
- §2. First premium, to E. R. Perkins, Salem, for pair Salem Buffs.
- §2. First premium, to John Prince, Beverly, for pair Langshan fowls.
- §2. First premium, to Dwight Foster, Beverly, for pair Black Minorca fowls.
- §1. Second premium, to Dwight Foster, Beverly, for pair Black Minorca chicks.
- §2. First premium, to G. E. Fassett, Beverly, for pair Silver Laced Wyandotte fowls.
- §2. First premium, to G. E. Fassett, Beverly, for pair Silver Laced Wyandotte chicks.
- §2. First premium, to Wm. P. Wharton, Beverly, for pair Pekin Bantam fowls.
- §1. Second premium, to Wm. P. Wharton, Beverly, for pair Pekin Bantam chicks.
- §2. First premium, to Daniel Appleton, Beverly, for pair Plymouth Rock chicks.
- Diploma, to Daniel Appleton, Beverly, for pen Plymouth Rock chicks.
- §2. First premium, to Wm. A. Foster Jr., Beverly, for pair Buff Cochin chicks.
- §1. Second premium, to Elmer O. Bragdon, Danvers, for pair Dark Brahma chicks.
- §2. First premium, to Elmer O. Bragdon, Danvers, for pair Dark Brahma fowls.
- §1. Second premium, to Elmer O. Bragdon, Danvers, for pair Dark Brahma fowls.
- §2. First premium, to Elmer O. Bragdon, Danvers, for pair Dark Brahma chicks.

- \$2.
First premium, to Harry English, Salem, for pair White Pyle Bantam fowls.
- \$2.
First premium, to C. L. Beckett, Peabody, for pair Brown Leghorn chicks.
- \$1.
Second premium, to C. L. Beckett, Peabody, for pair Brown Leghorn chicks.
- \$2.
First premium, to Chas. A. Jones, Peabody, for pair Silver Bearded Polish chicks.
- \$1.
Second premium, to Chas. A. Jones, Peabody, for pair Silver Bearded Polish chicks.
- \$2.
First premium, to Wm. P. Perkins, Danvers, for pair White Wyandottes.
- \$2.
First premium, to Wm. P. Perkins, Danvers, for pair Red Pyle Game Bantam fowls.
- \$1.
Second premium, to Wm. P. Perkins, Danvers, for pair Red Pyle Game Bantam fowls.
- \$2.
First premium, to Wm. P. Perkins, Danvers, for pair Pekin Bantam fowls.
- \$2.
First premium, to Wm. P. Perkins, Danvers, for pair Cayuga ducks.
- \$1.
Second premium, to Wm. P. Perkins, Danvers, for pair Pekin ducks.
- \$1.
Second premium, to Wm. P. Perkins, Danvers, for pair Toulouse geese.
- \$2.
First premium, to Wm. P. Perkins, Danvers, for pair Embden geese.
- \$2.
First premium, to Daniel Callaban, Danvers, for pair Pekin Bantam chicks.
- \$1.
Second premium, to Daniel Callaban, Danvers, for pair Pekin Bantam chicks.
- \$2.
First premium, to George D. Walton, Peabody, for pair B. B. R. Game bantams.
- \$2.
First premium, to N. W. Hawkes, Saugus, for pair Hong Kong geese.
- \$2.
First premium, to N. W. Hawkes, Saugus, for pair Toulouse geese.
- \$2.
First premium, to N. W. Hawkes, Saugus, for pair Creeper fowls.

- §2. First premium, to N. W. Hawkes, Saugus, for pair Creeper chicks.
- §2. First premium, to W. S. Caswell, Marblehead, for pair Houdan chicks.
- §1. Second premium, to F. S. Lovett, Beverly, for White Leghorn chicks.
- §2. First premium, to F. S. Lovett, Beverly, for Downie chicks.
- §2. First premium, to S. M. Leach, Danversport, for Brown Reed Game chicks.
- §2. First premium, to D. C. E. Johnson, Danversport, for Silver Duckwing Game fowls.
- Diploma, to George H. Coffin, Ballardvale, for pen Silver Laced Wyandotte chicks.
- §1. Second premium, to F. M. Day, Beverly, for pair Plymouth Rock fowls.
- §2. First premium, to George P. Wilkins, Middleton, for Bronze turkeys.
- §2. First premium, to James M. Currier, Middleton, for pair Light Brahma chicks.
- §1. Second premium, to James M. Currier, Middleton, for pair Light Brahma chicks.
- Diploma, to James M. Currier, Middleton, for pen Light Brahma chicks.
- §2. First premium, to T. W. Batchelder, Wenham, for pair Black Minorca chicks.
- §2. First premium, to T. W. Batchelder, Wenham, for pair Canada geese.
- §2. First premium, to Reuben W. Ropes, Salem, for pair White Leghorn fowls.
- §2. First premium, to Reuben W. Ropes, Salem, for pair White Leghorn chicks.
- §2. First premium, to Reuben W. Ropes, Salem, for pair Plymouth Rock fowls.
- §2. First premium, to Reuben W. Ropes, Salem, for pair Plymouth Rock chicks.
- §2. First premium, to Reuben W. Ropes, Salem, for Pekin ducks.

DRESSED POULTRY AND EGGS.

- \$1. First premium, to Daniel Appleton, Beverly, for one dozen Plymouth Rock eggs.
- \$1. First premium, to Wm. B. Foster, Beverly, for one dozen Leghorn eggs.
- \$1. First premium, to T. W. Batchelder, Wenham, for one dozen Buff Cochin eggs.
- \$2. First premium, to George D. Walton, Peabody, for Dressed Pekin ducks.
- \$2. First premium, to T. W. Batchelder, Wenham, for Dressed Poultry.
- \$8. First premium to C. A. Larcom, Beverly, for best year's account of 10 fowls.

STATEMENT OF C. A. LARCOM.

Breeding.—Cock, Light Brahma, hens White Leghorn (extra laying strain).

Age.—Hatched in May, 1888.

Average cost of keeping from Jan. 1, 1889 to Jan. 1, 1890.

Oats, Oat feed, Corn, Meat Scraps, etc.,	\$14 50
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PRODUCTION.

1570 eggs, equals 130 5-6 dozen, at 20c.—45c.,	\$34 35
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Income,	\$34 35
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Cost,	14 50
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\$19 85

\$19.85 profit from ten fowls in one year. (No account of manure.)

Method of feeding.—January, February, March and April:—morning, hot mush of oat feed, vegetable parings, chopped fine and other refuse from the table, seasoned with pepper, ginger or mustard and meat scraps two or three times a week; night, all the whole grain they will eat, chiefly oats, corn perhaps two times a week. May, June, morning, mush either hot or cold; night, whole

grain as before. July, August, September, October, feed only at night all the oats they would eat. Fowls having unlimited range. November, December, same as January to April.

Respectfully submitted,
C. A. LARCOM.

PLOUGHING WITH DOUBLE TEAMS.

The Committee on Ploughing with Double Ox Teams have attended to their duty, and respectfully report to the Secretary that they have made the following award:

\$10. First premium, to Lyman S. Wilkins, Middleton, with Hubbell Swivel plough.

Asa T. Newhall, M. B. Avery, D. A. Pettengill, Wm. S. Phillips, Jr.—*Committee*.

PLOUGHING WITH SINGLE TEAMS.

The Committee on Ploughing with Single Ox Teams, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

\$10. First premium, to Wm. P. Christopher, Middleton, with Hussey plough.

\$8. Second premium, to Peter E. Clark (Walter F. Dodge, ploughman), Beverly, with Landside plough.

Andrew Mansfield, Wm. H. Smith, Allen Smith—*Committee*.

PLOUGHING WITH HORSES.

The Committee on Ploughing with Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

\$10. First premium, to Moses H. Poor, West Newbury, (Fred H. Poor, ploughman,) with common plough.

\$7. Second premium, to A. P. Gardner, owner, Hamilton, (E. A. Wright, ploughman,) with Hussey plough.

§5. Third premium, to William Bent, West Newbury, with common plough.

James P. King, Joseph Whitehead, Edw. Harrington
Horace C. Ware, John J. Gould—*Committee*.

PLOUGHING WITH SWIVEL PLOUGH, OXEN.

The Committee on Ploughing with Swivel Plough, Ox Teams, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

§10. First premium, to S. W. Weston, Middleton, (Austin Brown, ploughman,) with Hubbell plough.

§8. Second premium, to R. F. Dodge, Wenham, with Yankee plough.

Augustine Stone, G. S. Phippen, Thomas P. Hale—*Committee*.

PLOUGHING WITH SWIVEL PLOUGH, HORSES.

The Committee on Ploughing with Swivel Plough, Horse Teams, have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

§10. First premium, to Fred A. Dodge, Beverly, with Yankee plough, No. 3.

Jos. F. Andrews, David L. Haskell, E. G. Dale, Geo. F. Averell—*Committee*.

SULKY PLOUGHING.

The Committee on Sulky Ploughing have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

§10. First premium, to C. H. Abbott, Wenham, (G. W. Wildes, ploughman,) for Sulky ploughing with Syracuse plough.

A. B. Fellows, D. D. Adams, Andrew Dodge—*Committee*.

PLOUGHING WITH THREE HORSES.

The Committee on Ploughing with Three Horses have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

\$10. First premium, to M. H. Connor, West Newbury, for ploughing with three horses, Oliver Chilled plough.

Joshua H. Chandler, Chas. A. Mason, Daniel McDonald, R. T. Jacques—*Committee*.

HARROWS.

The Committee on Harrows have attended to their duty and respectfully report to the Secretary that they have made the following awards :

\$10. First premium, to Whitcomb & Carter, Beverly, for Stoddard Wheel Harrow.

\$8. Second premium, to Henry Newhall & Co., Danvers, for Yankee Pulverizer.

REPORT OF COMMITTEE ON HARROWS.

It is to be regretted that but two harrows contended for the premiums, and the more so because they were both wheel harrows and therefore were fundamentally alike. The committee exercised their best judgment in the premises and gave the larger premium to the one which appeared to do the best work with the lowest power, but the distinctions between the merits of the two were not remarkable. And now about the matter of power, how can a comparison of the draft required for different implements be made in a reliable way while the society has no dynamometer by which to measure it? We have been favored at some of our trial of implements with dynamometer tests, through the kindness of Mr. Andrews, one of our members, and all who were present were greatly pleased at the result, and such of us as were about to purchase farm implements were guided by it in making our decisions. Certainly the matter of the comparative power re-

quired to get the best work of the different plows and harrows in the market, is a most important question for the farmer to decide before purchasing, for an implement which requires a pair of 1150 pound horses to do its best work, cannot be made to do it with a pair of 1000 pound horses. This is emphatically true of the wheel harrow, the sharper the angle at which they are set when they do their best work, the more hard drag there is to them, and no 1000 pound horse can draw them many days continually at such angle without being over-worked. The dynamometer test made at the implement trial at the Gardner farm demonstrated that there was a great difference in the power required by different plows when turning sod at equal depths, and that the good quality of the work done as often as not varied inversely with the power required to perform it. *By all means let the Society have a dynamometer.*

The work accomplished by that agricultural implement which in its dozen or more forms we call "harrow," may be classified under four heads, viz: 1st, to pulverize the soil after plowing; 2nd, to level the plowed surface; 3d, to lighten the soil, and 4th, to destroy weeds. When depth of pulverization is the essential requirement, there can be no difference of opinion that the wheel harrows do the best work; they cut the deepest, and make the former hard labor of getting sufficient soil on fresh turned sod to cover potatoes comparatively easy work. We all can recall when they first appeared on the trial ground at our annual fair, not many years ago. They were then a great oddity, but rapidly advancing from mere curiosity and wondering, with our Yankee shrewdness we noted the quality of the work done and gave them prompt and hearty welcome. There is no country in the world where the real value of any implement is so quickly recognized and generously welcomed as in this bright land of ours. A friend once told me of his experience in attempting to introduce a new grain mill into Brazil. The large planters were in-

vited to be present a certain day on one of the squares of Rio Janeiro to see it work. They came, they saw, but were by no means conquered along the line of their prejudice ; for after acknowledging that it would do far more work than the old hand mill and so save the labor of a dozen or more slaves, the poser that overwhelmed the hopes of the enterprising owners was " what could we find for our slaves to do if we bought your mill? "

As long as the two wings of the wheel harrows are fully extended the draft is comparatively small, but as we incline them toward each other, a drag motion is added and the power necessary to draw it is increased, so that in my experience, no horse that weighs less than twelve hundred can stand the work day after day for many weeks without breaking down. Indeed I am inclined to believe that my pair weighing fifteen hundred each, find more work than recreation in it before the season is over. The two wings of the early varieties of wheel harrows were joined by a ball and socket joint. This has been their weakness, for unless it is better protected than in most varieties, it is but a matter of time when particles of grit will work in and ruin it.

In the harrow which received the second premium the two wings rotate on each other at the end discs. This means, of course, a good deal of friction, but it is certainly an improvement over the ball and socket joint. With the wrecks of several wheel harrows always before my eye, made on the ball and socket principle, I have turned finally to the one named the Climax, and while I know others which are easier for the rider, and have some minor improvements, I have got to make the acquaintance with one which will stand equal wear with so little injury. The material which enters into the discs is first class, and after nearly two years of use which would be probable equal to ten years with the average farmer, I have not yet been called upon to make a cent's worth of outlay in the way of repairs. While harrows of the wheel

class excel all others in the depth to which they penetrate, sometimes being used as substitute for the plow, especially on land that was turned over in the fall, those built on the Acme principles will pulverize finer and are better levelers of the surface. I prefer the original Acme in my experience over any of those harrows which contain a modification of the principles, and can be bought at a lower figure. When there is no turned over sod to be worked deep, the Acme will be the better harrow for those farmers who can afford but one of the improved varieties. By setting it up at a sharp angle it can be made to cut nearly as deep as can the wheel harrow, though by so doing the draft on the horses will be greatly increased. Following the Acme and to be used as a final pulverizer and leveler, making the ground ready for planting of all kind of vegetables, dandelions almost alone excepted, comes the Meeker harrow. For those who raise vegetables on a large scale there is no greater labor saver than this, provided their land does not abound in stone larger than eggs. It has the capacity to work such stones below the surface, but not sufficiently deep to prevent their being struck by the slide hoe. When used it should be drawn across the field both ways, ending at right angle with the direction the seed rows are to be run. In using the Meeker, I find it does the work of over a dozen men and therefore is a great labor saver. Among weed killers the Thomas smoothing harrow and Breed's Universal Weeder rank pre-eminent. By using these freely, passing with and cross wise the rows as soon as weeds start in potatoes and corn, a vast amount of hoeing and hard weeding can be saved. The smoothing harrow can be used until the corn is six inches high and the potatoes a couple of inches, but Breed's weeder I should not dare use at so late a period of growth, for not having much weight of its own to force the teeth into the ground, it needs to be worked by the hand back and forth as it is drawn along the rows, which is rather too rough work among crops above

ground ; besides it needs to be used to do its best work as soon as weeds start. Why do not the makers of this weeder get out one capable of being used between the rows of corn during the later stages of its growth, when while necessary to kill the weeds, it is found to lessen the crop if the soil is stirred deep enough to disturb its roots. The one great objection to the use of the Thomas harrow among potatoes and corn when above ground, is its liability to get stones, sod, or when on land in corn the year previous, corn-butts caught between its teeth, for if this happens, unless such obstructions are at once removed, they will tear up the growing crops. Where corn butts are at all numerous on the surface it will not pay to use it ; there will be too much time required to keep it clear.

All varieties of the harrow class of implements tend to lighten the soil, but spring teeth excel all in this respect. It looks amazingly unreliable to the uninitiated as an implement to be sent among stones and stumps, but experience shows that the teeth are made of the best material. It has an immense amount of the "give and take" element in it and is very rarely floored. Of the revolving harrows I have no facts from experience, but have heard good words in their favor from other farmers who have used them.

In our article we have paid the respect of neglect to the harrows of our fathers, the old and square forms, assuming that an exhaustive knowledge of their capabilities was the inheritance of every farmer.

J. J. H. GREGORY.

MARBLEHEAD, MASS.

AGRICULTURAL IMPLEMENTS.

The Committee on Agricultural Implements have attended to their duty, and respectfully report to the Secretary, that they have made the following awards :

Diploma and \$10. First premium, to Henry Newhall & Co., Danvers, for collection of implements and machines.

\$8. Gratuity, to Whitcomb & Carter, Beverly, for general collection.

\$5. First premium, to John T. Elliot, Beverly, for market wagon.

\$5. First premium, to George E. Daniels, Rowley, for 2-horse farm cart.

\$2. Gratuity, to E. L. Blake & Co., Peabody, for wheel hoes and seed drill.

\$2. Gratuity, to George E. Daniels, Rowley, for one pair wheels.

Sherman Nelson, George E. Johnson, Albert Emerson, E. P. Barrett—*Committee*.

CARRIAGES.

The Committee on Carriages have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

\$12. First premium, to E. C. Sawyer, Beverly, for Goddard buggy.

\$5. Second premium, to E. C. Sawyer, Beverly, for depot wagon.

\$3. Gratuity, to E. C. Sawyer, Beverly, for ox wagon.

\$5. Gratuity, to Wm. S. Eaton, Amesbury, for Corning buggy.

\$5. Gratuity, to Wm. S. Eaton, Amesbury, for piano box buggy.

Diploma, to W. P. Whipple & Co., Peabody, for delivery and spring wagons.

J. W. Joyce, J. A. J. Sawyer, Aaron Sawyer—*Committee*.

IN EXHIBITION HALL.

REPORT OF SUPERINTENDENT OF HALL.

The attendance of visitors at the Exhibition of the Society, held in the Town Hall in Beverly, on the 23d and 24th of September, 1890, was quite satisfactory, but not as large as the previous year. The amount received for the sale of tickets indicates that 6550 persons purchased tickets of admission to the hall, which, with the tickets of admission given to exhibitors, represents an attendance of not less than 7500 persons.

The exhibition as a whole was highly satisfactory, and in some departments a large portion of the exhibits were excellent. The contribution made by the ladies of fine needle work and of other kinds of fancy work, of counterpanes, afghans, rugs and works of art, seems to be increasing each year, more especially in the departments of fancy work and works of art. The departments above enumerated constitute an important and attractive part of the exhibition and occupy quite a large portion of the space in the hall.

The society has wisely appreciated and encouraged the contributions by increasing the amount to be awarded in gratuities for works of art and fancy work. And yet in the contributions of fancy work twice the amount at the disposal of the committee could have been worthily given, so large was the number of entries worthy of a gratuity. In the art department the exhibit was not equal in quality to that of the last three years. Only a few oil paintings were shown which were especially worthy of notice. Other contributions were made to this department which added much to its attractiveness. It is not to be expected that oil paintings and other varieties of art work will be exhibited by professional artists, but there is a plenty of good work by amateurs to be found in each place where the exhibition is held or in its immediate vicinity, some of which, by a

little effort, might be brought forward for exhibition, which would furnish aid and incentive to beginners and help towards forming a better knowledge of what is worthy of exhibition.

Many articles are contributed not only in this department but in fancy work, counterpanes and rugs which are not sufficiently meritorious to warrant their being offered for exhibition. It is, however, hardly possible to reject any articles offered. The contributions are brought in either in the evening before or in the morning of the exhibition, and the committee receiving them have scarcely time to enter and put them in place, with no time to judge of their merits, even if they were at liberty to decide as to their fitness for exhibition.

The society may not be prepared to adopt any method at present for discriminating in regard to the exhibits that are offered. No standard should be adopted which would exclude meritorious work of beginners, especially that of beginners in art, or require a high standard of excellence. The aim should certainly be to encourage all such. But if those intending to offer articles for exhibition would seek the advice of those competent to judge of their merit, a higher standard would be the result. The merits of an exhibition do not consist in the number of articles exhibited, and all interested in the work of the society should aim to secure a higher standard rather than an increase in the number. In nearly every department above named, if the committee could have rejected a small portion of the articles exhibited, the remainder would have made a more attractive exhibition. The comparatively few commonplace articles are sure to be noticed by visitors and to suggest unfavorable comment.

For the purpose of protecting fancy articles from being handled or lost, it was recommended in the report of last year, that cases covered with wire be procured for permanent use. Under a vote of the trustee, six cases were made which proved to be of great service. A sufficient

number of glass cases cannot conveniently be obtained in any place where the exhibition is held. With a little care in moving these cases will last many years, and it may be advisable to procure as many more. These should be made only two-thirds as deep but otherwise the same. Cases were made also of wire except the frames for the exhibits of butter and of bread which proved decidedly serviceable in protecting these articles. Visitors have hitherto considered these as common property to be tested by any who chose.

The great failure in the apple crop and the comparatively small yield of pears gave little promise of an attractive show of fruit. But while the number of entries of pears and of apples was much less than usual, the quality was not far behind that of more favored years. Many specimens were shown both of apples and of pears quite equal to the best exhibit of former years.

Quite a good exhibit was made of peaches, grapes and assorted fruits.

In the vegetable tent especial effort was made by the committee of arrangements to gather the different kinds of vegetables in groups, each by itself, so that the committee in making awards could more easily decide on the merits of competing exhibits. This arrangement added greatly to the attractiveness of this department. A finer exhibit of vegetables has seldom been made.

A difficulty is found in marking vegetables so that they can be delivered to their rightful owners. The same difficulty is found in regard to fruit; a large portion of vegetables and all kinds of fruit are put in plates and these cannot be properly marked. The cards placed on them are taken up and quite frequently put on the wrong plate and in various ways misplaced so that the owners often find it difficult to determine which plate belongs to them. This gives an opportunity, to those who are careless, to take articles similar without being particular to get the ones they brought.

The use of tags now used for marking counterpanes, rugs, afghans, flowers and articles of general merchandise, assures the delivery of these articles to their right owners, and if they could be used in marking fruit and vegetables it would insure the delivery of every entry to its rightful owner. But the society has an ample supply of plates for fruit even when fruit is abundant. This year nearly or quite half of the plates were used for vegetables, but in an ordinarily good fruit year this could not be done and it would be advisable to adopt some way of exhibiting vegetables other than by the use of plates. Some quite inexpensive method could be adopted which would obviate the difficulty above named: boxes, baskets, wooden or fibre plates could be procured at small expense. Each could then be marked with a tag which would remain until the delivery of the exhibit.

Much difficulty is found in furnishing ticket sellers with a sufficient quantity of five cent pieces to make change. The price of admission being twenty cents it becomes necessary to give to nearly every person purchasing a ticket five cents in exchange. Nearly or quite eighty dollars in five cent pieces had to be procured in Beverly each year for that purpose, and it was with much difficulty that these were obtained. Would it not be more advisable to make the price of admission twenty-five cents for adults and fifteen cents for children under twelve years of age?

Very efficient aid was rendered by Mr. Whitcomb as assistant superintendent, and by the ladies and gentlemen who served on the committee of arrangements and those who served as clerks. Nearly all served the previous year and that experience gave to each ample knowledge of what was required.

The number of entries were as follows:

Dairy,	Entries, 7	No. of contributors, 3
Bread,	" 46	" " 42
Canned fruit,	" 19	" " 17
Bees, hives and honey,	" 19	" " 4

Pears,	Entries, 216	No. of contributors	110
Apples,	" 178	"	91
Peaches, grapes and assorted fruit,	" 105	"	75
Plants and flowers,	" 155	"	101
Vegetables,	" 317	"	110
Grain and seed,	" 14	"	10
Counterpanes and afghans,	" 119	"	115
Rugs,	" 103	"	82
Articles made of leather,	" 21	"	11
Manufactures and general merchandise,	" 29	"	29
Fancy work,	" 329	"	287
Works of art,	" 178	"	123
Work by children,	" 60	"	52

Respectfully submitted,

AMOS MERRILL, *Superintendent of Hall.*

DAIRY.

The Committee on Dairy have attended to their duty, and respectfully report to the Secretary, that they have made the following awards :

- \$8. First premium to C. E. C. Creamery, North Beverly, for butter.
- \$6. Second premium, to Ella O. Gowen, West Newbury, for butter.
- \$4. Third premium, to Mrs. George R. Dodge, Hamilton, for butter.

STATEMENT OF ELLA O. GOWEN, OF WEST NEWBURY, OF BUTTER MADE FROM THE MILK OF GRADE COWS, OR A MIXTURE OF ALL KINDS.

Milk set in (Reid's Peerless) Creamery at a temperature of 45 degrees, stands twelve hours, skimmed, kept in refrigerator, and not allowed to sour; churn twice a week. Butter washed in two waters, is then salted, three-

fourths ounce salt to a pound of butter. Worked with a Reid's butter worker, and put in half pound prints for market.

NOTE—Other statements not returned to Secretary.

BREAD AND CANNED FRUITS.

The Committee on Bread and Canned Fruits have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- \$3. First premium, to Mrs. A. C. Wilson, Beverly, for white bread.
- \$2. Second premium, to Sadie Campbell, Swampscott, for white bread.
- \$1. Third premium, to Mrs. Allen Smith, Rockport, for white bread.
- 50c. Gratuity, to Mrs. L. H. Perry, Danvers, for white bread.
- 50c. Gratuity, to Mrs. Charles Drain, Salem, for white bread.
- 50c. Gratuity to Mrs. John Barker, No. Andover, for white bread.
- 50c. Gratuity, to Mrs. Annie Hawkes, Saugus, for white bread.
- \$2. First premium, to Miss Grace Perry, Danvers, for graham bread.
- \$1. Second premium, to Mrs. Lyman S. Wilkins, Middleton, for graham bread.
- 50c. Gratuity to Annie C. Horsh, Rowley, for graham bread.
- 50c. Gratuity, to Mrs. E. S. Peirce, Beverly, for graham bread.
- \$1.50. First premium, to Mrs. A. M. Merrill, Wenham, for brown bread.
- \$3. First premium, to Mrs. Arthur C. Wilson, Beverly, for collection of pickles and canned fruit.

\$2. Second premium, to Mrs. A. B. Evans, Salem, for collection of pickles and canned fruit.

50c. Gratuity, to Mrs. Solomon Fuller, Danvers, for 5 jars preserves.

50c. Gratuity, to Miss M. E. Dwyer, Salem, for preserves and ketchup.

Mrs. C. W. Gowen, Amanda F. Low, Mrs. B. H. Farnum, Mrs. B. W. Farnum — *Committee*.

STATEMENT OF GRACE PERRY, FIRST PREMIUM GRAHAM BREAD.

Process of making: three cups of Glen Mills graham flour, two of Haxall flour sifted, one-quarter of Vienna yeast cake dissolved in a half cup of water, half a teaspoonful of salt, one-half cup of molasses and water, knead fifteen minutes, let rise over night, in the morning mould lightly, put in baking pan, rise one and one half hours, bake one hour.

STATEMENT OF MRS. A. W. MERRILL, FIRST PREMIUM BROWN BREAD.

One pint of rye meal, one pint Indian meal, one half pint molasses, one half pint flour, teaspoonful of salt, two teaspoonfuls saleratus, one and one half pints cold water, one cup raisins, steam three hours.

STATEMENT OF MRS. LYMAN S. WILKINS, SECOND PREMIUM GRAHAM BREAD.

Two quarts graham flour, one quart warm milk, one half cup molasses, one tablespoonful lard, one teaspoonful salt, one-half cup yeast, made into a sponge, raised three hours, put in a pan and raised one hour, baked one and one quarter hours.

NOTE—Other statements not returned to Secretary.

BEES, HIVES AND HONEY.

The Committee on Bees, Hives and Honey have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$3. First premium, to John Barker, No. Andover, for honey.
- \$2. Second premium, to Henry Alley, Wenham, for honey.
- \$1. Gratuity, to E. L. Blake & Co., Peabody, for honey.
- \$5. First premium, to Henry Alley, Wenham, for bees, hives and supplies.
- \$3. Second premium, to E. L. Blake & Co., Peabody, for bees, hives and supplies.
- \$1. Gratuity, to E. T. Edwards, Beverly, for bees.

Reuben W. Ropes, E. A. Emerson, J. Henry Hill —
Committee.

PEARS.

The Committee on Pears have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- 3.00. First premium to Edwin I. Bates, Lynn, for Bartlett pears.
- 3.00. First premium, to C. E. Brown, Peabody, for Belle Lucrative pears.
- 3.00. First premium, to C. E. Brown, Peabody, for d'Anjou pears.
- 3.00. First premium, to Edwin I. Bates, Lynn, for Duchess pears.
- 3.00. First premium, to Edwin I. Bates, Lynn, for Seckle pears.
- 3.00. First premium, to Edwin I. Bates, Lynn, for Sheldon pears.
- 3.00. First premium, to Edwin I. Bates, Lynn, for Howell pears.

- 6.00. First premium, to Edwin I. Bates, Lynn, for collection of eleven varieties of pears.
- 3.00. First premium, to W. P. Hutchinson, Danvers, for Dana's Hovey pears.
- 3.00. First premium, to Sylvester Parrott, Lynn, for Lawrence pears.
- 3.00. First premium, to A. C. Osborn, Peabody, for Louis Bon de Jersey pears.
- 3.00. First premium, to W. B. Little, Newbury, for Onondaga pears.
- 3.00. First premium, to Rufus Larcom, Beverly, for Paradise d'Automne pears.
- 3.00. First premium, to E. F. Webster, Haverhill, for Margette pears.
- 3.00. First premium, to R. W. Ropes, Salem, for Vicar pears.
- 3.00. First premium, to H. A. Southwick, Peabody, for Beurre Clairgeau pears.
- 3.00. First premium to J. H. Hill, Amesbury, for Bosc pears.
- 3.00. First premium to R. W. Ropes, Salem, for Comice pears.
- 1.00. Gratuity, to J. W. Goodell, Lynn, Bartlett pears.
- 1.00. Gratuity, to R. W. Ropes, Salem, Belle Lucrative pears.
- 1.00. Gratuity, to Edwin I. Bates, Lynn, for d'Anjou pears.
- 1.00. Gratuity, to R. W. Ropes, Salem, for Dutchess pears.
- 1.00. Gratuity, to I. P. Hale, Rowley, for Lawrence pears.
- 1.00. Gratuity, to S. S. Lee, Beverly, for Louis Bon de Jersey pears.
- 1.00. Gratuity, to S. J. Richardson, Lawrence, for Seckle pears.
- 1.00. Gratuity, to W. H. Stevens, West Newbury, for Sheldon pears.
- 1.00. Gratuity, to Isaac Wilson, Peabody, for Vicar pears.
- 1.00. Gratuity, to C. P. Savory, Groveland, for Howell pears.

- 1.00. Gratuity, to W. B. Little, Newbury, for Beurre Clairgeau pears.
- 1.00. Gratuity, to Edwin I. Bates, Lynn, for Bosc pears.
- 1.00. Gratuity, to J. W. Goodell, Lynn, for Fulton pears.
- 1.50. Gratuity, to A. C. Woodbury, Beverly, for Brockworth Park pears.
- 1.50. Gratuity, to R. W. Ropes, Salem, for Flemish Beauty pears.
- 1.50. Gratuity, to George A. Waite, Danvers, for Merriam pears.
- 1.50. Gratuity, to J. W. Dodge, Danvers, for Dodge Seedling pears.
- 1.50. Gratuity, to Allen Barr, Lawrence, for Dana's Hovey pears.

There were 216 plates of pears, from ninety-five contributors, from nineteen cities and towns.

The committee would recommend striking from the premium list of pears as being unworthy of cultivation in Essex county, the Urbaniste and Onondaga, and they advise to put on the list, the Brockworth Park and Merriam. They would also recommend that no premium be offered for collections, inasmuch as the competition has been so small for the last five or six years, rarely not more than one contributing.

Peter M. Neal, Geo. Pettengill, J. A. Lamson, E. F. Webster, A. C. Osborn — *Committee.*

APPLES.

The Committee on Apples have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- \$3.00. First premium, to Mrs. Sarah M. Moore, Peabody, for Gravenstein.
- 3.00. First premium, to George F. Sanger, Peabody, for Drap d'Or.

- 3.00. First premium, to C. L. Beckett, Peabody, for R. I. Greening.
- 3.00. First premium, to Otis Brown, Peabody, for Roxbury Russet.
- 3.00. First premium, to D. H. Ilsley, Newbury, for Hunt's Russet.
- 3.00. First premium, to G. W. Lunt, Newbury, for Red Russet.
- 3.00. First premium, to Horace Ware, Clifton, Marblehead, for Pickman Pippen.
- 3.00. First premium, to B. F. Huntington, Amesbury, for Hubbardston.
- 3.00. First premium, to B. F. Huntington, Amesbury, for Sweet Baldwin.
- 3.00. First premium, to B. F. Huntington, Amesbury, for Northern Spy.
- 3.00. First premium, to J. Henry Hill, Amesbury, for King of Tompkins.
- 3.00. First premium, to J. Henry Hill, Amesbury, for Bailey's Sweet.
- 3.00. First premium, to J. Henry Hill, Amesbury, for Smith's Cider.
- 3.00. First premium, to J. Henry Hill, Amesbury, for Granite Beauty.
- 3.00. First premium, to J. Henry Hill, Amesbury, for Snow.
- 3.00. First premium, to Dr. Wm. Mack, Salem, for Danvers Sweet.
- 1.50. Gratuity, to George A. Woodbury, Beverly, for Hyslop Crab.
- 1.00. Gratuity, to Wm. Burke Little, Newbury, for Smith's Cider.
- 1.00. Gratuity, to G. W. Chadwick, W. Boxford, for Pearmain Russet.
- 1.00. Gratuity, to Geo. W. Chadwick, W. Boxford, for Pearmain.
- 1.00. Gratuity, to S. B. George, Groveland, for Hunts' Russet.

- 1.00. Gratuity, to S. L. Titcomb, West Newbury, for Roxbury Russet.
- 1.50. Gratuity, to G. W. Lunt, Newbury, for Mann apple.
- 1.00. Gratuity, to J. M. Estes, Peabody, for Pearmain.
- 1.50. Gratuity, to Albert Kimball, Bradford, for Ordway
- 1.00. Gratuity, to Geo. A. Wait, Danvers, for Catshead.
- 1.00. Gratuity, to Wm. R. Cole, W. Boxford, for Killham Hill.
- 1.00. Gratuity, to Wm. R. Cole, W. Boxford, for Porter.
- 1.50. Gratuity, to Geo. D. Walton, Peabody, for Hass Apple.
- 1.50. Gratuity, to E. A. Emerson, Haverhill, for Green Sweet.
- 1.50. Gratuity, to E. A. Emerson, Haverhill, for Butler Greening.
- 1.00. Gratuity, to J. Henry Hill, Amesbury, for Red Russet.
- 1.00. Gratuity, to Geo. A. Wait, Danvers, for Canada Red.
- 1.00. Gratuity, to L. F. Nichols, Peabody, for Danvers Sweet.
- 1.00. Gratuity, to Frank Larrabee, So. Peabody, for Hubbardston.

J. W. Goodell, Chas. M. Lunt, E. A. Emerson, H. W. Munroe—*Committee*.

As Chairman of the Committee on Apples, at the Essex Agricultural Exhibit for 1890, we would beg leave to add to our report on premiums, already made, the following suggestions.

In our examinations for awarding premiums we found many plates of fruit entered under wrong names, which the exhibitors honestly believed they were entitled to, being bought and paid for as such.

This is only the natural result of dealing with *strange unscrupulous* vendors of nursery stock. One fellow comes around exhibiting his high colored plates of the finest varieties of fruits and flowers, and by the free use of his oily

tongue persuades the unwary to give an order—for what he supposes to be *first class goods, true to name*. Several months after follows his confederate, delivering the goods and collecting the cash. Very likely neither of the parties own a single bearing tree. The stock is picked up here and there about the country, perhaps bought at auction, at least obtained in the cheapest market, knowing full well that it will be years before you will find out your sad mistake, and they will be out of harm's way, and chuckling over their ill gotten gains. You in the mean time will go to work and graft the trees with good harvest fruits, for the sole benefit of the next generation. Our advice in such cases, would be, deal only with persons having a good reputation for telling the truth, and an abiding place where they can be found, if any explanation is wanted.

These facts it would be well to bear in mind, that all trees, like animals, when moved a long distance, must needs go through a season of acclimation. Also that all varieties of apples, when removed to a milder climate, deteriorate both in the beauty of their brilliant color and their sprightly acid flavor, and keeping qualities, although they may increase in size. Probably no tree which is expected to grow a crop of fruit, is so abused and neglected as the apple. It will grow in almost any soil, yet it *flourishes* only in good strong alluvial soil, and it is no detriment if there are plenty of boulder rocks, to spoil the apples when they fall, and here let us add an axiom, *poor fruit should never be raised, good fruit never shaken from the tree*.

Select a sheltered spot, among the hills, after the land is well prepared by previous cultivation in hard crops, dig good, large, broad holes 30 to 40 feet apart, loom the earth well in the bottom and sides. Set tree the same depth as it had been grown. Single out all small roots, *pack the earth firmly*, continue to cultivate the land with hard crops, using manure enough to insure good crops of vegetables. When the orchard begins to bear fruit, the land may be seeded to grass and pastured, best by sheep or horses, *never* by

horned cattle. The hog may be a good renovator for the old turf bound orchard, but as an ornament among a good thrifty lot of fruit trees, he is not a success.

In the matter of pruning, good surgery demands that every amputation shall be dressed. Many cultivators advise you to prune in the winter time, while you have plenty of leisure time, and the stump will get hard before the sap begins to flow. We would advise pruning when the sap is circulating freely, and all wounds brushed over with shellac in alcohol, coal tar, or a coat of thick oil paint. Shellac is apt to crack, we give preference to coal tar, it being much cheaper and would be used freely, and is sufficiently pungent to keep insects at a respectful distance.

We would advise pruning so as to keep the branches as near the ground as consistent with cultivation, giving less exposure to strong winds when laden with fruit in summer, or ice in winter, and materially aiding in the gathering of the fruit.

It must not be supposed that when the orchard begins to bear, and the land has been laid down to grass, no fertilizer is required, but bear in mind that it takes one kind of fertilizer to grow a tree and another to grow the fruit.

All bearing trees must have more or less *potash*, whether it is supplied by *wood ashes* or in a more concentrated form with compost and spread broad cast, it matters not, *but the potash must precede the fruit.*

In raising fruit we find the enemy omnipresent, and diligent in season. These are the codling moth, canker worm and the tent caterpillar. The former two are vanquished by the tarred paper on the trunk, and sponging the branches with solution of London purple before the young fruit is heavy enough to fall over, thereby giving the young worm a dose of poison before it enters the fruit.

The caterpillar is a later visitor, but appears to be increasing, as the canker worm decreases. We have found the *political torch* the most efficient, attached to a long pole; regulate the stick so as to give a broad blaze, and pass

it quickly along the under side of the limb, on which the tent is located; you may burn some of the foliage but the branch is not injured. This is to be done early in the morning before the vermin have gone to their work of destruction. It costs no more to raise and support a tree bearing first class fruit, than third class. The profit and satisfaction will be the difference, between success and failure. *Always pick by hand*, on a dry day, handle carefully, pack only in *clean casks* in which fruit has never been allowed to decay, give them time to sweat before packing them, keep in as cool a place as possible without freezing, mark name and quality on each barrel, so that you will not hesitate to have them opened in the presence of yourself and your customer, and that smiles only, will pervade both of your countenances, at the sight.

It is no easy task to compile a list of the best apples to be raised in Essex County. The trade demands some or all of the following qualities, *good size* and color, *sharp pleasant flavor*, possessing a definite character, and good keeping qualities as a result of our observations of the exhibitions of the last twenty years. We should make out a list something like the following: William's Early, Red Astrachan, Golden Sweet, Gravenstien, Lyscom, Porter, Hubbardston, Late Strawberry, Duchess of Oldenburgh, Drap d'Or, Golden Pippin, Garden Royal, Hunt's Russet, Baldwin, Rhode Island Greening, Roxbury Russet, Danvers Sweet, Smith's Cider, Kilham Hill. Farmuse and Northern Spy would be classed as doubtful, yet we had some very good specimens of both varieties at this year's exhibit, and more confidence is had in their cultivation.

Several new varieties were brought to our notice, among them the Mann which may be found described on pages 21 and 22 in the appendix of Downing's last edition on fruits; for it is claimed, good size, form and quality, *early and annual bearer*, and a late keeper, January to April.

This apple was exhibited by Mr. C. N. Lunt of Newbury. Another variety, the Ordway by Mr. Albert Kimball of

Bradford, which we have been unable to find described in the books, we would call the attention of the committee on new fruits to these two varieties, worthy of their attention and study. Specimens can doubtless be had from the above cultivators, together with such information as they may possess in regard to the trees and their fruits. In picking fruit for exhibition *leave the whole stem on*. Select a sample which possesses the greatest number of characteristics of its species, and fill your plate with specimens as *uniform as possible*. Any great difference in size, detracts much from the good appearance. The largest is not always the best specimen of its kind. It is liable to be irregular in form, and lacking in color and beauty.

Respectfully submitted,

J. W. GOODELL, *Chairman*.

PEACHES, GRAPES AND ASSORTED FRUIT.

- \$2.00. First premium, to Frederick Lamson, Salem, for Freestone peaches.
- 2.00. First premium, to Mrs. Seth Norwood, Beverly, for late Crawford peaches.
- 2.00. First premium, to H. P. Foster, Beverly, for Seedling peaches.
- 1.00. Gratuity, to Josiah A. Haskell, Beverly, for peaches.
- 50c. Gratuity, to Edwin Bates, Lynn, for White Flesh peaches.
- 50c. Gratuity, to W. H. Flint, Danvers, for Seedling peaches.
- 1.00. Gratuity, to Chas. H. Perry, Beverly, for late Crawford peaches.
- 50c. Gratuity, to A. C. Osborn, Peabody, for Blood peaches.
- 50c. Gratuity, to Mrs. E. L. Webber, Beverly, for late Crawford peaches.

- 50c. Gratuity, to Wm. A. Jacobs, Danversport, for early Crawford peaches.
- 50c. Gratuity, to M. C. Andrews, Andover, for Lemon peaches.
- 3.00. First premium, to Geo. Pettengill, Salem, for Concord grapes.
- 3.00. First premium, to S. M. Titcomb, West Newbury, for Worden's Seedling grapes.
- 3.00. First premium, to W. P. Hutchinson, Danvers, for Brighton grapes.
- 3.00. First premium, to W. P. Hutchinson, Danvers, for Hartford Prolific grapes.
- 3.00. First premium, to Wm. P. Hutchinson, Danvers, for Delaware grapes.
- 3.00. First premium, to C. S. Beckett, Peabody, for Martha grapes.
- 3.00. First premium, to Wm. P. Hutchinson, Danvers, for Moore's Early grapes.
- 3.00. First premium, to Wm. P. Hutchinson, Danvers, for Niagara grapes.
- 3.00. First premium, to Geo. Stickney, Beverly, for Golden Hamburg grapes.
- 4.00. First premium, to Edwin Bates, Lynn, for basket assorted fruit.
- 1.50. First premium, to Geo. D. Walton, Peabody, for Pocklington grapes.
- 1.00. Gratuity, to R. B. Dodge, Beverly, for Vergenes grapes.
- 1.00. Gratuity, to Samuel Newman, Peabody, for Jessica grapes.
- 50c. Gratuity, to Albert H. Merrill, Peabody, for Brighton grapes.
- 50c. Gratuity, to A. C. Osborn, Peabody, for Moore's early grapes.
- 50c. Gratuity, to J. W. Goodell, Lynn, for Hartford Prolific grapes.
- 1.00. Gratuity, to James M. Estes, Peabody, for Brighton grapes.

- 1.00. Gratuity to Geo. Stickney, Beverly, for collection of hot house grapes.
 50c. Gratuity, to Wm. P. Hutchinson, Danvers, for Prentice grapes.
 50c. Gratuity, to Wm. P. Hutchinson, Danvers, for Vergenes grapes.
 50c. Gratuity, to Sarah M. Moore, Peabody, for Lady grapes.
 50c. Gratuity, to J. W. Goodell, Lynn, for Imp. Gage plums.
 50c. Gratuity, to Edwin Bates, Lynn, for plums.
 50c. Gratuity, to M. Wilkinson, Beverly, for prunes.
 50c. Gratuity, to Frank A. Emery, Andover, for blackberries.
 1.00. Gratuity, to Geo. A. Wait, Danvers, for quinces.
 Thos. C. Thurlow, Thos. P. Hale, Rufus Kimball, Andrew Nichols, John Hobbs — *Committee*.
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PLANTS AND FLOWERS.

The Committee on Plants and Flowers have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$1.00. First premium, to Mrs. Mary A. Eaton, Lynn, for twelve Scabiosas.
 1.00. First premium, to Mrs. E. A. Willard, Lynn, for Geraniums, double.
 1.00. First premium, to Mrs. E. A. Willard, Lynn, for twelve single Geraniums.
 1.00. Gratuity, to Miss Emily Ropes, Beverly, for perennial Gladiolas.
 5.00. First premium, to Miss Mary Mitchell, Beverly, for one hundred (fifty varieties) cut flowers.
 1.00. Gratuity, to John E. Mitchell, Beverly, for bouquet Roses.
 1.00. Gratuity, to Mrs. John Glover, Beverly, for bouquet Asters.

- 1.00. First premium, to Mrs. S. P. Buxton, Peabody, for Coxcombs.
- 50c. Gratuity, to Bessie Grace, Beverly, for basket of Dahlias.
- 1.00. First premium, to Julia A. Cain, Lynn, for twenty-four French Marigolds.
- 1.00. First premium, to Julia A. Cain, Lynn, for twenty-four African Marigolds.
- 1.00. Gratuity, to Julia A. Cain, Lynn, for ten Geraniums, double.
- 1.00. Gratuity, to Joseph J. Conley, West Newbury, for collection Dianthus.
- 1.00. First premium, to W. S. Ward, Salem, for collection Carnations.
- 1.00. First premium, to T. C. Thurlow, West Newbury, for twelve Pompom Dahlias.
- 1.00. First premium, to T. C. Thurlow, West Newbury, for twelve Phlox (hardy).
- 2.00. First premium, to T. C. Thurlow, West Newbury, for collection Phlox, twenty-four varieties.
- 2.00. Gratuity, to T. C. Thurlow, West Newbury, for collection Gladiolas.
- 1.00. Gratuity, to T. C. Thurlow, West Newbury, for two vases Japan Anemones.
- 2.00. Gratuity, to J. C. Rogers, Peabody, for vase of Roses.
- 1.00. First premium, to J. C. Rogers, Peabody, for vase Cannas.
- 1.00. Gratuity, to Mrs. L. M. Haskell, Salem, for Garden Anemones.
- 1.00. Gratuity, to Julia A. Cain, Lynn, for basket Immortelles.
- 1.00. First premium, to Miss Eva Raddin, Peabody, for variety Dahlias.
- 50c. Gratuity, to Miss Augusta Foster, Beverly, for collection Dahlias.
- 5.00. Second premium, to John E. Mitchell, Beverly, for twenty-five varieties plants and flowers.

- 1.00. First premium, to John E. Mitchell, Beverly, for five fancy Gladiolas.
- 1.00. First premium, to John E. Mitchell, Beverly, for five Fuchsias.
- 1.00. First premium, to John E. Mitchell, Beverly, for five Crotons.
- 3.00. Second premium, to Julia A. Cain, Lynn, for one hundred flowers, fifty varieties.
- 1.00. First premium, to John E. Mitchell, Beverly, for five Dracenas.
- 1.00. First premium, to George Ward, Beverly, for collection twenty-four Zinnias.
- 1.00. Gratuity, to George Ward, Beverly, for display of Pansies.
- 1.00. Gratuity, to Mrs. W. R. Cloutman, Salem, for Brugmansias.
- 1.00. First premium, to Abbie L. Cain, Lynn, for Nasturtiums.
- 10.00. First premium, to David Weir, Beverly, for twenty-five varieties Foliage plants and flowers.
- 1.00. First premium, to David Weir, Beverly, for five Begonias.
- 1.00. First premium, to David Weir, Beverly, for five Ferns.
- 1.00. Second premium, to Mrs. David Warren, Swampscott, for pair boquets, Native Flowers.
- 50c. Gratuity, to Mrs. David Warren, Swampscott, for basket Garden Flowers.
- 2.00. Gratuity, to Mary A. Titcomb, Lynn, for Amaryllis.
- 3.00. Second premium, to Mrs. J. C. Vickary, Lynn, for Design Crescent.
- 2.00. First premium, to Mrs. J. C. Vickary, Lynn, for pair boquets, Native Flowers.
- 1.00. First premium, to Mrs. J. C. Vickary, Lynn, for Drummond's Phlox.
- 2.00. First premium, to Mrs. Mary A. Eaton, Lynn, for pair boquets, Garden Flowers.

1.00. First premium, to Mrs. Mary A. Eaton, Lynn, for twenty-four single Petunias.

1.00. Gratuity, to S. D. Stanley, Lynn, for Tuberous Rooted Begonias.

Mrs. Edwin V. Gage, Louisa P. Weston, Lucy H. Bowdoin, Thomas Hale — *Committee*.

VEGETABLES.

The Committee on Vegetables have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

\$3.00. First premium, to I. O. Edwards, Beverly, for Brunswick cabbage.

3.00. First premium, to I. O. Edwards, Beverly, for American Imp. Savoy cabbage.

3.00. First premium, to Hooper A. Appleton, Beverly, for Red Drumhead cabbage.

2.00. Second premium, to James F. Potter, Beverly, for Red Dutch cabbage.

2.00. Second premium, to John W. Elliot, Beverly, for Brunswick cabbage.

3.00. First premium, to David Warren, Swampscott, for Stone Mason cabbage.

2.00. Second premium, to William A. Jacobs, Danversport, for Stone Mason cabbage.

2.00. Second premium, to Frank A. Emery, Andover, for Savoy cabbage.

3.00. First premium, to Issachar Foster, Jr., Beverly, for Marblehead squash.

3.00. First premium, to Charles A. Mason, Beverly, for Bay State squash.

3.00. First premium, to David Warren, Swampscott, for Hubbard squash.

3.00. First premium, to David Warren, Swampscott, for Essex Hybrid squash.

- 3.00. First premium, to David Warren, Swampscott, for Sibley squash.
- 3.00. First premium, to A. A. Mason, Beverly, for Turban squash.
- 3.00. First premium, to John W. Elliot, Danvers, for Danvers Intermediate carrot.
- 3.00. First premium, to William A. Jacobs, Danversport, for Boston Marrow squash.
- 3.00. First premium, to A. A. Mason, Beverly, for Danvers onions.
- 3.00. First premium, to Richard Jaques, Newbury, for Yellow Flat onions.
- 3.00. First premium, to James J. H. Gregory, Marblehead, for Red Globe onions.
- 3.00. First premium, to I. O. Edwards, Beverly, for Cardinal tomatoes.
- 3.00. First premium, to A. F. Lee, Beverly, for Livingston's Peerless tomatoes.
- 3.00. First premium, to A. F. Lee, Beverly, for Red Cross tomatoes.
- 3.00. First premium, to Edwin I. Bates, Lynn, for Acme tomatoes.
- 3.00. First premium, to David Warren, Swampscott, for early Crosby sweet corn.
- 3.00. First premium, to William A. Jacobs, Danversport, for Mammoth sweet corn.
- 3.00. First premium, to Charles A. Mason, Beverly, for Nutmeg melon.
- 3.00. First premium, to Charles A. Mason, Beverly, for Dewing's beets.
- 3.00. First premium, to William A. Jacobs, Danversport, for long, smooth parsnips.
- 3.00. First premium, to William A. Jacobs, Danversport, for Edmand's beets.
- 3.00. First premium, to William B. Little, Newbury, for Short Horn carrots.
- 3.00. First premium, to Edwin I. Bates, Lynn, for Salmon Flesh melons.

- 3.00. First premium, to Calvin Foster, Beverly, for Watermelons.
- 3.00. First premium, to Andrew Lane, Rockport, for cranberries.
- 3.00. First premium, to George E. Ward, Beverly, for White Plume celery.
- 3.00. First premium, to William B. Little, Newbury, for Early Rose potatoes.
- 3.00. First premium, to William B. Little, Newbury, for White Ruta Baga turnips.
- 3.00. First premium, to Richard Jaques, Newbury, for Eclipse beets.
- 3.00. First premium, to Richard Jaques, Newbury, for Yellow Ruta Baga turnips.
- 3.00. First premium, to Edwin I. Bates, Lynn, for Mangold Wurtzels.
- 3.00. First premium, to N. P. Perkins, Wenham, for Essex Hybrid tomatoes.
- 3.00. First premium, to W. H. Greenleaf, Salisbury, for L. I. Beauty cauliflowers.
- 3.00. First premium, to H. A. Stiles, Middleton, for White turnip.
- 3.00. First premium, to William R. Cole, Boxford, for cranberries.
- 3.00. First premium, to William R. Cole, Boxford, for Clarke's No. 1 potatoes.
- 3.00. First premium, to William R. Cole, Boxford, for Pearl of Savoy potatoes.
- 2.00. Second premium, to E. Rust, Peabody, for Black cranberries.
- 3.00. First premium, to Albert Berry, North Andover, for Purple Top turnips.
- 2.00. Second premium, to Frank A. Emery, Andover, for cauliflower.
- 3.00. First premium, to James J. H. Gregory, Marblehead, for early Maine potatoes.
- 3.00. First premium, to William R. Cole, Boxford, for Beauty of Hebron potatoes.

- 50c. Gratuity, to Issachar Foster, Jr., Beverly, for Mammoth squashes.
- 50c. Gratuity, to James F. Potter, Beverly, for onions.
- 50c. Gratuity, to James F. Potter, Beverly, for Bell peppers.
- 50c. Gratuity, to James P. King, Peabody, for Danvers carrot.
- 1.00. Gratuity, to William A. Jacobs, Danversport, for Essex Hybrid squash.
- 1.00. Gratuity, to William A. Jacobs, Danversport, for Hubbard squash.
- 50c. Gratuity, to William A. Jacobs, Danversport, for Sugar pumpkin.
- 1.00. Gratuity, to William B. Little, Newbury, for early Dunlap squash.
- 1.00. Gratuity, to William B. Little, Newbury, for Beauty of Hebron potatoes.
- 2.00. Gratuity, to William B. Little, Newbury, for collection of potatoes.
- 1.00. Gratuity, to Richard Jaques, Newbury, for Red Globe onions.
- 1.00. Gratuity, to Richard Jaques, Newbury, for Edmand's beets.
- 1.00. Gratuity, to Richard Jaques, Newbury, for long, smooth parsnip.
- 50c. Gratuity, to Richard Jaques, Newbury, for Sibley squashes.
- 1.00. Gratuity, to A. A. Mason, Beverly, for Danvers onion.
- 1.00. Gratuity, to Frank A. Emery, Andover, for Ruta Baga turnips.
- 50c. Gratuity, to Frank A. Emery, Andover, for Purple Top turnips.
- 1.00. Gratuity, to William R. Cole, Boxford, for Early Rose potatoes.
- 2.00. Gratuity, to A. M. Nickerson, Wenham, for Black cranberries.

50c. Gratuity, to James Duggan, Salem, for Garden Lima beans.

50c. Gratuity, to E. J. Horace, Topsfield, for cauliflower.

8.00. First premium, to J. J. H. Gregory, Marblehead, for best collection of vegetables.

6.00. Second premium, to A. A. Mason, Beverly, for collection of vegetables.

4.00. Third premium, to Simon P. Buxton, Peabody, for collection of vegetables.

M. B. Faxon, A. P. Fuller, E. L. Wildes, John B. Faxon, J. Henry Hill — *Committee*.

GRAIN AND SEED.

The Committee on Grain and Seed have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

\$5.00. First premium, to John Barker, North Andover, for 25 ears Field corn.

3.00. Second premium, to Jeremiah Bresnahan, Peabody, for 25 ears Field corn.

2.00. Third premium, to John B. King, Middleton, for 25 ears Field corn.

3.00. First premium, to A. C. Osborn, Peabody, for 25 ears Pop corn.

2.00. Second premium, to Geo. D. Walton, Peabody, for 25 ears Pop corn.

8.00. First premium, to J. J. H. Gregory, Marblehead, for collection of Field and Garden seeds.

6.00. Second premium, to Simon P. Buxton, Peabody, for collection of Field and Garden seeds.

Joshua B. Grant, Albert Berry, Wm. H. Smith, John K. Bancroft — *Committee*.

COUNTERPANES AND AFGHANS.

The Committee on Counterpanes and Afghans have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$4.00. First premium, to Mrs. E. G. Mears, Danvers, for Silk quilt.
- 2.00. Second premium, to L. A. Hawkins, Salem, for Patch quilt.
- 1.00. Gratuity, to A. B. Brown, Salem, for quilt and sham.
- 1.00. Gratuity, to M. E. Buxton, Peabody, for Knit quilt.
- 1.00. Gratuity, to Mrs. W. Taylor, Amesbury, for quilt and shams.
- .75. Gratuity, to Lydia A. Wilson, Beverly, for Knit quilt.
- 1.50. Gratuity, to Mrs. W. B. Furber, Lynn, for Silk quilt.
- 1.00. Gratuity, to Mrs. M. F. Howes, Beverly, for Silk quilt.
- 1.00. Gratuity, to Mrs. Sally Cloutman, Wenham, for Patch quilt.
- 1.00. Gratuity, to M. A. Narbonne, Salem, for Knit quilt.
- 1.00. Gratuity, to Emma W. Herrick, No. Beverly, for quilt.
- 1.00. Gratuity, to W. Hutchings, Salem, for quilt.
- 1.00. Gratuity, to Mrs. S. P. Baker, Peabody, for Afghan.
- 1.00. Gratuity, to Mrs. B. M. Smith, Beverly, for Afghan.
- 1.00. Gratuity, to Mrs. C. C. Pike, Peabody, for Afghan.
- 2.00. Gratuity, to Mrs. I. Quimby, Wenham, for Afghan.
- .75. Gratuity, to Miss K. L. Babcock, Salem, for Silk quilt.

Mrs. A. F. Harvey, Mrs. David Warren, Martha P. Swinerton, Mrs. N. Dole—*Committee*.

 CARPETINGS AND RUGS.

The Committee on Carpetings and Rugs have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$3.00. First premium, to Mrs. W. H. Tyler, Manchester, for wrought Hearth rug.
- 2.00. First premium, to Mrs. Pushee, Beverly, for Drawn rug.
- 4.00. First premium, to Mrs. Ambrose Paul, Salem, for Drawn carpeting.
- 1.00. Gratuity, to Mrs. Daniel Murray, Salem, for Drawn rug.
- 1.00. Gratuity, to Miss B. F. Cook, Wenham, for Braided mat.
- .50. Gratuity, to Mrs. Preston, Beverly, for Harness mat.
- .50. Gratuity, to Mrs. A. L. Crosby, Beverly, for Braided mat.
- 1.00. Gratuity, to Mrs. J. H. Richards, Beverly, for Drawn rug.
- .75. Gratuity, to Austin Quimby, Salem, for Drawn rug.
- 1.00. Gratuity, to Mrs. Stafford, Beverly, for Braided mat.
- .50. Gratuity, to Lydia P. Ober, Beverly, for Drawn rug.
- 1.00. Gratuity, to Mrs. E. C. Trask, Beverly, for Knit rug.
- 1.00. Gratuity, to Mrs. J. A. Dunn, Salem, for Braided mat.
- 2.00. Gratuity, to Mrs. M. L. Johnson, Ipswich, for four Drawn rugs.
- .50. Gratuity, to Mrs. M. E. Cook, Newburyport, for Braided mat.
- 1.00. Gratuity, to Mrs. Elnathan Dodge, Beverly, for Drawn rug.
- .75. Gratuity, to Mrs. B. M. Smith, Beverly, for Knit rug.
- .50. Gratuity, to Mrs. H. S. Baker, Beverly, for Drawn rug.
- .50. Gratuity, to Miss Nellie Holan, Topsfield, for Knit rug.
- 1.00. Gratuity, to Mrs. A. R. Sanborn, Lawrence, for Knit Silk rug.
- .50. Gratuity, to Mrs. Mary Trask, Beverly, for Drawn rug.

- .50. Gratuity, to Miss Sadie Savage, Beverly, for Knit rug.
- .50. Gratuity, to Mrs. Porter Brown, No. Beverly, for Knit rug.
- .50. Gratuity, to Mrs. E. C. Trask, Beverly, for Drawn rug.
- .50. Gratuity, to Mrs. M. M. Titecomb, Lynn, for Braided mat.
- .75. Gratuity, to Elizabeth Dell, Marblehead, for Rag mat.
- .50. Gratuity, to Mrs. M. M. Titecomb, Lynn, for Braided mat.
- .50. Gratuity, to Calvin Foster, Beverly, for Drawn rug.
- .50. Gratuity, to S. A. Berry, Beverly, for Button mat.
- .50. Gratuity, to E. F. Merchant, Beverly, for Braided mat.
- .50. Gratuity, to Mrs. John L. Ober, Beverly, for Knit rug.
- .50. Gratuity, to Mrs. C. Hussey, Beverly, for Knit rug.
- .50. Gratuity, to Calvin Foster, Beverly, for Drawn rug.
- .50. Gratuity, to Fitz W. Davis, East Gloucester, for Button mat.
- .75. Gratuity, to Mrs. Swift, East Gloucester, for Drawn rug.
- .50. Gratuity, to Mrs. Wm. F. Story, Salem, for Drawn rug.
- .50. Gratuity, to Mrs. M. J. Ham, Beverly, for Drawn rug.
- .50. Gratuity, to Mrs. Eleanor Jackson, Beverly, for Button mat.

Mrs. N. E. Ladd, Andrew Nichols, Mrs. T. C. Thurlow,
Mrs. J. Henry Hill—*Committee*.

MANUFACTURES FROM LEATHER.

The Committee on Articles Manufactured from Leather have attended to their duty, and respectfully report to

the Secretary that they have made the following awards:

- \$5.00. First premium, to Chas. P. Spencer & Co., Salem,
for 1 Gilt Carryall harness.
- 3.00. Gratuity, to Chas. P. Spencer & Co., Salem, for 1
Silver Track harness.
- 5.00. First premium, to Barker & Kilham, Beverly, for
1 Express harness.
- 5.00. First premium, to Wm. T. Works, Beverly, for 1
Sett Team harness.
- 2.00. Gratuity, to McDonald & Hanaford, North And-
over, for 1 Coupe harness.
- 2.00. Gratuity, to McDonald & Hanaford, North And-
over, for 1 Single Strap Buggy harness.
- 1.00. Gratuity, to George E. Lewis, Peabody, for 6
bunches belting.
- 2.00. Gratuity, to W. H. Flint, Danvers, for men's,
youths' and boys' Balmoral shoes.
- 2.00. First premium, to Clark Bros. & Morgan, Beverly,
for ladies' boots.
- Diploma, to Clark Bros. & Morgan, Beverly, for fine ex-
hibit of ladies' shoes.
- Diploma, to Edmund Giles Jr., Beverly, for exhibit of
ladies', gents' and misses' boots and shoes.

Henry Hobs, S. D. Hood, Henry E. Reynolds, Albert
Perry—*Committee*.

FANCY WORK.

The Committee on Fancy Work have attended to their
duty, and respectfully report to the Secretary that they
have made the following awards:

- \$1.00. First premium, to Mrs. John H. Glover, Peabody,
for crochet lace.
- 1.00. First premium, to Mrs. Wm. P. Farnham, Beverly,
for lace edging.
- 1.00. First premium, to Mrs. Herbert Walker, Beverly,
for tray cloth.

- 1.00. First premium, to Helen Southard, Beverly, for suspenders.
- 1.00. First premium, to Mrs. M. A. Osgood, No. Beverly, for tidy.
- 1.00. First premium, to Nellie S. Andrews, Salem, for pillow shams.
- 1.00. First premium, to Abby Porter, Beverly, for aprons.
- 1.00. First premium, to Maggie Dugan, Beverly, for sofa pillow.
- .75. Second premium, to R. C. Smith, Salem, for lamp shade.
- .75. Second premium, to Maggie Collins, Beverly, for fan.
- .75. Second premium, to Nellie Blaney, Peabody, for scarf.
- .75. Second premium, to R. M. Wilkinson, Peabody, for knitting work.
- .75. Second premium, to M. S. Mitchell, Beverly, for pillow cases.
- .75. Second premium, to Lillie Paine, Beverly, for apron.
- .75. Gratuity, to Mrs. Arthur Elliot, Peabody, for infant's dress.
- .75. Gratuity, to Mrs. R. B. Raymond, Beverly, for tidy and lace.
- .75. Gratuity, to Mrs. Ruth Kimball, Peabody, for pen-work bag.
- .75. Gratuity, to Ella A. Dow, Beverly, for handkerchief.
- .75. Gratuity, to Hattie F. Buxton, Peabody, for picture scarf.
- .75. Gratuity, to George Odell, Salem, for screen.
- .75. Gratuity, to L. Mabel Hurst, Beverly, for picture scarf.
- .75. Gratuity, to Clara Swasey, Beverly, for pillow sham.

- .75. Gratuity, to Emma F. McKenzie, Beverly, for
crochet edging.
- .75. Gratuity, to Nellie Dugan, No. Beverly, for sofa
pillow.
- .75. Gratuity, to Anna S. Burnham, No. Beverly, for
tidy.
- .75. Gratuity, to Mrs. M. E. Arrington, Lynn, for apron.
- .75. Gratuity, to Mrs. L. H. Cole, Salem, for apron.
- .50. Gratuity, to Mrs. D. D. Addison, Beverly, for
piece of embroidery.
- .50. Gratuity, to Mrs. Charles Andrews, Beverly, for
cushion and mat.
- .50. Gratuity, to Mrs. Andrew Edwards, Beverly, for
child's dress.
- .50. Gratuity, to Mrs. J. H. Webber, Beverly, for
apron.
- .50. Gratuity, to Grace Lefavour, Beverly, for hand
bag.
- .50. Gratuity, to M. E. Fiske, Beverly, for tidy.
- .50. Gratuity, to Carrie F. Lucas, Salem, for birch
basket and ring.
- .50. Gratuity, to Mrs. John J. Dennis, Beverly, for
stockings.
- .50. Gratuity, to Mrs. Geo. Batchelder, Lynn, for in-
fant's sack.
- .50. Gratuity, to Sarah Dean, Beverly, for knit lace.
- .50. Gratuity, to Mrs. Chas. F. Quimby, Salem, for
pillow sham.
- .50. Gratuity, to Mrs. Chas. Whitehouse, Beverly, for
knit edging.
- .50. Gratuity, to Mrs. G. H. Southwick, Beverly, for
crazy work.
- .50. Gratuity, to M. C. Young, Wenham, for embroidery.
- .50. Gratuity, to Mrs. Mary Harkins, Beverly, for
crochet and knit lace.
- .50. Gratuity, to Mrs. Lizzie Ober, Beverly, for tidy.
- .50. Gratuity, to Mrs. M. F. Allen, Beverly, for dust
bag.

- .50. Gratuity, to Mary Forness, Peabody, for Mexican work.
- .50. Gratuity, to Mrs. C. S. Dow, Beverly, for crocheted basket.
- .50. Gratuity, to S. M. Perry, Beverly, for skirt.
- .50. Gratuity, to Abbie Appleton, Beverly, for toast napkin.
- .50. Gratuity, to Grace Wood, Beverly, for knit purse.
- .50. Gratuity, to Mrs. W. F. Porter, Beverly, for skirt.
- .50. Gratuity, to Kitty Phalen, Salem, for handkerchief and lace.
- .50. Gratuity, to Lizzie Walker, Beverly, for bed shoes.
- .50. Gratuity, to J. H. Cummings, Amesbury, for foot rest.
- .50. Gratuity, to Mrs. R. B. Raymond, Beverly, for pin balls.
- .50. Gratuity, to Mrs. Joseph Woodbury, Beverly, for embroidered chevea.
- .50. Gratuity, to Sarah F. Trask, Beverly, for table mats.
- .50. Gratuity, to Mrs. R. L. Stanwood, Beverly, for pillow shams.
- .50. Gratuity, to Julia Haregan, Beverly, for tidy.
- .50. Gratuity, to Mrs. James Porter, No. Beverly, for tidy.
- .50. Gratuity, to Mrs. Ella Morgan, Beverly, for lace ends.
- .50. Gratuity, to Sarah T. Wood, Beverly, for tidy.
- .50. Gratuity, to Stella F. Gentlee, Beverly, for paper flowers.
- .50. Gratuity, to Lizzie Foster, Beverly, for tidy.
- .50. Gratuity, to M. D. Story, Beverly, for tidy.
- .50. Gratuity, to Mrs. Joseph Williams, Beverly, for apron.
- .50. Gratuity, to Mary E. Turner, Beverly, for bead bag.
- .50. Gratuity, to Mrs. Nancy Knowlton, Hamilton, for pair worsted hose.

- .50. Gratuity, to Marion Swasey, Beverly, for doilies.
- .50. Gratuity, to Mira C. Blake, Danversport, for crazy plates.
- .50. Gratuity, to Mrs. C. S. Cilley, Salem, for night dress.
- .50. Gratuity, to Mrs. J. Dugan, No. Beverly, for apron.
- .50. Gratuity, to Clara Corning, No. Beverly, for apron.
- .50. Gratuity, to Mary E. Stone, Marblehead, for apron.
- .50. Gratuity, to S. A. Berry, Beverly, for tidy.
- .50. Gratuity, to Mrs. W. F. Jones, Beverly, for sofa pillow.
- .50. Gratuity, to Mrs. Wm. H. Joint, Lynn, for sofa pillow.
- .50. Gratuity, to Mrs. H. S. Sabaris, Beverly, for cushion.
- .50. Gratuity, to Essie M. Shove, Peabody, for knit skirt.

Elizabeth P. Nichols, Frances O. Perkins, Emily Campbell—*Committee.*

WORKS OF ART.

The Committee on Works of Art have attended to their duty, and respectfully report to the Secretary that they have made the following awards:

- \$2.00. Gratuity, to C. H. Dockham, Beverly, for crayon work.
- .75. Gratuity, to E. F. Davis, Lynn, for oil painting.
- 2.00. Gratuity, to S. E. Dwyer, Salem, for oil painting.
- .50. Gratuity, to Agnes McMahon, Lynn, for oil painting.
- 2.00. Gratuity, to W. C. Thayer, Hamilton, for oil painting.
- 1.00. Gratuity, to Katie Lynch, Beverly, for crayon.
- 1.00. Gratuity, to Grace D. Gladden, Hamilton, for oil painting.

- .50. Gratuity, to Millie Hathaway, Gloucester, lustre painting.
- .50. Gratuity, to Celia Merrill, Wenham, for repousee work.
- .50. Gratuity, to Thomas E. Green, Beverly, pen and ink drawing.
- .50. Gratuity, to Sarah J. Swett, Marblehead, for oil painting.
- 1.50. Gratuity, to J. A. Denis, Beverly, for Sorrento work.
- 2.00. Gratuity, to Mrs. David Warren, Swampscott, for oil painting.
- .50. Gratuity, to T. G. Lefavour, Beverly, for oil painting.
- 1.00. Gratuity, to James M. Currier, Middleton, for motto.
- .50. Gratuity, to Clara Goldsmith, Beverly, for panel of oil.
- 2.00. Gratuity, to Abbie Woodbury, Beverly, for water colors.
- .50. Gratuity, to Mrs. Chas. Lefavour, Beverly, for plaque of oil.
- .75. Gratuity, to May Goodridge, Beverly, for crayon.
- 3.00. Gratuity, to Mary E. Dockham, Beverly, for oil painting.
- .50. Gratuity, to Addie Abbott, Beverly, for oil painting.
- .50. Gratuity, to Mrs. C. G. Mears, Danvers, for shovel in oil.
- .50. Gratuity, to Delia Sheldon, Beverly, for water color.
- .50. Gratuity, to William Linnehan, Beverly, for crayon drawing.
- .50. Gratuity, to E. A. Wallis, Salem, for dress form.
- .50. Gratuity, to Frank L. Hildreth, Beverly, for photograph.
- .50. Gratuity, to L. Colson, Beverly, for vase.

- 2.00. Gratuity, to Annie S. Friend, Beverly, for pen and brush work.
- 1.50. Gratuity, to W. T. Chappel, Salem, for clayoid work.
- .50. Gratuity, to Alfreda Grant, Danvers, pastelle picture.
- 1.00. Gratuity, to M. W. Haskell, Salem, for china.
- .50. Gratuity, to Mrs. D. D. Addison, Beverly, for picture frames.
- .50. Gratuity, to Ella Shackley, Lynn, for oil painting.
- 1.00. Gratuity, to Cora Whipple, Beverly, for toilet case.
- 1.00. Gratuity, to John T. Crafts, Manchester, for book box.
- 2.00. Gratuity, to L. G. H. Sanford, Beverly, for millinery.
- 3.00. Gratuity, to W. G. Hussey, Salem, for photographs.
- 3.00. Gratuity, to Haswell, Salem, for colored crayons.
- 2.00. Gratuity, to Nellie Magoon, Danvers, for oil painting.
- 3.00. Gratuity, to W. G. Hussey, Salem, for crayon work.
- 1.00. Gratuity, to Miss Wood, Beverly, for lustre painting.
- .50. Gratuity, to R. B. Raymond, Beverly, for oil painting.

The exhibition in this department consisted, as usual, in the varied branches of Fine, Decorative and Industrial Art, and made, altogether, a very creditable show. There were not so many objects which come under the head of "Decorative Art," which the public in general can, perhaps, more fully appreciate than the higher branch of "Fine Art," as there were at the last exhibition. Possibly this may be accounted for by the fact that no gratuity is awarded for work which has not been executed during the last official year; and, the locality of the exhibition being the same as it was last year, perhaps the novelty was a little worn off, making the result rather

what the second crop of grass is to the farmer,—possibly that had nothing whatever to do with it.

Among the works in the department of fine art there were several paintings done by Mrs. Colby, of Wakefield, which were exhibited; but of course with the understanding that they could receive no award, as that is granted only to work done in Essex County. They were, however, far superior to any thing else in the exhibition, both in execution and in design, and therefore they performed a most worthy mission as an example to those who have not yet attained the same skill: a mission which will be most appreciated by, and most useful to those who possess the greatest artistic talent. She will have her reward, though the committee were unable to assign one to her.

Of course this made the ordeal through which the rest of the pictures must pass for judgment the more trying, although they were to be judged from a different standpoint, because most of the exhibitors had had comparatively little experience, and fewer advantages, and they needed all the more encouragement for that very reason. Perhaps it was a mistake not to have granted an award to a very ambitious painting of "Manchester-by-the-Sea;" a sort of bird's eye view, taken probably from nature, which showed much painstaking work, without good artistic qualities in execution, woolly clouds, etc.; perhaps the effect might not have been so bad if it had been hung at the end of the gallery, where a proper distance might have "lent enchantment to the view." It may have some topographical value when that shore shall become thickly populated: like a picture of the city of Baltimore when it was composed of only thirty-two houses, which is now preserved in the Historical rooms of that city.

Some very good specimens of inlaid work were shown, the best of which this year was executed by a woman; proving that skill in the use of the knife is not limited to

the whittling Yankee boy, but that hands more delicate, if not so strong, can turn the national accomplishment into an artistic channel, and produce really fine work, which may be handed down to posterity with as much pride as is felt in regard to the old Dutch clocks, by which we can look back through the vicissitudes of several generations, and see, and delight in work which was put into this permanent and useful form, and handed down to us by our ancestors.

A beautiful, neatly-joined, and exquisitely finished piece of wood work, lined with satin or soft silk, called a book-box, a worthy home for some of the elaborate publications of to-day, which dust or careless handling would easily deface, made by John F. Crafts, of Manchester, was especially to be commended, as well for its elegant simplicity as for the thoroughness and skill of the work; qualities which are far too seldom exhibited by our countrymen, who are too apt to make haste to be rich by wasting their best qualities on shabby work, hurriedly executed and cheaply sold; instead of doing their utmost to employ worthily whatever talent they may have been gifted with, and thus produce valuable work which would improve their own powers and taste, as well as raise the standard of production,—and also bring a good price from those who can appreciate it.

Some beautiful decorated letters by Annie S. Friend, of Beverly, in pen and brush work, were as delicate and elegant as possible, and Miss M. W. Haskell's painting on china, which was most tasteful and well touched, ought to be especially emphasized, as most useful and ornamental, as well as perfect in their kind.

The committee wish to recognize the generosity of the Trustees in raising the sum to be distributed in gratuities in this department, to fifty dollars, and to tender their thanks for the same.

Mary E. Williams, Mrs. Henry A. Hale, Susan P. Boynton, Daisy F. Raymond, Martha O. Barrett, Mrs. Charles J. Peabody—*Committee*.

CHILDREN'S WORK.

The Committee on Children's Work have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$3.00. First premium to Louis B. Mader, Beverly, for butterflies.
- 2.00. Second premium, to Edith Pratt, Peabody, for handkerchief.
- .50. Gratuity, to Arthur P. Merrill, Peabody, for butterflies.
- .50. Gratuity, to Sadie B. Soper, Beverly, for tidy.
- .50. Gratuity, to Daisy Derby, Beverly, for sofa pillow.
- .50. Gratuity, to Edwin Todd, Beverly, for quilt.
- .50. Gratuity, to Claribel Saul, Salem, for quilt.
- .50. Gratuity, to Mary E. Dodge, Hamilton, for oil painting.
- .50. Gratuity, to Arthur Webber, Beverly, for crayon.
- .50. Gratuity, to Fred Herriek, Beverly, for mat.
- .50. Gratuity, to Alice R. Putnam, Danvers, for napkin.
- .50. Gratuity, to Maude Burnham, Beverly, for pillow case.
- .50. Gratuity, to May Maloon, Beverly, for corn cover.
- .50. Gratuity, to Edith Tullock, Peabody, for skirt.
- .50. Gratuity, to Edith May Trask, Peabody, for bag.
- .50. Gratuity, to Jennie F. McKenzie, Beverly, for infant's jacket.
- .50. Gratuity, to Florence E. Frazier, Beverly, for dust bag.
- .50. Gratuity, to Laura E. Abbott, Beverly, for bread bag.
- .50. Gratuity, to Lilla F. Perkins, Beverly, for bread bag.
- .50. Gratuity, to Joanna Endicott, Beverly, for scarf.
- .50. Gratuity, to Carl Andren, Beverly, for model.
- .50. Gratuity, to Walter Herriek, Beverly, for crayon.

Mrs. Bennet Griffin, Mrs. A. B. Fellows, Mrs. Fred A. Dodge, Rebecca T. Wood — *Committee.*

MANUFACTURES AND GENERAL MERCHANDISE.

The Committee on Manufactures and General Merchandise have attended to their duty, and respectfully report to the Secretary that they have made the following awards :

- \$3.00. Gratuity, to W. C. Packard, Salem, for furniture.
- 2.00. Gratuity, to B. S. Lunt, Beverly, for furniture and stoves.
- 2.00. Gratuity, to C. H. & J. Price, Salem, for assortment of manufactured articles.
- 1.50. Gratuity, to N. M. Jewett, Ipswich, for horn novelties.
- 2.00. Gratuity, to F. G. Lefavour, Beverly, for two cases cutlery.
- .50. Gratuity, to Thissell & Bradstreet, Beverly, for wash boilers.
- .50. Gratuity, to Geo. H. Flint, Danvers, for steam cookers.
- .50. Gratuity, to N. E. Crosby, Beverly, for table.
- .50. Gratuity, to Fred W. Herrick, Beverly, cabinet.
- 1.00. Gratuity, to C. A. Lawrence, Beverly, for bean pots.
- 1.00. Gratuity, to Daniel Murray, Salem, for shackles and ante rattlers.
- 1.00. Gratuity, to James A. Roome, Peabody, for horse shoes.
- .50. Gratuity, to C. E. Brown & Co., Beverly, for stuffed birds, rugs, &c.
- 1.00. Gratuity, to C. E. Marsh, Lynn, for criterion soap.
- .50. Gratuity, to S. R. Rogers, Salem, sewing machines.
- .50. Gratuity, to J. Larcom, Beverly, collection of coins.
- 1.00. Gratuity, to Mrs. F. Warren Upton, Peabody, silk worm cocoons.
- .50. Gratuity, to Althea Story, Essex, silk worm cocoons.
- .50. Gratuity, to J. L. Morse, Beverly, for painted carpetings.

David P. Waters, George Buchan, Henry Alley— *Committee.*

REPORT OF COMMITTEE ON IMPROVING WASTE LAND.

The Committee on the Improvement of Waste Land have visited the two pieces entered, and award the following premiums.

\$15.00. First premium, to John H. George, of Methuen.

10.00. Second premium, to Albert Titcomb, of Rowley.

STATEMENT OF JOHN H. GEORGE.

The piece of land which I enter for the society's premium for improvement of land to add to its agricultural value, five years ago was in wood, cutting about thirty-five cords to the acre, mostly oak, second growth trees from six inches to two feet through growing in clumps, the land lies about two miles from the city of Lawrence and three-quarters of a mile from Methuen Village, in Methuen, and adjoining lands sell for from \$150 to \$200 per acre. This piece was about as rough as any in the neighborhood. I was prompted to buy, and clear it by hearing a lecture at one of the Essex Co. Institutes delivered by the Hon. J. J. H. Gregory, in which he said if a man needed the land, and had the money it would pay better to improve the land than let the money lay in a savings bank at four or six per cent. I had the money, the land was for sale, and whether it justifies Mr. Gregory's statement the figures will show.

I bought the land so that after the wood was cut off and marketed the land stood me less than nothing (we will call it nothing); the stone, of which there were cords of them, sold for enough to pay for digging them out, and were removed most of them for me so I shall make no account of them, but the toughest job of all which I had to deal with was oak stumps, and I will guarantee that any one who has tried to remove one will never forget it. The first year I burned it and sowed it to rye and grass seed which grew amazingly, some of it being six feet high; the rye itself sold for enough to pay for all the labor on the

land up to that time; I sold the straw, drew it one-half mile and got \$48.50 for it. I then tried to let the job to clear the stumps out. I offered \$100 per acre for their removal and I let the job at those figures to four different parties who tried to dig them, but none of them worked more than a few days. I then offered thirty-five cents a stump and got a few dug at that price but the next fall I had a piece hardly large enough to lie down on cleared, and made up my mind that if I would have it cleared, I must go at it myself, so I hired four or five men and went at it. I spent \$55 digging stumps, using shovels, picks, bars, stump puller, tackle and falls and anything that suggested itself as likely to prove useful, measured what I had got done and found I had nearly one-quarter of an acre; concluded that after ploughing and digging the stone it would not pay and suspended work.

During the winter I thought the matter over, got an Etna powder catalogue and concluded to try "Dynamite." Spring came, I ploughed my fourth of an acre already cleared and planted it with potatoes, getting a fine crop; in the fall I procured my dynamite and went to work, and the way the stumps and stones flew was pleasing to see. I got an electric battery used for such purposes and tried putting two or three cartridges under some of the largest stumps but after experimenting some I came to the conclusion that it was better and less expensive to use one cartridge at a time, so I have since used it that way, my idea being that after exploding one on a stump you can then see where the next one will do the most good; after using what dynamite I thought proper, I took my horse, tackle and falls and hitching the ends of the fall to opposite roots, let the horse pull and one or the other would come. I went out one day with twenty pounds dynamite and before dinner time I had blown one-third of an acre of stumps to fire wood (mostly), the next day with horse and axe, the job was done so far as stumps were concerned. I got on a team of four

large horses, and four men one-half day ploughed it, leaving the stone on top of the ground; next year planted this piece to potatoes, had them dug in the fall with a pickaxe, going the depth of the pick all over the ground and throwing out all small stones with the potatoes; result, good crop of potatoes but better one of stones. Last year I went through about the same programme on a little larger piece, took the Essex County premium for the best crop of potatoes in the county; this year I have some splendid crops on the whole of the land. After the experience I have had, this is about the way I can clear land now of stumps per acre.

To dynamite, 75 lbs. at 26 cents,	\$19 50
Caps and fuse,	3 00
Labor, 4 days,	8 00
	<hr/>
	\$30 50

The stone of course where they are not worth digging would swell this amount accordingly; the following is what it has cost me to clear a little more than an acre.

To labor on first fourth of an acre,	\$55 00
“ the other three-fourths, dynamite 50 lbs.,	13 00
“ labor other than ploughing, 3 days,	6 00
“ caps and fuse,	2 00
“ ploughing and getting stone top of ground,	20 00
	<hr/>
	\$96 00

According to this and the above accounts my experience has been worth \$65.50 to me.

The manure I have used on this land has been mostly night manure and muck as it being new land, I reckoned that there would be potash enough in the land, so I have applied mostly nitrogeous manures. It has cost me less than nothing, but to place it on a fair basis with the crops I will call it \$5.00 per cord; it has consisted of a few cords horse (shaving) manure, wool waste with some lime

in it, night soil and muck with 400 lbs. fertilizer. The cropping covers beside the rye :

For the first piece cleared, 4 years.

“ “ second “ “ 3 “

“ “ third “ “ 2 “

and there has been taken from it in the above time:

	CR.
Potatoes, 363 bushels, worth,	\$242 00
Cabbage, 85 barrels,	70 00
Carrots, 60 bushels,	30 00
Parsnips, 30 bushels,	30 00
Beets, 80 bushels,	40 00
Squash, 15 barrels, at \$1.00,	15 00
Onion seed,	3 00
Melons,	5 00
Parsley,	1 50
Pop Corn,	10 00
Sweet corn,	3 00
Strawberries,	2 00
Gooseberries,	50
Raspberries,	3 00
Pumpkins,	2 00
Beans,	5 00
Cucumbers,	10 00
Grass, 5 tons (estimated) at \$15.00,	75 00
1st premium from Essex Co. Agricultural Society	
for potatoes,	10 00
Firewood kept fire two winters,	30 00
Rye and straw,	71 00
One acre of improved land,	150 00
	<hr/>
	\$808 00

The above amount of produce has cost,

For manure, 20 cords at \$5.00,	\$100 00
“ labor, seeds, &c.,	66 00
“ fertilizer, 400 pounds,	6 00
“ clearing land,	96 00
	<hr/>
	\$268 00

Please bear in mind that this statement is equivalent to the produce of about four acres one year, and while the amount produced has not been large, about (\$200 per acre), it has been a paying investment in the long run.

The credits standing,	\$808 00
As against the debtor side of	268 00

Leaving as a balance on the right side of \$540 00 or not reckoning the price of the land at its enhanced value, of \$390.00 to the credit of the crops alone, after paying for the clearing of the land, fully justifying (to my mind) Mr. Gregory's statement that the money was at better business than laying in the savings bank at four per cent.

Respectfully yours,

JOHN H. GEORGE.

Methuen, Mass.

STATEMENT OF ALBERT TITCOMB.

To the Committee on Improvement of Waste or Pasture Land:

I commenced the improvement of the pasture, by cutting and pulling up the bushes. I cut and pulled about four thousand Savin bushes, which were the most part of the bushes in the pasture. Then I plowed it, and sowed rye on a part; then set out the orchard, about three hundred apple trees, also eight hundred peach trees the next year. I planted six acres to potatoes; they did well, had a good crop, and it paid well.

The next year I planted six acres of strawberries. I got a good crop, and it paid well. We picked fifty bushels in one day.

I have ploughed the whole field twice, and some of it five or six times. I have not kept any book account of the goes and comes from the field, but have kept them in mind, and according to my judgment and recollection the field has paid the expenses, and I have the improvement for profit.

Yours truly,

ALBERT TITCOMB.

REPORT OF COMMITTEE ON ROOT CROPS.

The Committee chosen to examine the Root Crops entered for the Society's premiums, have attended to their duty, and report eleven entries by ten competitors, as follows:

John H. George, Methuen, crop of potatoes.

James J. H. Gregory, Marblehead, crop of onions.

Chas. C. Blunt, Andover, crop of parsnips.

Frederick Symonds, North Andover, crop of cabbage.

Daniel Carlton, North Andover, crop of cabbage.

J. C. Poor, North Andover, David Warren, Swampscott, crop of cabbage.

M. H. Conner, West Newbury, crop of cabbage.

S. P. Buxton, Peabody, crop of cabbage.

C. Moynihan, Newbury, crop of onions and beets.

Although considerable time and expense were involved in travelling about the county viewing the different crops, the committee feels well paid. The compensation comes from meeting many of the most enterprising farmers in the county and seeing how they do their work, learn of their experience. The committee has been most hospitably treated at every place visited, and our hosts have shown us every thing interesting on their farms and on others in their vicinity.

On September 4, visited Mr. John H. George in Methuen. Mr. George drove the committee about the town, showing them the many fine residences in that place before taking us to his farm. At Mr. George's we found a heavy crop of potatoes, with the vines all dead and the tubers ready to dig. An unsound potato was not seen, but we did see twenty-six marketable potatoes dug from one hill. This crop was grown on a reclaimed swamp where Mr. George had grown onions. The crop was very smooth and of good size.

While in Methuen, Mr. George took us up to Mr. Mann's place where we saw two as fine yokes of oxen as one could

wish to see and also looked over Mr. Mann's splendid farm, afterwards we were treated to a bounteous dinner at Mr. George's.

In the afternoon we visited Mr. Gregory in Middleton, where we found a very large crop of onions. At the time of our visit they were not quite all down, but were going fast. Very few crops of onions equal to this one are seen in these days. They were piled up three high in a great many places, and were of very even size. Mr. Gregory did not forward his statement in season, otherwise he would have had first premium.

On September 11, the committee visited Mr. Daniel Carlton in North Andover, and saw a very heavy piece of cabbage growing in dark shallow loam. They were very thick in the row, being about eighteen apart and every one a good head. In this way, Mr. Carlton gets a large crop of medium sized cabbage.

On the same day the committee visited Mr. Symonds of North Andover and Mr. C. C. Blunt of Andover, who entered a piece of parsnips. They were bottoming in good shape, and looked as if there would be a heavy crop. The tops were of very even height and were beginning to change color. Mr. Blunt digs and markets the greater part of them in the spring, when they sell rapidly at a good price.

On Sept. 25th visited David Warren of Swampscott, where we saw a fine piece of Cabbage. They were growing in a dark heavy loam, where onions were formerly grown. The crop was very even, of good size and very hard. They were the Stone Mason and were raised principally for seed. Mr. Warren also showed us some very fine squashes which he was going to save for seed, also a large lot of Crosby sweet corn for seed.

We were very hospitably entertained at dinner by Mr. Warren, after which the committee took the train for Newbury.

Here at Mr. Moynihan's we saw a good crop of onions, but they were grown on two separate pieces which prevented him from receiving a premium.

On Oct. 16th, Mr. Connor's crop of cabbage was seen, also Mr. Buxton's in Peabody, who showed us a handsome piece of cabbage. They were set a good distance apart and had a chance to make very large and solid heads. They were the most even piece the committee had seen, but being so far apart, the crop was much lighter in weight than most of the others. Mr. Buxton raised them for seed and not for market.

The committee recommend the following premiums :

John H. George, 1st premium, on Potatoes; C. C. Blunt, 1st premium, on Parsnips; Daniel Carleton, 1st premium, on Cabbage; David Warren, 2nd premium, on Cabbage.

The appearance of cabbage crops were so nearly alike, that the premiums were decided mostly from the statements. Mr. Carlton's showing the much greater weight.

EDWARD A. FULLER.

For the Committee.

STATEMENT OF CROP OF POTATOES RAISED BY JOHN
H. GEORGE, METHUEN, ESSEX CO., MASS.

The crop of potatoes which I enter for the Society's premium, was raised on peat meadow land, the crop last year and for the two preceding, being grass.

The whole piece measured three-quarters of an acre. One-half acre, (the piece which I enter), was dressed with one-half ton of Stockbridge Potato Manure; on the remainder, (one-quarter acre) I put cow and horse manure, at the rate of fifteen cords per acre. At no time during their growth could it be told where the manure was, judging by the appearance of the vines, and at digging time, those on the fertilizer turned out to be the best potatoes, and there were more of them than on the manure. It was no catch crop. It was planted with the intention of competing for the Society's premium, and to see how cheaply per bushel I could raise potatoes. Therefore there was no extra labor expended on them. They were dropped by hand, but from the time they were dropped until they were dug, there was

but one hour's hand labor done on them, and that was in fixing up the ends of the rows after cultivating them, as the land was so situated that I had to turn on the potatoes.

The land plowed eight inches deep last fall, harrowed in the spring, furrowed with horse hoe, covered with the same implement, cultivated once, earthed up once, and left until digging time. The tops grew so rank that before the bugs hatched they covered the ground, so I let them eat, but should not do so again, as I think they hurt the crop to a considerable extent. The fertilizer was applied about two-thirds broadcast, and the rest put in the drill. Potatoes, part whole ones and part cut, were dropped one foot apart as nearly as I could guess. The rows were three feet apart, marked with a marker before opening.

FINANCIAL STATEMENT.

Crop of Potatoes	<i>Dr.</i>	
Plowing one-half acre of land,	\$2.50	
Harrowing,	1.00	
Marking, and opening furrows,	.75	
One-half ton Stockbridge Potato Manure, at \$42.50	22.50	
Applying same,	.75	
Dropping and covering,	1.50	
Seven bushels potatoes, for seed,	5.00	
Cultivating and earthing up,	1.50	
Digging and storing, at 7 cts. per bushel,	18.27	
Interest and taxes on land,	3.00	
	<hr/>	
	\$56.77	
	<i>Cr.</i>	
By 18 bushels small potatoes, at 25 cts.,	\$4.50	
243 bushels of large potatoes, at \$1.,	243.00	
	<hr/>	
	\$247.50	

The product of one-half acre was 261 bushels, or at the rate of 522 bushels per acre, and the cost per bushel 21 cts. and a fraction. Where cut seed was used, there was but one bushel of small potatoes to twenty-five large ones, and

where whole seed was used, there was fully as many merchantable potatoes, but a larger per cent. of small ones. The whole seed was what we call "medium" (between the size of an English walnut and a hen's egg). The cut seed was from quite large potatoes, say 125 potatoes to the bushel, cut about two eyes on a piece. The varieties were Beauty of Hebron, Early Essex, with one peck of New Queen, from which I dug fourteen bushels of very nice potatoes, hardly a peck of small ones in them. After the New Queen, the Essex was the best cropper. I have at this time the most of them in the cellar. What I sell I am getting \$1 a bushel for. There were no rotten ones where the fertilizer was used, and very few where the manure was,—probably not four quarts on the three-quarters of an acre. They were planted the last part of April, and were ripe before the mildew struck them.

JOHN H. GEORGE.

METHUEN, Mass, Oct. 9, 1890.

This certifies that I measured one-half acre of land for John H. George, on which was a crop of potatoes entered for premium with the Essex Co. Agl. Society.

CHAS. W. MANN

STATEMENT OF DANIEL CARLETON.

To the Committee on Root Crops.

GENTLEMEN:—

The half acre of cabbage entered by me, was grown upon land that had been in grafts for seven years. Last spring twenty loads per acre of cow manure were spread on the sod and plowed under about six inches deep. The land was harrowed and the rows made about three and a half feet apart, one-half ton per acre of Cumberland super-phosphate was sown in the furrows and covered with the brush harrow. Seed was sown May 31, by machine, using three-quarters

lb. of Brunswick cabbage seed per acre. The plants were thinned so as to stand one foot and a half apart in the rows. The piece was hoed by hand twice ; the cultivator used often until the heads were formed. The soil is a dark shallow loam resting upon a stony sub-soil ; no manure had been applied while in grass. There are now on the half acre 4,320 cabbages of good size, and very solid, fit for market. One row cut just as they stood, weighed an average of ten lbs. each. Scarcely a soft head can be found on the piece. There are a few cracked ones that are not counted.

I make the cost of the crop per acre as follows, viz.

Plowing and preparing land,	\$8 00
Seed and sowing,	3 00
Cultivating and hoeing,	16 00
$\frac{1}{2}$ ton fertilizer,	17 00
20 loads manure spread on land,	50 00
	<hr/>
	\$94 00

which makes the cabbages cost nearly one and one-tenth cents each.

Respectfully,

DANIEL CARLETON.

No. Andover, Oct. 10, 1890.

To the Committee on Root Crops.

The crop of cabbages which I enter for premium was raised on land that onions had been grown on the two preceding years. The soil is a dark loam with gravelly sub-soil, ploughed in the spring six inches deep, stable manure applied with Kemp spreader by going over it twice at the rate of eight to ten cords to the acre, cut in with wheel harrow, smoothed off with drag, seed put in the 14th of June with Mathews' seed sower, three feet, two inches apart, thinned down from 16 to 24 inches apart, cultivated twice

and hoed once. The piece is twenty-two rods long and six rods and two feet wide, contains thirty-one rows of an average of one hundred and ninety-five solid heads to a row, making over six thousand heads to the piece, although the committee made it more than that. The value of the crop in the field at present prices is four cts. per head, although they are of much more value to me as I use them for seed.

COST OF CROP.

Cost of manure on land,	\$40 00
Ploughing,	3 00
Wheel harrowing and dragging,	2 00
Cultivating, hoeing and thinning,	8 00
Seed,	3 00
Rent of land,	10 00
	<hr/>
	\$66 00

DAVID WARREN.

Swampscott, Oct. 29, 1890.

SWAMPSCOTT, Oct. 23, 1890.

This certifies that a piece of land measured by me contained one hundred and thirty-four rods of cabbage raised by David Warren, of Swampscott.

ALLEN ROWE.

ANDOVER, Mass., Oct. 30, 1890.

To the Committee on Root Crops.

The land occupied by the crop of parsnips which I enter for premium, is a light loam with gravelly subsoil.

The crop of 1888 was onions with barn manure at the rate of six cords per acre; the crop of 1889 was onions with same amount of manure as year previous.

The land was plowed in the fall of 1889, ten inches deep, and barn manure, six cords per acre, spread on and harrowed in. Cross plowed in the spring and five hundred lbs. of phosphate sowed on and brushed in, raked once and sowed on the 25th of April with three lbs. of improved Maltese parsnip seed.

Not wishing to harvest the whole crop at the present time, as it is in good growing condition, I have selected five rows each side of the piece measured and weighed fifty-five lbs. to bushel and the yield was at the rate of two hundred and fifty-nine bushels on the one-half acre.

COST OF CROP.

Preparation of land,	\$3 75
Manure three cords, \$6 per cord,	18 00
500 Phosphate,	\$8 50
Hoeing, weeding and thinning,	20 50
Seed and sowing,	2 35
Harvesting,	10 00
	<hr/>
	\$63 10
To 259 bushels at 90 cts. per bushel,	233 10
	63 10
	<hr/>
Yield per acre 518 bushels,	170 00
Cost per acre,	\$126 20
Profit per acre,	340 00

Respectfully,

C. C. BLUNT.

ANDOVER, Mass., Oct. 27, '90.

This certifies that I have this day measured a tract of land, having on it a crop of parsnips, owned by Chas. C. Blunt, of Andover, and entered by him for the Essex Agricultural Society's premium, and that such tract contained eighty rods of land.

SAMUEL THAYER.

ANDOVER, Mass., Oct. 30, '90.

Having measured a portion of the parsnips on the above piece, the yield is at the rate of two hundred and fifty-nine bushels per half acre, and fifty-five pounds to the bushel.

SAMUEL THAYER.

TREES AND TREE CULTURE ON THE FARM OF MR. FRANCIS H. APPLETON.

In behalf of the Committee on Forest Trees who visited the farm of Mr. Francis H. Appleton,* and at the request of the Secretary of the Essex Agricultural Society, the following report is respectfully presented :—

In response to a kind invitation of Mr. Francis H. Appleton to visit his farm in West Peabody, near Lynnfield, in connection with the official visit of the society's committee on forest trees, several gentlemen met at the appointed hour on Wednesday, July 2, 1890, and examined the trees, both native and introduced in nearly every portion of the estate.

The farm is situated on the northern shore of Sautaug Lake, Lynnfield P. O. and, as will be seen by Mr. Appleton's statement, the land upon which the improvements have been made, scarcely more than twenty years ago was a bleak field "covered with mossy corn hills" of unknown origin and was largely in the condition of all exhausted and neglected lands.

The soil in this portion of the farm, gravel covered with a thin coating of loam, familiar in the neighborhood of "kames" in Essex county, is typical of the region and was probably the last work of the ice and rushing waters at the close of the glacial epoch.

*It should be stated that Mr. Appleton made no entry in competition for the society's prizes.

Mr. Appleton built his house at a point where a good view of the lake could be obtained and the tree planting was begun; a nursery having been established in 1869 which to a great extent formed the basis of supply for his work afterwards.

To fill this nursery it was necessary to import the entire stock from England for at that time there were no dealers in this country from whom such supplies could be obtained. To day, however, seedling and older trees of all varieties may be obtained in this country from special dealers and growers, while from our own nurserymen in Essex county and its neighborhood the finest selected home grown specimens of most varieties of trees for ornamental planting may be obtained as, also, larger supplies of the most used sorts for windbreaks, hedges and small plantations. These facts illustrate the advance which has been made in the past twenty years in this direction.

Trees were planted in groups and singly on the borders of the avenue leading to the house, in suitable positions about it and on the lawn, and towards the north quite thickly to serve as a windbreak: more trees being planted than were to remain, to provide against accident and for mutual protection.

The trees used were "Norway, black and white spruce, Austrian, Scotch, red and white pine, hemlock, larch (European), several kinds of maple (rock, white and negundo), English and American elm, ash, mountain ash, acacia (honey locust), virgilia, catalpa, willow (*salix alba*), tulip, European beech and American chestnut." Some shrubs and woody vines were also planted and a few horse chestnuts; these latter did not flourish and have been removed.

From the variety of the trees used and the character of the soil of the farm, valuable practical knowledge is to be obtained from Mr. Appleton's experience which will be of great assistance to tree planters over a large portion of Essex county, especially upon lands which are not likely to prove of value for other purposes. It should be remem-

bered that all of the evergreen trees planted in 1869 were but about ten inches in height, and that the deciduous trees resembled a short alpine stock. The white pines have from time to time been taken from the place, and other trees have since the date of the first planting been added from American nurseries.

The Norway spruces have grown well retaining, as yet, all of their foliage to the ground when planted singly, one specimen having a trunk circumference of three feet and one inch at three feet from the ground and being twenty-seven feet high. These trees have not, of course, reached the age of failure which in most cases comes in our climate at forty or fifty years, the time when the greatest perfection is to be desired. The few white spruces planted show evidences of superiority and this will doubtless prove a valuable species for the soil.

The Austrian pine fails earlier than the Norway spruce, often dying unexpectedly when not over twenty-five years old, and the Scotch pine is not so thrifty in our climate as either of the native species. Nearly all of the trees of these two species of pine have failed to give satisfaction and are to be removed in the course of thinning or are to be replaced by more valuable trees.

The red pines on the place are chiefly the seedlings of a tree, perhaps fifty years old, on the adjoining estate and, judging from the appearance of the older tree and that of another of the same species planted by the late Gen. Newhall on the opposite shore of the lake, they will never prove so valuable in this soil as the white pine when planted singly, although in small plantations they may be quite successful, certainly more so than most of the foreign evergreens. The young trees, however, look well and most of them are holding their foliage well down to the ground. The native red pines of our neighborhood at Boxford and at New Castle, N. H., are found on the schist ledges and it may be naturally doubted, therefore, if this species ever flourishes at its best in gravelly soil.

The European larches upon the place are the remains of an acre of these trees planted in 1879, but of the original plantation scarcely one-fifth of the trees have survived and those which have, although in many cases they have reached a height of twenty feet, present a poor appearance, having suffered from the attacks of insects and disease. It is evident that this tree will never, in our soil and climate, fulfil the expectations which were entertained when it was recommended for general planting rather more than ten years ago, but the experiments with it, although unsuccessful, possess the negative value of teaching us what to avoid in this direction. That this tree flourishes in some poor soils in Europe may be due to the moister climate and it is to be very much doubted if it ever is generally used in New England excepting as an ornamental tree in situations where soil and moisture are favorable. Trees of this species planted in Wenham by Timothy Pickering in the early part of this century are still living, but they are evidently failing and can not endure many years longer.

As might naturally be expected so gross a feeder as the American elm shows evidence of starvation in the gravelly soil, yet one tree of this species near the house has done very well, reaching a height of twenty-five feet with a trunk circumference of two feet, nine inches, at four feet from the ground. The English elms planted have more dense heads and fuller foliage than their American relatives and give promise of longer life and better growth. One of these trees has a trunk circumference of two feet, seven inches, at four feet from the ground, and another of three feet, four inches, at the same height.

The catalpas have grown very well but the tendency to form wide spreading heads with heavy branches renders them particularly liable to injury in high winds, and therefore they require too much care in constant pruning to make them desirable excepting as occasional ornamental trees.

The virgilia, mountain ash, negundo, acacia (honey

locust), and horse chestnut have not proved adapted to the soil and can not, therefore, be recommended for similar situations. The European beech has grown fairly well but, judging from the trees of the American species growing naturally near the borders of the pond, the native beech would soon outstrip the foreign tree in growth. The American ash does not succeed as it might be hoped this valuable tree would; those planted have a meagre appearance far from satisfactory in an ornamental plantation.

Both the rock and the white maples have proved decidedly successful, making fine growth and producing ample heads. The trees planted near the house and stable, both on account of the protection received and the occasional waterings and enrichment of the soil, have of course made the greatest growth. Of the white maples, one has a trunk circumference of two feet, nine and one-half inches, and another three feet, three inches at four feet from the ground, while both have reached a height of twenty-five feet and are of graceful habit and symmetrical form. Among the rock maples one is two feet, three and one-half inches and another three feet, one inch in circumference at four feet from the ground, and together with a tree near the stable have reached a height of at least twenty-five feet. All have fine heads and are free from the attacks of fungi or insects.

One of the most promising species among the trees planted is the American chestnut. One of the trees first planted has a trunk circumference of two feet and a height of twenty-five feet, while the spread of the branches is twenty-six feet in diameter, and a dozen trees grown from seeds selected by Mr. T. C. Thurlow of West Newbury and planted out in 1882, when about seven feet high, are now fruiting well, forming solid heads of clean, dark foliage and showing evidence of enduring usefulness.

The white willows planted in one of the hollows show their usual adaptability to our soils and climate, and if the single specimen of tulip tree not far from the house may be taken as a fair test, this species can most certainly be recommended for planting in similar places.

Mr. Appleton has planted his trees with much care as regards the preparation of the soil, mulching and watering them when required, especially those with short roots and all which were intended to occupy permanent places.

Among the trees indigenous to the farm are the beech, tupelo, white and pitch pines, red cedar, locust, red, white and black oaks, hickories and some others. All of these species with the possible exception of the pitch pine seem to be of good quality, and some of the white pines, oaks and hickories are above the average of such species in the neighborhood.

Much benefit has been derived from the thinning and pruning of the natural wood practised during the years Mr. Appleton has occupied the farm, both as regards the appearance of the trees individually and the general effect on the forest growth. In one portion of these woods, where the trees reach a height, perhaps of forty or fifty feet, where there are few lower branches to obstruct the view, and a carpet of large ferns (*Osmunda cinnamomea*) covers the whole ground, the work has been so well done that the spot would be the envy of any park commission.

Large numbers of seedling trees of the white pine and oaks spring up in the woods and from this source all of the pines planted have been obtained; some hemlocks also indigenous have been moved to other portions of the place where they appear to succeed well.

One of the greatest difficulties encountered is to prevent the ravages of the insect enemies of the trees. The leaders of the pines and spruces are often killed and occasionally a tree of considerable size is destroyed. To remedy this evil, Mr. Appleton suggests that too much can not be said in favor of the protection of our native insectivorous birds which are not multiplying in the ratio with which tree planting is increasing. Aside from their native enemies in the remoter districts, in the neighborhood of farms, the domestic cats, with their numerous half wild barn and stable progeny, destroy such numbers of young birds every

year that the increase is checked and the birds which would naturally nest in the vicinity of houses, are driven to other places of safety.

On the fifteen acre space termed "the house lot" the trees have become of ample size for shade and are gradually reaching the condition of complete protection against the searching winds which at certain seasons of the year sweep over the region, and it is now Mr. Appleton's intention, beginning with the opening of the next spring, to experiment farther "by planting some of the choicer kinds of trees, etc."

The committee also visited the estate of Mr. Henry Saltonstall in response to a special invitation received through Mr. Appleton, and as the conditions of soil and situation are precisely like those of the estate reported on which it joins on the eastward, and as Mr. Saltonstall's place has been brought to its present state of beauty by an entirely different treatment, necessitated by the difference in the original condition of the land, reference to it seems desirable as illustrating another method of improvement of our county lands.

The estate, some two or more generations ago, was probably cut over and a sucker growth of oaks together with young hickories and some other trees sprung up to succeed the original timber. To-day the house is in the centre of a park like group of trees where ample openings give free access for air and glimpses of the lake and enough sunlight is admitted to produce the greenest of turf which extends to the verandas of the house itself.

By a wise policy Mr. Saltonstall has become owner of the wooded slope of the opposite lake shore and the picturesque and heavily wooded island which makes up the middle ground of the picture. No landscape architect has ever been employed—none could add a single improvement—and the result is a retired, restful, yet perfectly cheerful country home and illustrates the very best method of treatment of land already covered with a natural growth of trees where

the axe rather than the spade must be employed in its improvement.

Mr. Saltonstall has treated the roadsides near his house, and also those of the neighboring turnpike upon which this by-road opens, in the same park like manner and with the most satisfactory results, by thinning out the natural growth and adding, here and there, maples, pines and other trees and shrubs, the last chiefly laurels and rhododendrons, to complete the desired effect.

A glance at Mr. Saltonstall's place and the well-planted estate of Mr. D. P. Ives which is next it on the border of the pond, will prove at once the permanent superiority of the white pine for this soil, for the older trees here are in the finest condition and promise to last for ages to come.

In conclusion : The lessons to be drawn from Mr. Appleton's labors ought to be of the greatest interest to all of the residents of the rural districts of Essex County. There is much land in most of the towns in Essex County and in many cases quite as pleasantly situated as Mr. Appleton's farm, where farming cannot be carried on with profit but where, owing to the same reason, the gravelly soil, the most perfect drainage and other desirable conditions for establishing country homes are secured. The tendency, perhaps inherent in our blood and cropping out as easier circumstances remove each generation, more and more from the struggle for existence, to seek country homes and to spend an ever increasing portion of each year upon them, is a growing one and no county in New England can offer more advantages than Essex County can to induce this class of settlers to locate within its territory.

Good air, good water, absolute freedom from malaria, good driving roads and a network of railroads making the business centres easily and quickly reached from almost any point, together with a prudent management in public affairs, with good schools and fine libraries in many places, renders the rural districts of Essex County the most desirable and delightful place of residence anywhere to be found.

The committee are of the opinion, therefore, that the experiments conducted by Mr. Appleton attended by such good results, are of great practical value; they show how much may be accomplished under quite unfavorable conditions; they show that certain trees may be planted with successful results and that certain others should be avoided in a particular soil and situation and they point out what may be done with a certain class of unprofitable farming lands—they may become beautiful and healthful homes.

Recommendation: The committee would, in accordance with the views expressed above, respectfully recommend that the Society's First Class Certificate of Merit be awarded to Mr. Francis H. Appleton for his instructive and successful experiments in tree planting and caring for the natural growth of trees on his farm in Lynnfield.

In behalf of the Committee,

JOHN ROBINSON.

SALEM, Sept., 1890.

STATEMENT OF FRANCIS H. APPLETON OF PEABODY,
TO COMMITTEE ON "FOREST TREES."

Although appointed Chairman of said Committee by the Trustees during my enforced absence from their June meeting, I invited the Committee, with a few guests whom I knew would be interested, to meet at my home and view my plantings of trees on July 2nd, when I thought the trees could be seen at their best. I was aware that it was at a time when haying was attracting the attention and efforts of the farmers generally, but, having cut all but my young timothy at that date, I ventured to extend said invitation for the reason given.

I was fortunate in having several present who were experts in trees and their planting, but regret that the majority were unable to be present.

Mr. John Robinson, of Salem, having been selected to make some report to the Society by my guests, and he having also been since then authorized to do so by our Secretary, I submit this statement through him.

Two years previous to my farm receiving the prize from the "Committee on Farms" (In 1872, I think), the tract of land over which my trees were planted was covered with mossy corn hills, which may have been left by the Indians for aught I can learn. I ploughed and planted it for two years, and then, my married life having begun, I chose it for my house-lot, and my tree planting began.

The situation is on the north side (centre) of Suntaug Lake, on the south-east border of which was located "Camp Schouler" with four regiments of Infantry during the early part of the Civil War.

This portion of my farm was the south-east part of an open collection of fields which are about forty-four acres in extent, bordered by pine and oak woods on the east, north and west; and towards the Lake, at the south, are a fringe of oaks and pines for little more than half the border.

It will thus be seen that this treeless and houseless plain needed much patience and perseverance to establish enough trees to form a protection of pleasing appearance, that would be both useful and enjoyable as a New England home, and afford a break to prevalent winds.

No other landscape architect has been employed than the present owner, against whom all faults and credits must be cast.

The original plotting of the land has been but slightly changed, although new roads have been laid out and more or less planting has been done yearly, either to replace those trees or shrubs which had been winter-killed or otherwise died or to enlarge the spaces planted.

A portion of the land has curious depressions and mounds, attributed to glacial action, which are left unconcealed by trees.

A hillside is also included, from which a pitch pine grove

was cut down in 1871, and where I have done much pruning, and thinning, to train the young oaks, hickories, white pines, etc., besides planting some Norway spruces and elms, the former having risen from ten inches to about twenty-four feet during my keeping.

My water supply is by wind-mill, or steam-pump, the latter seldom used.

So much for my location, and now a few words about my trees.

In the spring of 1869 I received from Waterer's nursery in England, a large number of foreign and American trees, mostly the former. These were small, the pines not over ten inches or one foot tall, and others of equal ages.

To-day were I to seek a similar lot of trees I should be able to secure them in this country, and of greater variety.

These were planted in a well located nursery until needed, and have been the basis of my plantation.

Since then Messrs. Douglas, Thurlow, Manning, Strong, and others have supplied my wants.

A few specimens that I brought home by train in my hand are now even with the top of my house, and affording delightful shade.

In planting I have always set out many more trees than would be eventually allowed to remain, my object being to make the young trees protect each other, and to remove the less desirable ones so that the others should not be injured by their contact. A considerable amount of pruning has been necessary, as well as much care to early remove worms that attack the leaders of some of the pines.

I should say that in the tract now referred to my object is to eventually have what might be termed park trees, or pleasurable ornamental trees.

Of the planted trees, I have Norway, black and white spruce; Austrian, Scotch, red, and white pine; hemlocks; larch, several kinds of maples, English and American elms, ash, mountain ash, acacia, weeping elm, *Virgilia lutra*, catalpa, willow, tulip, English beech, and American chest-

nut (some from seeds selected by Vice President T. C. Thurlow); also there are a variety of shrubs, privet hedges, grapes, and a few young applications.

A few horse-chestnuts look so poorly; including the variety having that lovely pink flower, that I intend to remove them.

There has been more or less of a nursery of trees on the farm since 1869, but, of all the evergreen trees, the white pine is my favorite for general use, of which there is an ample quantity of seedlings on the place.

The methods of planting have varied with the size of the tree, but it is the rule to dig the hole of ample size and replace the gravel thrown out, with loam taken from some new road bed, where the gravel is placed.

Young trees, with short roots, are mulched with grass, or leaves, and watered when the dryness of the season requires it; or, if mulched in advance, the effect of drought is often prevented, and watering becomes unnecessary.

All trees, especially those that are to remain as fixtures and not serving as protection to the others, are benefitted by judicious pruning. A little book, translated, and issued by the Mass. Society for Promoting Agriculture is a useful hand book on Pruning (by Des Care).

While it has been a great pleasure to see my planted trees grow and to aid them by pruning, it has also given me much satisfaction to see the improvements in natural plantations where I have trimmed, thinned and otherwise pruned them.

I have also to report a plantation of about four hundred and fifty trees set out last spring, mostly pines of several kinds, on the north side of my farm road, and the strip of larch trees adjoining them which were set out about 1876.

Several thousand (perhaps twenty thousand) trees have been set by me with the intention of securing fine and well shaped specimens.

As I stated to my visitors, I have now enough trees of sufficient size, on my house lot of fifteen to twenty acres to consider that I am sufficiently protected from the winds that have swept over my fields in winter, to commence planting

some of the choicer kinds of trees etc., which I shall begin to do next spring.

Respectfully submitted,

FRANCIS H. APPLETON.

To Mr. John Robinson,
Salem.

COMMITTEE ON FOREST TREES.

In response to a notice, duly received from the Secretary of the Society, for this Committee to view a plantation of white pine trees over three years old, entered for the Society's prize of \$20 by Mrs. Anna T. Phillips, of Morain Farm, North Beverly, the Chairman requested the members to meet there on Tuesday morning, Sept. 30th.

The members of the Society who were present are unanimously in favor of awarding the prize of \$20 to Mrs. Phillips, for her successful and instructive efforts and results in improving and beautifying an otherwise almost useless piece of land, by planting it with that native evergreen tree, the white pine (*pinus strobus*), whose value for ornamental planting is already high, and whose value for timber is constantly being enhanced on account of its increasing scarcity in the nation.

It is customary for the Committee to give some account of their visits, and, in conformity to that custom, the following is submitted in addition to the statements concerning the plantation more immediately under consideration.

Four members of the Society were present, and were driven from the station through the pleasant streets of that northerly section of Beverly, which is remarkable for, among other things, its world-renowned Wenham Lake — on the northerly shore of which is Mrs. Phillips' farm.

It was from this lake, in the more prosperous days of the ice-exporting business that ice was shipped to many parts of the world and sold as *Wenham ice*. This lake is also re-

markable for the purity and quantity of its water-supply, for which it is drawn upon by two pumping stations, for Beverly and Salem respectively. Two fort-like structures, resting conspicuously on neighboring hills, near by, form ample reservoirs, and it is from one of these that Morain Farm is supplied.

We soon arrived at the substantial main entrance, beautifully covered with hardy vines, passing alongside of a rich looking field, where the pure-blood Jersey cattle and the Cotswald sheep were herded for the inspection of your Committee. They were fine specimens and were admired by those present. The cows showed evidence that they had been bred with reference to promoting their milk-yield and health.

The barn, with its convenient arrangements, was next inspected. No posts or stanchions were used in tying the cows, collars and chains taking their place, and thus affording an unobstructed view of the animals, and less opportunity for dust, or germs of any possible disease to gain a resting place.

A watering-trough extended in front of the feeding boxes of the cows.

On the opposite side of the drive-way is the bull-pen, with a fine animal in it whose pedigree contains Rioter, Stoke Pogis, Eurotas and other well-known strains of milk and butter stock.

Completing the row on this side are box-stalls where horses are wintered.

A room is provided near the entrance, where the milk is separated from any possible odors of the barn as soon as the milk-pails are filled; and opposite this room is the herdsman's room with his sleeping apartment above.

One of our number, a botanist, spoke in words of praise of the pure condition of the hay that filled the mows. I wonder if it is generally known that in England grass seeds are sold "guaranteed pure" and free from *ergot* and *adder*. I find this in the Royal Society's report, where it recommends that grass seed be bought unmixed.

Near this cow-barn is the commodious farm-house, with its accompanying buildings, and the older barn which is used on the main floor for team-horses, implements and vehicles, with the hay above.

Here we were met by Mrs. Phillips who accompanied the party during their inspection of the competing plantation, and gave them the necessary information in regard to the previous condition of the grounds, its planting, and the cultivation and care bestowed upon the trees since.

It is difficult for Mrs. Phillips to give from record a statement of every fact in regard to the plantation as the trees were "not set out with any idea of entering them for premiums," but she has answered the questions, which the Chairman sent to her, quite fully and clearly.

It must be remembered that there were three plantings, each of which is referred to separately.

Ten year old trees: — Were bought in 1883 of Mr Robert Douglass, Waukegan, Ill.; were three years old when they came, and were then planted out in a nursery. In 1886 they were transplanted to their present location.

Immediately before planting the land had been in grass for one year. Previous to that time grain had been raised on it for a couple of years.

It was ploughed in the fall of 1885 and harrowed, and the trees were set out the following May, four feet apart each way. The soil, poor and gravelly, was cultivated between the trees by horse power twice in the season, and weeds pulled twice by hand.

Mrs. Phillips cannot state just how many had been planted out, as many have been transplanted to different parts of the place, but none of them have died. Perhaps fifteen thousand.

Six and seven year old trees: — Were ordered from the same Mr. Douglass in 1886 to the number of fourteen thousand white pines. They were a long time on the way, owing to being sent by freight instead of by express; which may be the reason that nearly one-half died, which were replaced the following year.

During this second year besides the replacing, about twelve thousand trees were added to the plantation.

A few measurements were taken among this lot of trees and it was found that one tree, about seven and a half years old had grown four feet four inches in the past eighteen months, on a south west slope, in an especially gravelly part of the field; and others showed about the same growth, with five and a fourth inches circumference just above the ground.

Another tree six feet four inches tall, six and one fourth inches circumference near the ground, had made a growth of four feet and six inches in the past two years.

Five year old trees : — Were probably two years old when sent, and, consequently, will not be five years old till next spring. Perhaps five out of a hundred have died, and about twenty-four thousand were planted. Mrs. Phillips said the roots of these trees were poor when received, but they appeared to have done well.

This lot has not been cultivated at all, but the weeds have been moved twice in the season, and are reported to have done as well as the others which were kept cultivated.

No pruning has been done in either of the three lots, except to cut off false leaders, and remove many leaders which have been destroyed by borers.

No mulching has been done.

Here we have an example of how an otherwise unprofitable piece of land, like much else that exists in this State, and elsewhere, composed of true morain formation, can be reclaimed to the benefit of its owner.

Beyond the enhanced value of the land on which these trees are growing, where they appear to have found good and sufficient nourishment, the adjacent land is improved by the beauty of, and protection from winds to be soon afforded by this prospective grove, which is now well advanced and quickly increasing in size.

Besides being an example to individuals who can see

it, by which they can learn that unprofitable lands, even very poor ones, have been and can be successfully treated, and how it is done, this work also shows, for the benefit of our State Board of Agriculture, one of the directions in which their efforts can be turned by endeavoring to promote the improvement of a large part of the surface of the State which is now unprofitable and treeless.

While Mrs. Phillips found that small seedling trees suited her purposes, and on gravelly land have proved most successful, examples of planting unprofitable tracts from seed can also be cited which have proved a success, and can be advocated.

In support of which latter, the writer can say that he visited, the past summer, a plantation of Pines (*Pinus rigida*) on Martha's Vineyard, at Edgartown, successfully planted from seed on poor sandy soil by a prominent citizen of that town. He removed the soil with his boot, dropped the seed, covered it and lightly pressed it down with his foot.

The trees appeared to be doing well. Much more land of equal uselessness, within our State limits, could be similarly treated and with equal chance of success.

The results of Mrs. Phillips' experience can be made a useful example to the state by submitting it to the State Board of Agriculture through the medium of our transactions, in accordance with Chapter 114, Section 5, if our officers see fit to mark such paragraphs as contain statements in regard to them.

Where seedling trees are thought more desirable, they can be raised easily at home in the manner recommended by Mrs. Jackson Dawson, of the Arnold Arboretum, in an admirable essay delivered before the Massachusetts Horticultural Society, at Boston, in 1885; which directions can always be learned by consulting that Society's published Transactions.

After completing their inspection of the plantation your representatives were invited to inspect a woodland road

which had been built, extending about one mile, along the wooded shores of Wenham lake and winding inland so as to return to the starting point.

It was a delightful walk, with the trees at either side joining their branches overhead, or being judiciously pruned and thinned so as to improve their condition and growth, and to open up views and vistas having the water and shores of the lake, or fine specimens of trees as objective features.

The road passes several especially fine old oaks, which are worthy of mention for their graceful beauty, and finally skirts alongside of a part of the sheep pasture, which is soon to be ploughed up, as the sheep are to be sold.

What a pity it is that an animal, which might be of so much value to the country as the sheep, is so frequently abandoned, or the thought of raising them never reaches a reality, on account of difficulties existing, or to be encountered.

The residence is commandingly situated over-looking the lake: plants and shrubbery are artistically placed around the house and about the grounds, with particularly fine specimens of ampelopsis on the yard walls, and shed adjoining.

Many trees, including many that are rare, and many that are more commonly known, are found planted about the grounds and growing well, but time was too short to view them carefully.

The Society is surely favored by being able to report these experiences in its Transactions, and the visitors are indebted to Mrs. Phillips for her kind reception.

Respectfully submitted,

FRANCIS H. APPLETON,

Chairman.

REPORT OF COMMITTEE ON STRAWBERRIES AND OTHER SMALL FRUITS.

The Committee on Strawberries and other small fruits regret that they can report but one entry, viz.: Strawberry crop, by J. W. Barton, Asylum Station, Danvers.

The Committee visited the crop and were very much pleased with the appearance of it and the method of cultivation, and award him the first premium of \$10.

Lyman S. Wilkins, Augustus Verry, Chas. P. Savory—*Committee.*

STATEMENT OF J. WEBB BARTON, DANVERS, OF STRAW- BERRY CROP.

Contrary to the usual custom, this crop was grown upon an inverted sod. The land is heavy and had been in grass several years, but was still in good condition.

A careful ploughing (in April, 1889) was followed by a very severe wheel-harrowing. Then twenty-two bushels of ashes were spread and brushed in, and the plants set out about eighteen inches apart, in rows about four feet apart. The varieties were Downing and Crescent, except a few experimental plants of Belmont, Sharpless, and Great American.

Soon after the plants were out witch grass began to appear, and this, with other weeds made much work during the summer, as the amount charged for hoeing will show. In December, about 2500 pounds of meadow hay were put on as covering, and in the spring this was removed and used for bedding. It was necessary to cut out the weeds in the spring and also to cut paths.

After this one third of the bed was sprinkled with Bradley potato manure and the remainder with the contents of the hen coop. The latter contained a good deal of loam put into the coop in the fall and thoroughly worked over by the hens.

The Downing plants were not true to name, containing a large percentage of what seemed to be accidental seedlings. The quality of the crop was thus injured somewhat, but I think the amount was increased. A few boxes were picked June 17th, and the last upon July 9th.

The value of the hen manure is necessarily estimated, as also that of the hay removed. The picking is mostly at two cents per quart. Plants were sold to the value of \$4.25. The cost of marketing and rental of land is not taken into consideration. The area of the land is 20,750 square feet.

2035 qts. strawberries at average price, 12 1-10 cents.		\$246 39
Ploughing,	\$4 25	
Harrowing and leveling,	5 08	
Setting plants,	4 13	
Cost of plants,	8 00	
Cultivating and hoeing in 1889,	20 00	
“ “ “ 1890,	7 95	
2500 lbs. hay at \$9 per ton, less 1000 lbs. removed,	6 75	
Labor on hay,	3 42	
22 bushels ashes,	7 26	
Hen manure and labor on same,	12 00	
150 lbs. Bradley's potato manure,	3 00	
Picking,	44 75	
	<hr/>	126 59
Net profit on crop (20,750 sq. ft.),		<hr/> \$119 80

RATE PER ACRE.

Product, 4269 quarts,	\$517 06
Cost,	265 72
	<hr/>
Net profit,	\$251 34 per acre.

J. W. BARTON.

ASYLUM STATION, Mass., Aug. 28th, 1890.

I measured the strawberry land J. W. Barton offered for premium. It measured twenty thousand seven hundred and fifty (20,750) square feet.

ANSEL W. PUTNAM.

REPORT OF COMMITTEE ON GRAIN CROPS.

To the Trustees of the Essex Agricultural Society.

The Committee to whom was entrusted the duty to examine the grain crops entered for the Society's premium have attended to the work assigned them, and report only four entries. The success that has rewarded these representative farmers of Essex County should stimulate a more extended cultivation of grain in the East.

The entries are as follows:

Wheat crop by Oscar Gowen, West Newbury.

Rye crop by Maurice H. Connor, West Newbury.

Rye crop by Wm. Little, Newbury.

Corn crop by Chas. W. Nelson, Georgetown.

At this point your committee wish to emphasize that rule of the Society, which calls for "all calculations and figures given in report of and statements of crops, are to be made on the basis of an acre, results in all cases to be given at the rate per acre."

You will see by the Committee's note that two of the statements are remiss in this. The first to receive the attention of the Committee was the wheat crop, which was visited July 16. At that time it was still standing, with its heavy heads drooping, as it waved in the breeze; a rare sight it was to view in this country such a crop, which makes the "Staff of life." We see by Mr. Gowen's statement that it was a large yield, exceeding even the crops of Dr. Lawes on English soils where he experimented for a series of years on heavily fertilized fields to see how large crops could be grown.

Certainly there is hope of profit as well as pleasure in the cultivation of wheat in New England.

On the same day we examined M. H. Connor's crop of rye; being raised on an old strawberry field, which had been highly fertilized, accounts for the large growth of straw which he reports, some of the stalks, which were not much above the average, measured six and one half feet, with heads six inches in length.

Mr. Connor is a very successful farmer, who purchased a run out but naturally a good farm, which in the few years he has occupied it he has brought up to a high state of cultivation, raising as some of his specialties, onions, cabbages and strawberries. He reports his crop of the latter to be rising eight thousand boxes, the past season.

Our next call was at the farm of Wm. Little of Newbury this gentleman and his vocation are well known to the society judging from his large and fine annual exhibits at the fair. Being familiar with his reports of crops as published in the Transactions of the Society we expected to see a fine field of grain, and in this we were not disappointed, although we would have preferred to have seen it before it was cut and stooked. We see by both Mr. Connor's and Mr. Little's report that the grain alone barely pays the expense of the crop, but that the profit lies in the value of the straw which, in Mr. Connor's case, is more than double that of the grain. This is the one point where the Eastern farmer has the advantage in raising grain over the Western, who realizes no value from the straw.

The only field of corn which was entered, was that of Chas. W. Nelson, which the Committee saw Sept. 26; this was an exceptionally fine crop with rows running each way, and very clear from weeds. The variety he cultivates is one he has been improving for the past few years by mixing two or more of the best strains in cultivation, and which he now claims to be one of the best varieties, if not *the* best to raise.

In this case the Committee allowed Mr. Nelson to stake

off five rods and estimate the crop on that basis. The piece was so even that we did not attempt to select the portion of the field for him to estimate the quantity of his crop from; and we believe he reports rather under than over his entire yield.

It has been stated many times at our Institute meetings that the value of the fodder of a corn crop paid the expenses of cultivation. As Mr. Nelson has left that item entirely out of his statement, the expense of his crop is nearly equal to its value.

According to the Sept. report of the State Board of Agriculture, it is estimated that the corn crop of the state for 1889 yielded 1,997,000 bushels against 1,950,000 bushels in 1869. By this we see that this valuable crop has been but slightly increased in twenty years; your committee believe that we should raise more corn and that it can be done at a profit as large in the East as in the West.

The writer has the past season harvested from one hundred and twelve rods, ninety-seven bushel baskets of sound corn, this on land which does not produce on an average one-half ton of hay per acre. Stockbridge fertilizer at the rate of half ton per acre was all the manure used, about one-third in the hill at the time of planting, the balance cultivated in at the last hoeing.

We believe that with the use of these special manures, which involve but little labor in applying, that on light lands we can raise corn at a good profit.

You will notice by our report that we have several times made allusion to the profit of grain-growing in the East as compared with the West; we do this because we sincerely believe that New England should strive to increase its crop of cereals, so that it may not be said that in the next twenty years, as in the past, that we have made no advance in this branch of agriculture.

After fully examining the above crops and the statements thereon, your Committee believe that each are deserving of a premium and therefore recommend to the Trustees the following awards:

To Oscar Gowen, West Newbury, crop of wheat,	
1st premium,	\$10
To Maurice H. Connor, West Newbury, crop of rye,	
1st premium,	\$10
To Wm. Little, Newbury, crop of rye,	
2d premium,	\$ 5
To Charles W. Nelson, Georgetown, crop of corn,	
1st premium,	\$10

All of which we respectfully submit,

B. F. HUNTINGTON,	}	Committee.
D. D. ADAMS,		
H. C. WARE,		

STATEMENT OF WHEAT CROP.

My wheat being in two pieces one of which in 1888 was fruiting strawberries, and one set to strawberries, both fruiting in 1889, one piece was manured with barnyard manure at the rate of four cords to the acre, in the fall of 1889, the other had an application of about three cords to the acre, and sowed to white winter wheat and grass seed. One piece of land is a heavy dark loam with a clay subsoil, the other a light gravelly soil; the land was ploughed seven inches deep.

Cost of ploughing,	\$ 1 75
Harrowing and seeding,	2 00
Cost of seed,	2 00
Manure,	16 00
	<hr/>
	\$21 75
Less one-half manure for land,	8 00
	<hr/>
	\$13 75

The crop was at the rate of 35 bushels to the acre.

WEST NEWBURY, Oct. 11, 1890.

This certifies that I measured the land on which the wheat grew, entered for a premium by Oscar Gowen, and that it contained one acre and one rod.

WM. MERRILL.

STATEMENT CONCERNING A CROP OF RYE RAISED
BY M. H. CONNOR IN THE TOWN OF
WEST NEWBURY, 1890.

The acre of rye which I enter for premium was grown on land that has been a strawberry bed for the last two years. The soil is a gravelly loam. The old vines were ploughed under about six inches deep in Sept., 1889, and fifteen loads of stable manure harrowed in with a wheel-harrow, then sowed two bushels of rye and harrowed with smoothing harrow. I do not charge anything for ploughing or harrowing as that would be necessary in seeding to grass which was done at the same time.

The rye came up a little too thick which made more straw but not so much grain as there would have been had it not been seeded so heavily.

The crop was cut with a seythe July 20, bundled and stooked and left about two weeks; it was then hauled to the barn as fast as the men could thresh it. The straw and grain was marketed immediately for lack of room and economy in handling. The entire crop was 1932 pounds of rye and 5835 pounds of straw.

Dr.

Two bushels of rye, at .75	\$ 1 50
One-half of the manure, 7 1-2 loads,	
at \$2.00	15 00
Cutting and binding,	5 00
Hauling and threshing,	5 00
Marketing straw,	4 00
	<hr/>
	\$30 50

Cr.

34½ bushels of rye, at .73	\$25 18	
5835 pounds of straw, at \$18 00 a ton,	52 51	
	<hr/>	\$77 69
Expenses per acre,		30 50
		<hr/>
Profits per acre,		\$47 19

I hereby certify that I have measured one acre of ground planted with rye and entered for premium by M. H. Connor, West Newbury.

WM. MERRILL.

I hereby certify that I helped thresh and measure the rye grown on one acre by M. H. Connor, and the above figures are correct.

JOHN F. COUGHLIN.

STATEMENT OF WM. LITTLE'S RYE CROP.

To the Committee on Grain Crops of the Essex Agricultural Society:

The crop of winter rye that I entered for premium grew on one acre and twenty-eight rods of land. Upon it is standing fifty-nine apple trees set out in 1879, and for the ground they occupy no deduction has been made. The soil is a medium loam such as is usually found on dry ledgy land. The crop raised upon it in 1888 was potatoes manured with about six cords of barn-yard manure spread on and ploughed into the acre. The crop of 1889 was also potatoes manured in the same way. After digging the potatoes the land was thoroughly stirred with a disc harrow and five pecks of rye sown, about Sept. 20, to the acre, using no fertilizer for the crop of 1890.

The rye was cradled July 23 and stood in stooks about two weeks when it was put under cover. It was threshed by hand on rainy days in September, and measured Oct. 4th, forty-one bushels and one peck of clean grain, which

would make thirty-five and one-eighth bushels to the acre. Besides this there was about a bushel of Indian grain.

*I think a fair estimate of the cost of the crop would be

Seed,	\$ 1 25
Harrowing and sowing,	4 00
Cradling, stooking and teaming,	10 00
Threshing and winnowing,	10 00
Use of land (low estimate on acc't of trees)	5 00
	<hr/>
	\$30 25

The value of the crop I estimate to be—

41¼ bushels of grain,	\$33 00
1½ tons of straw at \$16	24 00
	<hr/>
	\$57 00

Respectfully submitted,

WILLIAM LITTLE.

I hereby certify that the above statement of the amount of land is correct.

N. W. MOODY.

I hereby certify that the above statement of the amount of crop is correct.

CARLETON LITTLE.

STATEMENT CONCERNING A CROP OF CORN RAISED BY C. W. NELSON, ON TOWN FARM, GEORGETOWN, 1890.

The crop for 1889 was grass. Barnyard manure, seven cords to the acre. Soil a sandy loam. Ploughed once in April six inches deep.

Cost of ploughing, \$1.50 per acre,	\$3 00
Harrowing and marking,	3 00
Planted in checks 3 ft. 10 inches each way.	

*Committee's note.

Cost of crop per acre,	\$25 50
Value of grain and straw per acre,	48 53
	<hr/>
Balance in favor of crop,	\$22 93

Manure spread on furrow and harrowed.	
Value of same on ground at \$5.00 a cord,	70 00
Ames' fertilizer, 500 pounds per acre,	16 00
Planted May 17, by hand, 16 quarts Nelson pro-	
lific corn, cost of seed and planting,	3 00
Cultivated three times, hoed once, cost,	5 00
Shooked last week in Sept., cost of harvesting,	14 00
	<hr/>
Cost of crop per acre,	\$57 00
Amount of crop 80 bushels, 64 pounds per acre.	

REPORT OF THE COMMITTEE ON THE TREADWELL FARM.

The Treadwell farm is now without a tenant. By reason of the non-fulfilment of the conditions of the lease to Mr. J. Plummer it was terminated last March, and the committee entered upon, and took possession of the premises, in behalf of the society.

The farm has since been thoroughly advertised, but on account of the general depressed condition of agriculture, no satisfactory tenant was secured for this year, but an agreement is made to lease it for a term of five years from next April, on satisfactory terms. No attempt was made this season to cultivate hoed crops. Very late in the season the pastures were let to Mr. Chas. J. Peabody at a very low rate, as it seemed necessary to make *some* disposition of it.

Mr. Plummer, the former tenant, wished to do something on account of his indebtedness, and proposed to harvest the hay crop without charge, which he did, and there is now in the barn about thirty tons of hay belonging to the society and is for sale, the proceeds of which, together with the rent of the pastures will make the income of the farm about as much as the rent would have been.

The barns and outbuildings are in good repair, but the house needs shingling and some inside repairs, which will be done before the term of the new lease begins.

No one regrets the apparent neglected appearance of the farm the last season more than the committee, but circumstances beyond their control have operated against their wishes. They endeavored to do all that could be done under the difficulties that surrounded them.

Respectfully submitted,

BENJAMIN P. WARE,

Chairman of Committee.

NEW MEMBERS.

The total number of new members to Nov. 1st, 1890, was twenty, including those who by receiving awards of seven dollars or upwards, became members under the rule which deducts three dollars from such awards to non members for membership, which membership is for life, without assessments, and entitles the member to a voice and vote in the Society's business, and a copy of its annual publication of its transactions. The following furnished the new members:

Amesbury 1,	Danvers 3,
Andover 1,	Lynn 1,
Beverly 5,	Middleton 1,
Boxford 2,	Newbury 4,
Bradford 1,	West Newbury 1.

Respectfully submitted,

JOHN M. DANFORTH,

Secretary Committee.

REPORT OF COMMITTEE ON EXHIBITIONS OF OTHER AGRICULTURAL ORGANIZATIONS IN THE COUNTY.

Invitations were received by members of the committee to visit exhibitions of the Houghton Horticultural Society at Lynn, West Newbury Farmer's Club, the West Peabody Farmer's Club and the Amesbury and Salisbury Agricultural Society.

Exhibitions were also held by the Methuen Grange and North Andover Grange but reports of which, however, have not been received.

The exhibition of the West Newbury Farmer's Club was a grand success in every way. Without going into details, there were fine specimens of horses in the several classes of driving horses, work or farm horses, brood mares with their colts, besides colts of different ages, showing points of good breeding, working oxen, milch cows, bulls and heifers in variety and superior quality.

The hall exhibit was a surprise, especially in apples, pears, quinces, grapes, which for any year would have been creditable, but for this year of scarcity, was certainly remarkable. Flowers were not omitted, several local florists were present with their collections, and contributions from private gardens, were tastefully arranged, adding beauty and fragrance to the hall. The ladies too, were present, with their ornamental and useful handiwork, which showed much taste, skill and industry. There was a fair exhibit of vegetables in variety.

But the great feature of this exhibition of the club as usual, was its social character; everybody was there with their friends, the weather was all that could be wished. The Newburyport Cadet Band heading a procession of 700 strong marched into the spacious tent where tables were spread, sufficient for all and laden with the luxuries and substantials that farmers' wives only can furnish, decorated with the fruits and flowers of the season, and served by the fair daughters of the village. After dinner all gathered around the improvised grand stand located under the shade of trees on the village green, to listen to music by the band, songs from the Newburyport quartet club, and wise, otherwise and humorous speeches of distinguished guests.—B. P. Ware, President of the Essex Agricultural Society, Hon. Warren Brown of N. H., Hon. E. P. Dodge, Mayor of Newburyport, Hon. T. E. Burnham, Mayor of Haverhill, Rev. S. L. Gleason, James P. King, Esq., of Peabody,

Rev. O. S. Butler, of Georgetown, N. D. Dodge, of Newburyport, who were presented by the president of the club, Mr. Samuel Rogers, in a felicitous manner. The crowd of men, women and children for two hours, standing, gave close attention to the remarks of the speakers, promptly responding with applause to any good hit made by them, and the excellent music offered. The festivities were continued in the evening by a promenade concert and dance in the big tent, thus making all happy by this, the seventeenth exhibition of the West Newbury Farmers' Club.

The Houghton Horticultural Society held its annual exhibition at Lynn. This growing and prosperous city is sometimes called the city of gardens, thus affording facilities for a first-class exhibition of the choicest specimens of fruit, more especially pears, which are grown in perfection in these gardens, and their annual exhibitions are remarkable for their excellence, and this year, although a general scarcity prevailed, was no exception to the general rule. Much attention is given to flowers also, but very little to vegetables. Sociability is also encouraged in this society by a banquet given in the evening of the closing day, which is noted for the elegance of the repast, with speaking at the close. This year's experience fully sustained the high character of other years, being under the administration of President Dr. J. W. Goodell.

The Amesbury and Salisbury Agricultural Society, although working under a charter granted by special act of the legislature, may properly be considered as a branch of the Essex Society. It held its annual exhibition Sept. 30 and Oct. 1, F. W. Sargent, Esq., president, which was very satisfactory and creditable to this young and growing society, but inasmuch as a detailed statement is published in its transactions, an extended notice in this report is deemed unnecessary.

The West Peabody Farmers' Club, Mr. G. H. Legro, president, held an exhibition and fair Sept. 17th, and although the weather was unfavorable, it did not prevent a

good attendance of people, and a fine show of vegetables, fruit, flowers and fancy-work; there was also some fine poultry on exhibition. This club is composed of intelligent, wide-awake people who are alive to the interests of agriculture; we think that within the limits of this club there are more small fruits, poultry and eggs produced than in any other section of the county, of equal territory and population, and these being the principal commodities every point is discussed at their winter meetings and taken advantage of and when it comes time for the annual exhibition, the tables are laden with the best specimens of everything, even to the delectable and bounteous dinner that the ladies are so famous for providing.

BENJAMIN P. WARE,

Chairman of Committee.

FARMERS' INSTITUTES.

The Society held six Institutes during the season of 1889-90 on as many days forenoon and afternoon, at which the following subjects were opened by carefully prepared essays, and freely discussed afterwards, viz. —

1. "Is the Present Massachusetts System of Taxation Just and Equitable?"
2. "Highways and their Repairs."
3. "Poultry."
4. "Agricultural and Pomological Products of California."
5. "Stock Feeding in Relation to the Dairy."
6. "Exports and Imports. Their Effects or Influence on the Agriculture of New England."
7. "The Durability of Different Varieties of Timber and its Adaptability to Farmer's Uses."
8. "Experiments in Application of Plant Food."
9. "Reclaiming Wet Meadow Land."
10. "Education of Farmers."

11. "Small Fruits."

12. "Ensilage."

All of which were reported quite fully in the "*Essex County Mercury*" and a copy mailed to each member in the County.

The first Institute of the season and the 67th was held at Methuen, Memorial Hall, Jan. 10, 1890, President Ware presiding; the subject being "*Is the Present Massachusetts System of Taxation Just and Equitable?*"

Owing to the inclement state of the weather and the prevalence of "La Grippe", there was a small attendance present. Sidney C. Bancroft Esq., of Peabody, was to open the discussion, but owing to sickness could not be there, and James P. King opened the subject by stating that he thought the farmers generally were overtaxed, especially if they lived near a village, and if there was a prospective chance of their land ever being wanted for house lots. Mr. King said that if a farmer could sell his land for what it was assessed it was all right to tax it, but he should not be taxed in anticipation of high prices; he believed that the plan that is being agitated for real estate to pay all the taxes would be ruinous to the farmer. While admitting that much of the personal property pays a tax indirectly, he quoted authority to show that not one fourth of the personal property of the state was taxed. If there is any land in Essex County that is worth more than one hundred dollars per acre (except small choice lots on a good street) for farming purposes, the speaker failed to know where it was.

Mr. C. C. Blunt stated that the present system is unjust to the farmer. Farming is retrograding as a business yet everything a farmer owns is in plain sight and is taxed even to his dog and hens.

In all large towns the villages have water and lights for which the farmers have to help pay, and in most instances derive no benefit therefrom.

The general sentiment of the meeting was that under the present laws taxation is ruinous to the farmers and that some legislation should be had in regard to it.

During the discussion a petition was circulated and largely signed stating that the laws of the Commonwealth are inadequate to the proper taxation of personal property, and asking the Legislature to establish a system of direct taxation, so that farm lands that derive little or no benefit from city or town improvements should not be called upon to pay for such.

At the afternoon session the subject "Highways and Repairs" was opened by Mr. Charles C. Blunt of Andover, who considered the present system of Commissioner, far superior to the old one of surveyors of highways, but care should be taken to retain the right man for Commissioner. No public money is more foolishly or improperly wasted than that for repairing high-ways. He believed in the use of drains, and loose rocks on a clay subsoil or springy roads.

Mr. Nathan Bushby of Peabody, considered the subject of roads next to taxation, citing a case of how a muddy springy piece of road was made a good dry piece by the use of small stones put into the road bed and covered, so the water could get through. A great trouble with country roads is they make them too wide and have too much surface to keep in repair.

Mr. G. S. Phippen of Methuen, said that his town voted to have eighty-five per cent. of the money raised for roads expended before the first of July, believing in drains and small stones as the best material to use: he believed the proper way to build a road was to dig out the old road bed, fill in with stones and cover lightly with gravel, crowning the centre. President Ware, Albert Emerson, Chas. W. Mann, and others spoke in the same direction, all believing in drains, small stones, or crushed stone as the best material, and cheapest in the end.

The 68th Institute was held at the Town Hall, Peabody, on Friday, Jan. 31, 1890. Rev. O. S. Butler of Georgetown, was announced to speak at the morning session upon "Poul-

try," but owing to sickness could not be present, and Mr. Thomas C. Durkee of West Peabody, was unexpectedly called upon to take his place, and filled it very well considering he had made no preparation, speaking from an actual and extended experience.

Mr. Durkee stated that he had been in the poultry business about twenty years, and had always kept the light Brahmas, because they are tough, can winter well, stand more ventilation having no comb to freeze; he thought they did not eat any more than Leghorns, especially if they can get plenty of grass. He hatched chickens as early as March and the cockerels are ready for the market early when they bring a good price, he having got as high as thirty-five cents a pound for them. He kept three hundred laying hens and about one hundred chickens through the winter.

This breed averages about eight pounds each when full-grown and he got from three to five cents a dozen more for his eggs than smaller eggs sold for; he thought eggs should be sold by the pound. The speaker did not believe in long coops but thought it better to build them about thirteen feet long, and keep twenty-five hens and two cockerels in a coop; by so doing if disease gets into a flock, they can be isolated and kept under control.

For feed he would give mostly shorts and vegetables in the morning, and corn and oats at night. For chickens he fed rather more meal mixing it into a stiff dough, and believed there were more chickens died by pampering with them than from any other cause. Mr. Perkins of Danvers, spoke in favor of boiled clover for feed, and claimed that for geese if they can have plenty of clover, grass and waste products of the field and garden with a little corn they will thrive and bring two dollars apiece at Christmas.

President Ware, T. C. Thurlow, and others spoke of the effect of turning a flock of hens into an orchard from their own experience and others that they knew, saying that the insects they devoured and the fertilizing of the ground produced astonishing results.

Mr. Hawkes of Saugus, advanced the idea that poultry now and is destined to be a main source of income and fertilizer on the farm ; he believed there was no danger of the poultry business being overdone and cited a case of an extensive poulterer who kept seven thousand or eight thousand hens and made a very profitable thing of it.

At the afternoon session President Ware spoke upon "The Agricultural and Pomological Products of California." To give an idea of the state Mr. Ware said it was three times as large as all New England, and then have enough left to make two states the size of Massachusetts, while its sea-coast stretched as far as from here to Georgia.

He advanced a theory as to the State's wonderful climate. In winter the thermometer rarely reaches freezing and in summer rarely a hundred; the theory concerning the temperature was that the big ocean stream in the Pacific, which corresponds with our Gulf Stream but is much larger, governs the temperature. Everything there is conducted on a large scale, and the great land holdings are typical of the place; some of these great lands were bought for a very small sum of money, one that he cited containing thirty square miles that was bought for twelve hundred dollars near Monterey as late as 1856.

Gen. Bidwell's ranch which he visited consists of twenty-two thousand acres, which is under the most complete cultivation. He has seven thousand acres in orchard, one thousand in wheat, several hundred head of cattle, five hundred horses, six thousand sheep, and raises apricots, prunes, nuts, raisins, etc., One thousand acres are devoted to natural scenery, with immense native oaks, etc.

Most fruit trees come into perfect bearing condition in six years: this ranch is about one hundred miles from Sacramento in Sacramento valley: the owner, however, confesses that the place does not pay expenses, because it is too large.

The schools and educational facilities of the state, except in the sparsely settled portions, the speaker considered as good as in New England.

One large estate the speaker referred to made a specialty of raising "alfalfa," having over twenty thousand acres devoted to that crop. It is excellent feed for horses and some of the land produces ten tons to the acre by cutting five or six times in the season. It is stacked in the fields by machinery.

Riverside is the great orange producing place, and one-half the oranges raised in California are produced here. Twelve years ago there was not a shrub here, now it is covered with orange groves and beautiful ornamental trees.

The land companies sell land for agricultural purposes with water privileges, and an annual tax of from sixty cents to five dollars an acre for irrigation; sometimes this water is brought in open ditches and sometimes in pipes. Lately however, the people are learning to cultivate the ground more and irrigate it less; thus improving the flavor of the fruit and preventing much needless growth of wood.

Southern California was comparatively but little known until the opening of the Santa Fe route and San Diego in that section has one of the finest harbors in the world.

The rolling country about San Diego has proved to be finely adapted to agriculture, has a system of irrigation costing \$200,000 and the previously barren hills have been converted into fine groves. Besides the orange and lemon groves, the olive groves are giving much promise.

The raisin industry centres at Fresno, and is yet in its infancy, though 534,213 boxes were shipped last year. The air here is so dry that raisins are cured out of doors, and the absence of dew aids in this process. The grapes are laid on trays, about twenty-five pounds to each, and are dried in about fifteen days, after which they go through a "Sweating" process, under cover, lasting from ten to twenty days.

All fruit growing requires constant attention and five acres is enough for one man to take care of, the tendency being in favor of smaller holdings.

The immense grain-growing interests of the state were touched upon, and it was stated that twenty-five million

bushels were exported last year besides home consumption. The wheat is threshed, winnowed, stacked and sacked by machinery in the field.

At this point Mr. Ware invited the audience to ask any questions they wished and he would try and answer them.

The opportunity was embraced by many of those present and about an hour was spent in this way, and the general feeling was that it had been a very interesting and instructive meeting.

The 69th Institute was held at West Newbury, at the Town Hall, February 14, 1890. The subject for discussion in the forenoon was "Stock Feeding in relation to the Dairy," opened by Mr. J. Otis Winkley of Newburyport, who said that milk and butter are the principal sources of income to the farmers, and that nothing excelled good stable manure for fertilizing the land and increasing the crops. The most profitable stock for butter was the Jerseys, but for milk he preferred the Ayrshires. The speaker said stock raising in Essex County does not pay financially, but found that the extra cost of raising had well repaid him in the quality and knowledge of the animals compared to those he bought in the market. Different feeds are required for butter and milk production, but the speaker confined himself to a general feed, and a variety for quantity and quality: one part of corn meal mixed with two parts of shorts he had found to be reliable for general purposes, although he recommended Gluten. Cotton seed meal he believed to be injurious, roots were a good relisher and healthful, but do not increase the flow or quality of milk. For forage crops he believed fodder corn to be one of the best and the cheapest and large quantities can be grown at small expense. He did not believe in forcing or over feeding dairy stock as it shortened their usefulness. Regularity in feeding and watering is very important as the stock is more content and yields better profit.

Mr. James P. King of Peabody, referred to the first speaker's use of corn fodder and vigorously defended

the silo, he believed that no man could afford to make milk at $3\frac{1}{2}$ cents per quart without a silo ; the cost of the ensilage is trifling and the increase in manure increases the productiveness of the farm.

Mr. Chas. J. Peabody of Topsfield, spoke of his experience with dry fodder corn ; he had made a practice of raising sweet corn, stripping the ears and curing the fodder by stooking in the field. Cows will eat it all up clean in the winter, and it increases the flow of milk.

Mr. George E. Herrick of Lynnfield, thought it a waste to give a cow all she can eat ; he feeds two or three times a day on hay, and ensilage at night. He has more than doubled his stock within a few years by raising ensilage, and believes in it fully.

At the afternoon session the subject was "Exports and Imports—Their effect or influence on the agriculture of New England." Opened by Mr. George W. Russell of West Newbury, who had evidently given the subject a good deal of careful study, and evidently came out of it a strong protectionist. In his opening remarks he claimed that every dollar's worth of agricultural products that was exported lowers the price to the farmer, and every dollar's worth of manufactured articles imported hurts the farmer's market. A profitable market, and a near one, and a cheap supply of fertilizer, are the great needs of the American farmer. The great want of the producers of agricultural products is consumers of their products, and producers of articles that farmers want to consume. He said, build up the home market by building the fences so high that all foreign products, both agricultural and manufactured, must stay away. Nothing is raw material that has labor or capital applied to it. We have all the material we want for everything and it is free.

Others followed in the discussion, but brought out no new ideas in regard to the subject, as the ground had been pretty well covered.

The 70th Institute was held in the Town Hall, Topsfield, Friday, February 28, 1890.

Subject for discussion in the forenoon—"The Durability of Different Varieties of Timber and its Adaptability to Farmers' Uses," opened by Charles J. Peabody and Baxter P. Pike of Topsfield, in a very interesting and instructive manner. Mr. Peabody quoted largely as his authority, the report of a State Commission to examine into the forestry of Massachusetts as far back as 1837. He divided his subject into four classes—woods for farm buildings, for implements and vehicles, for fences, and for fuel.

The principal building timbers are pine, hemlock and spruce, the latter not abundant in Essex County, and all three of about equal value for building purposes.

The Essex County pine brings from three to seven dollars more per thousand than hemlock, one reason being that hemlock is very much harder to work than pine.

Of woods for farm implements and vehicles we have the white, yellow and other varieties of oak, five varieties of walnut or hickory, and two of maple. These hard woods are very slow in growth and it is said that it takes 150 years for the oak to get its growth.

Timber that is cut from the last of August to the middle of October seasons the best for the reason that the leaves continue to draw the sap from the trees after they are felled.

Most of the speakers who followed took occasion to speak of the durability of hemlock, while all agreed that it was harder to work than pine.

Mr. Edmund Hersey of Hingham, substantially confirmed what Mr. Peabody said for the best and worst time to cut timber, but named August as a good month and said it was not necessary to let the leaves remain on to season the wood. On his soil he found stakes would last one-third longer with the top end in the ground.

He would cut pine for timber of about forty years growth, when it is apt to be from twelve to twenty-four inches in diameter and could see no reason for letting it grow longer.

In the afternoon Mr. Edmund Hersey of Hingham, gave his experience in the application of plant food. Mr. Hersey

made a nice little opening address to the children, the point of which was to urge them to keep their eyes open, study nature and see her plans in what she does. Plants of different species take the same elements from the same soil and yet remain true to their nature and produce their own kind. Up to a certain point plants must have the kind of food they need; they, like animals, may absorb a small amount of poison or injurious substance without apparent detriment, a larger amount and suffer injury without dying, and still more will kill them. Thus the speaker had put salt around a pear tree until it rendered the pear unfit to eat, although a fine looking fruit. The wants of a plant should be studied the same as those of an animal, and it should be fed accordingly. Very little progress was made in this direction for two centuries after the landing of the pilgrims, and about all that has been learned in the last fifty years is an appreciation of our ignorance. The agricultural papers and farmers' institutes are doing much to throw light on dark places.

The chemist tells of what elements the plant is composed, and one might naturally reason from that, that all there is to do then is to feed into the land those elements. This is not so. Clover contains more nitrogen than wheat, but it will not do to feed the soil more nitrogen for clover than for wheat. On the contrary, by some mysterious process clover leaves more nitrogen in the soil than it takes from it. Again, the elements wanted by plants may be plentiful in the soil and yet hard to get at, while in other cases there may be less of the same element in the soil, but in such a form that it is readily obtainable.

The elements of plant food are nitrogen, potash and phosphoric acid. Some soils may be rich in one or two of these and deficient in others; it is the farmer's business to find out just what his land contains and stands in need of, and then to act accordingly. And this fact, and the method of ascertaining it, was the one idea that Mr. Hersey made prominent in his lecture.

To illustrate his experiments Mr. Hersey used two colored charts, in which stripes of red, blue, yellow and white represented stable manure, nitrogen, potash and phosphoric acid respectively. With great care in the application, Mr. Hersey used each fertilizer separately, and each in combination with others in different portions. Those experiments in which the potash predominated showed the poorest results, and those in which phosphoric acid predominated the best; thus showing conclusively that phosphoric acid was what was needed on his farm. But the result would very likely be different on other soils.

Those who are unfamiliar with commercial fertilizers should take what comes nearest to barnyard manures, and no one should use fertilizers until familiar with their nature. When using barnyard manure, the old practice of rotation of crops should be pursued. For his supply of phosphoric acid he used ground bone and South Carolina rock, manufacturing the former and reckoning the expense at \$27 per ton and valuing the latter at \$20 or less. He had good success with the rock, but didn't know how it would work in a dry year. His soil was a sandy loam.

An old wood lot on which the stumps have decomposed makes a rich soil, the acid from the decaying wood apparently decomposing the mineral elements and releasing the plant food from them. A great need on the farms today is to save the wastes, particularly the liquids of manures. He advocated farmers buying the material for and mixing their own fertilizers.

For raising asparagus on his land he had found nothing better than dry bone—a ton to the acre. For potatoes he made a compost of dry muck and superphosphates. For a compost to experiment with he reduced ground bone with acid, and while hot put in unleached ashes to dry it, composting with dry muck. With this fertilizer and at a cost of half a cent a hill, he had produced 667 bushels to the acre. A common mistake is to call all fertilizers superphosphates; *superphosphate* is simply a phosphate that has

been reduced by the addition of other material to a condition to be used for a fertilizer. On land well manured, superphosphates in the hill are good to start potatoes. Hog manure is a good and quick fertilizer for potatoes, and hen manure, mixed with ashes and muck, is good to give corn a start. In dry seasons, he found that commercial fertilizers worked better than barnyard manures.

Mr. J. J. H. Gregory, of Marblehead, endorsed what Mr. Hersey had said about experimenting with fertilizers and the value of such experiments to those who engaged in them. We should avail ourselves of the knowledge of what is tried at the experiment stations, and learn the meaning of the few terms necessary to understand it. We should not only know what the land is naturally, but keep a debit and credit account of what is put on and its status each year. The first crop produced on a virgin soil after wood had been cut from it takes a richness that is never replaced. The decaying wood may give a fertility to the land, but the speaker thought that the shading of the land might have more to do with it, for it is a well established fact that land shaded by trees or covered with boards acquires a peculiar richness of its own.

Mr. B. J. Balch of Topsfield, asked if slips from potato vines, started in greenhouses and then set out, would produce tubers. Mr. Hersey and Mr. Gregory both replied yes, but said the method was too expensive to be of practical utility. In response to another question by Mr. Balch, Mr. Hersey replied that he had never tried commercial fertilizers in solution, or known of their being tried, and should hardly think there would be any advantage in it.

Mr. William Walch of Topsfield, evidently took no stock in fertilizers and didn't think it paid to use them. Mr. Nathan A. Bushby of Peabody, believed with Mr. Walch that barnyard manure must remain the great staple fertilizer, though the commercial article is a good secondary element for starting the vegetables. He did not agree with a statement by Mr. Hersey that fertilizers would do

better than barnyard manures in a dry year. Mr. Ware in general endorsed what Mr. Hersey said and enlarged some of the points he had made.

EXPERIMENTS WITH POTATOES.

Mr. Hersey gave the results of planting large potatoes cut, and small whole potatoes, at a meeting in Topsfield some few years since, and on Friday he gave the summing up of ten years' experiments. In starting the experiment he used equal weights of large and small potatoes, cutting the large into as many pieces as there were small tubers. The product in ten years showed as follows:—

Small Potatoes.

Large, 255 lbs ; small 80 1-4 ; total 335 1-4.

Large Potatoes.

Large, 226 lbs ; small, 90 ; total 316.

This shows a superiority of small uncut potatoes over large ones cut, for planting, both in the total production and the number of marketable ones produced.

After Mr. Hersey concluded, the following letter from Dr. Loring was read by Major David W. Low, Secretary.

LISBON, January 18, 1890.

My Dear Sir: I am happy to comply with your request to present some view of the agriculture of Portugal, to be laid before an institute of the Essex County Agricultural Society during the present winter. I cannot promise to give anything new or perhaps interesting,—but I can at least show my regard for that association with which I have been connected so many years, which was an object of great interest to me in my boyhood, and which has taken the lead in all efforts for the improvement of the great industry which it represents. Before I reached Portugal last July, I was obliged to traverse other European countries, and I am inclined to think the most interesting ac-

count I can give will be one which includes what I saw on my way, as well as what I have seen here. In doing this I shall be obliged to repeat some things I have said elsewhere: but I have no right to suppose all the members of the Essex Agricultural Society know what I have been saying, and then I have the satisfaction of knowing that a good story will always bear repetition.

It was on the morning of June 17th that I first saw the shore of England as I landed at Southampton on my journey hither. The season was most delightful,—the month which the poet calls “the leafy June,”—and the fields and gardens of the old country were a scene of beauty to the traveller, and of agricultural skill and prosperity to the eye of the farmer. I was surprised to find so much well-ordered market gardening as I saw along the railroad from Southampton to London. It is not many years since the cultivation of lands lying near the large cities was first urged upon the English farmer for the purpose of market gardening: and even now the conversion of such lands into sheep-pastures is quite a common occurrence. The first crop of hay was being gathered from fields devoted to grass, and the yield was abundant. But the vegetable growth in fields devoted to potatoes, early cabbages, turnips, kale, carrots, cauliflower, spinach, etc., was most luxuriant, and the cultivation was systematic, clean, and well arranged. Not a weed was to be seen—and so far as I could judge, not a half-starved plant.

The crops looked healthy and luxuriant. I missed our handsome fields of sweet corn which constitute so important a part of the early cropping in Essex County, and I was inclined to look with compassion on a people who did not enjoy the luxury of this vegetable on their tables; and so deep was this compassion that I have ordered a supply of sweet corn for seed to be sent from the Pickman farm, which *I suppose the whole world knows is famous for this crop*, to the Marquis of Ahsa, whose estates are in Scotland and who entertained me on his yacht, the *Titania*, on the

Tagus last summer. This tract of farming land in England reminded me more of the agriculture of Massachusetts than anything else I saw in that country.

When I reached London, I found that the great exhibition of the Royal Agricultural Society,—a great anniversary exhibition,—would take place at Winsor in a few days. Great effort had been made to make this show the most important and impressive ever held in England. And it was. Nearly sixty thousand dollars were offered in premiums, the presence of the queen and the royal family was promised, and the best breeders of horses, cattle, sheep and swine had prepared their prize animals—and a prize animal in England means an animal as near perfection as he can be brought. There were more than four thousand entries—the sheep alone numbering nearly a thousand. The horses were mostly horses bred for draught on the farm, and consisted of Clydesdales, Dien horses, Suffolks, with Cleveland bays for the carriage, and ponies for light driving, but no thoroughbreds or trotters, and no Percherons. The exhibition in the classes of cattle can hardly be described, for a prize short horn or Hereford or Devon in English means a perfection of shape, an accumulation of fat, and a softness in handling which it is hard for us in New England to conceive.

The display of implements of husbandry covered more than fifteen thousand square feet; and while great ingenuity and good mechanical workmanship were displayed, I remembered with great satisfaction the grace and beauty of the American manufacture, especially in ploughs and shovels, rakes and forks, as well as reapers and mowers. I remembered moreover with supreme satisfaction that all these implements are from 25 to 30 per cent. cheaper in the United States than in England. The number of visitors at this exhibition was 175,000, and the queen made repeated visits and took many prizes, as she did also at the Smithfield fat-stock show. The interest felt in London at the time of the exhibition was great.

It took but a few hours to be transported from this agricultural affluence to the less striking, of farming in France. As I travelled by rail from Calais to Paris there was a generally diffused agricultural prosperity, such as is seen in wheat fields and hop yards, and common herds of cattle. The scene indicated thrift and popular welfare, but no application of scientific skill and special cultivation, and so from Paris southward through that historic section of France until you come into the neighborhood of Bordeaux, where the vineyards cover hill and valley and constitute by far the most important part of the agricultural industry, an interesting branch of farming, but not one the Essex Agricultural Society could imitate.

From Bordeaux onward the farming becomes more difficult and less interesting. You are soon brought into the region of the Pyrenees, whose steep and lofty cliffs are unfit for cultivation, and whose valleys are overshadowed a large part of even the long summer days. And when you have crossed this ridge of mountains and have entered Spain, the prospect becomes still more discouraging. I should say that from Burgos, one of the first towns of importance you enter in Spain, all the way to Madrid there is hardly an acre of fine farming land.

I shall never forget the view I had of the famous Escorial in the early sunrise of a summer day. The palace windows were glistening in the sun, the splendid architecture was brought out in all its beauty by the morning light, and nature had provided for the most impressive view of this magnificent building. But the surrounding landscape was most discouraging, even to the eye of taste, utterly hopeless to the eye of the farmer. On every hand hill and valley were covered with stones and small boulders as thickly strewn as if scattered from a huge pepper-box prepared for the seasoning of utter desolation. Even the spaces between the stones appeared hard, dry and barren, and this condition of the land continued all the way

to Madrid, more than twenty miles. From Madrid to the boundary of Portugal the country is of about the same description. And not until you enter the weird and ghostly cork forests of Portugal, interspersed with olive groves and here and there a vineyard, does this state of things come to an end.

And now I have reached the farming of Portugal, a description of which you have requested and which I will give with some fear, as I have said, of repetition. Agriculture means a great deal in Portugal. More than fifty per cent. of the soil is fit for cultivation; the great mass of the people are engaged in tilling the soil, the government encourages the industry as far as possible, the King owns large estates and is deeply interested in the products and encouragement of his farms. The present king, Dom Carlos I., looks carefully after his property of this description, has large cork-forests, and told me with considerable pride that he sold \$30 000 worth of pigs last season, fed largely on the acorns produced by his cork trees. The manufactures of Portugal are very small. It is the *land* which occupies the attention of a hard working, diligent, patient, economical people, whose day of toil extends from sunrise to sunset the year round.

Portugal does not raise grain enough for her own consumption, but she produces \$20,000,000 worth of wine, and but few of her productive acres lie idle. Even the sand hills, in which vines are planted five feet deep in order to find the moisture, are carefully cultivated. The cereal productions of the kingdom amount annually to \$43,087,610, of which Indian corn amounts to \$20,477,310, wheat, \$13,365,000, rye \$6,941,410, and barley \$1,406,160. The crops vary largely in amount, ranging from 2 bushels of wheat to 10 bushels to the acre, and rye in about the same proportion. According to the careful official estimates contained in the Report of the Director General of Agriculture, land fertilized with \$5.25 worth of manure or other fertilizer will produce 27 bushels of wheat on 2 1-2 acres,

the value of the wheat and straw being \$30 and costing \$30.01. Of Indian corn the estimate is interesting, as follows, on 2 1-2 acres :

Labor of oxen ploughing and harrowing.....	\$10 00
Seed75
24 days' hoeing at 20 cents per day.....	4.80
6 days' watering.....	1.80
Manuring.....	6.30
Harvesting, husking and shelling.....	4.20
<hr/>	
Expenses.....	\$27.85
Crop 33 1-2 bushel on 2 1-2 acres, valued at.....	\$33.75
Corn Fodder on 2 1-2 acres.....	8.00
<hr/>	
	41.75

Potatoes according to the estimate, yield 365 1-2 bushels on 2 1-2 acres, and are valued at \$75.60, costing \$66.46. The market price of wheat is about \$1.00 per bushel; Indian corn, \$1.00; rye, 75 cts.; barley, 70 cts.; oats, 35 cts.; white beans, \$1.08. Beef brings 11 cts. per pound; veal, 10 cts.; mutton, 7 cts.; pork, 10 cts. The wages of farm hands are about 25 cts. per day for men and 12 cts. for women. The wine product in 1882 was 125,000,000 gallons; this year it has been largely reduced.

The pastures in Portugal, except in the Douro district, are poor; and the hay crop is generally light. Cattle and horses are fed largely on straw. I have not seen a load of hay since I reached this country—nor a bale of hay. I have seen huge boats or gondola loads of straw brought down the river,—the immense cargoes built out on frames far beyond the gunwale,—and chopped and fed to the cab horses in baskets as they stand about the streets. I am told that horses thrive better on this food than on the hay which is grown in the country.

Horses, sheep, goats, donkeys and mules abound. The donkeys are small and stubborn. The mules are of fair size and great strength. The horses are of a common breed and very hardy. In Lisbon all draught animals are subjected to great trials on account of the steep hills, and

on this account the horses are seldom sound. The sheep have lost much of their quality as merinos, for which they were formerly distinguished. The cattle are very fine. I have never seen in any one section so many good oxen as I have seen in and around Lisbon. They are large, reaching often seven feet and three or four inches, of a uniform dun or black color, with strong well-formed limbs, straight bodies, wide hips, bevel rumps and well-shaped heads. They work singly or in pairs and are trained to perfection. The cows are also remarkably good, and are well cared for. In Lisbon there are vaccarias or milk shops in which are kept from six to twenty cows, provided with elegantly furnished stalls, kept perfectly clean and used to furnish fresh milk to customers. The cows and the counter are in the same apartment. They are among the finest specimens of dairy cows I have ever seen, being apparently Holsteins of moderate size and admirable shape, and well developed grade Jerseys. They are fed on all they can eat of wheat straw carelessly threshed by treading and coarsely chopped; to which are added twice a day about ten quarts of a mixture of large beans soaked and coarse wheat-bran—three quarts of beans and seven of wheat-bran,—evidently a most nutritious food.

Great care has been taken in breeding horses, and the government has established sixty-five breeding-studs, thirty-one in the north and thirty-four in the south,—in which may be found the Thoroughbred, the cross of Arab and Portuguese, the Anglo-Norman, the cross of English and Portuguese, the Cleveland Bay, the Hackney, the Anglo-Arab, and the cross of Portuguese and the Morocco. They breed especially for the saddle throughout the kingdom, and sure-footed, elastic, well-made horses for this purpose can be found everywhere. A delegation from Morocco has recently arrived in Lisbon bringing twelve beautiful specimens of the horses of that country as a present to the king of Portugal.

In 1888 the Department of Agriculture organized a most interesting exhibition in the city of Lisbon. The directors in organizing the show presented with great force the character of the display they desired, and the advantages to be derived from it. They urged the judges to consider carefully the fitness of the various animals for the service required for them and for the demands of the market. Especial attention was called to the breeds of animals already existing in Portugal, which, being accustomed to the climate and food, thrive well and fatten early; and great care in the selection of animals for crossing was urged. Great satisfaction was expressed with the native bulls, while the necessity for using better stallions was strongly laid down. They encouraged Portuguese and not foreign breeds of cattle therefore, and they especially objected to the introduction of foreign breeds if they tend to weaken the native stock. The premiums offered under these rules were very liberal and significant. For the best stallion, \$200; for the best lot of mares, \$80; for the best lot of colts, \$60; for the best gelding, \$200; for the best saddle-horse, \$100. For the best bull the premium offered was \$60; for the best lot of three rams, \$18; for the best boar, \$20. No premiums were offered for specific breeds.

The characteristics of this industrial organization which I have briefly described are simplicity and economy. The investments are not large—nor are the profits. The amount of money involved is comparatively small. The wages of labor as I have pointed out are very low, and steady, long-continued toil is the law of life. I have seen laborers going to the fields before sun-rise, as I have said, and I have seen them returning at twilight in the evening. Their repose they take at mid-day. I have seen twenty reapers at work in a wheat-field which a reaper and binder would have cut in a few morning hours, and the field was not half reaped towards the close of the forenoon. In it all, I saw no recognized poverty, nor did I see much wealth or energy or ambition. The people were well-clad, and

they were evidently well-fed, if we may judge by strength and form and muscle.

In fact, the Portuguese are a well-made people. The strength of the porters is amazing. The longshoremen are vigorous and strong. The soldiers have sturdy limbs and a great stride. The carriers in the streets of Lisbon are strong, erect, sturdy young women from the Douro district, who rear heavy baskets of fish and coal from the barges, and vegetables on their heads, while they travel bare foot over the stony streets in all weather, wet and dry, warm and cold. The young men who go forth to their business in Lisbon have athletic frames. The pedestrians in Cintra possess great muscular power—else the hills would kill them. The climate is delightful. The soil is easily cultivated. There is no frost. In the seven months that I have been here I have seen showers, but not a half dozen rainy days.

It is now the 18th of January and the market is full of fresh vegetables, turnips as white as snow balls, carrots as yellow as gold, cauliflower of the most delicate texture, and spinaeh as “green as grass.” This is a great country for farming, and the people engaged in this occupation are so contented with their lot into which they are born that the question of profit never enters their minds, and the family subsistence is as assured as the changing of the seasons. They have an agricultural college, and they have model farms, but they have no institutes. If they had I would read to them for their edification and instruction one of the debates of the Essex County Institute on the benefit of silos, or the value of the corn crop, or the duty which should be laid on eggs.

I trust your meetings will be successful, and I assure you I should enjoy joining in your discussions.

Truly Yours,

GEO. B. LORING.

Major David W. Low, Sec., Gloucester.

The 71st Institute was held at the Town Hall, Bradford, Tuesday, March 18, 1890, President Ware presiding.

The subject announced for the morning session was "The Reclaiming of Wet Meadow Land" to be opened by Mr. T. C. Thurlow of West Newbury, but owing to sickness he could not be present and Rev. O. S. Butler of Georgetown, was called upon to open the discussion.

Mr. Butler frankly stated in opening that his remarks on farming were based more upon his observation of others than upon his own limited experience.

About one fifth of the territory of Essex County is in wet meadow land, and as a large proportion of this low land is in close proximity of our homes there are two objects in reclaiming it—first, profit, and second, to improve the beauty and sanitary conditions of our homes.

In reclaiming, the character of the land must be taken into consideration; if there are from five to ten feet of muck on the meadow, the treatment should be different from where there is only one or two feet with a gravelly or clay bottom. But the primary object is to get rid of the surplus water, and then improve it the same as upland.

Mr. Butler cited several cases of reclaimed land that had come under his observation, and said that some had made it a permanent thing, and raised enormous crops on it year after year, while others had spent a great deal of money in draining and had let the land finally go back to its original state, the expense being too large in keeping the water out of it to make it profitable.

To sum up his remarks Mr. Butler finally came to the following conclusions: first, that these swamp lands can be reclaimed, and second, that there are very few acres of such land that will pay in dollars and cents to reclaim when much of the best farming lands in the county may be obtained at from \$50 to \$100 per acre, while the cost of reclaiming the swamps, if reckoned at what it would really cost in labor, would be from \$150 to \$500 per acre. President Ware, in opening the subject for discussion, took

an opposite view to Mr. Butler and not only expressed the belief that it did pay to reclaim those lands when done intelligently, but it was one of the best investments farmers could make ; although, where there are meadows that cut good crops of native hay at no expense he thought it best to let them alone.

Mr. E. G. Nason of West Newbury, took Mr Butler's view of the case, and cited examples of marked failure in his town, but unless we can increase the value of land he would advise to let the meadows alone and attend to the uplands.

Mr. David Warren of Swampscott, gave his experience in underdrained land, and believes it a paying investment in certain kinds of land; his underdrained land had produced 1000 bushels of onions to the acre, and 150 barrels of potatoes.

Mr. N. A. Bushby of Peabody, referred to Mr. Warren's land as the best drained in the county, and cited other cases, but was in general of the same opinion as Mr. Butler, that the cost of reclaiming, is too large to warrant any profit from it.

Mr. James P. King, N. P. Perkins of Wenham, and others spoke on the subject, and all came to the conclusion that it would be better to go slow on reclaiming.

The afternoon meeting was opened by M. Walsh Bartlett of West Newbury, who read a very thoughtful and carefully prepared paper on "The Education of Farmers."

Education, said Mr. Bartlett, is development and may be divided into physical, moral, religious, and mental.

The physical training a farmer finds in his work, the religious he left for the church and Sunday School and then devoted his remarks to the mental. Man's progress in education has been uneven, but surely forward since the earliest times. A certain amount of manual labor strengthens a man, while too much deadens his forces. Some people educate their children merely to make a living—and this is the curse of American life, this "Bread and Butter"

aim contracts them, they should be educated for American citizens.

Impressions are strongest in the young, and the character is mostly developed at an early age; most education is derived outside the schools and colleges; who cannot recall the time when the course of his life might have been changed by different influences. On entering life and taking his individual place, if he cannot hold his own, no matter what book learning he may have, he is a parasite or a pauper.

The doctor and lawyer both require special training, so does the farmer; whatever sacrifices he has to make, let him keep out of debt, then he will be independent; the love of home should be greater than that for anything else, let him keep accounts and be able to tell just where he stands.

Going into his personal experiences, Mr. Bartlett said that thirty years ago, broken in health, and unacquainted with farming, he gave up his former pursuits and purchased ten acres of land with an old house on it.

He had enough money left to put the house in repair, to buy a cow and calf and \$25 left over; for that twenty-five dollars he had so many uses that he never spent it. He took an inventory of stock at commencing, and again at the end of the year and came out \$10 ahead, the best ten dollars he ever made. Some years he had done worse than that, but nevertheless has enough now to carry him through, providing he dies before it is all gone.

The secret of acquiring an education is to know how to spend our leisure time to advantage; one might say study this thing, study that, one can't study them all. Study that which will be useful to you. The speaker recommended books on the various branches of farming, on history, especially of our own country, discarding newspapers, that reading in his opinion being the great evil of the day. Anything worth reading is worth reading twice, and anything worth reading is worth owning. Finally, the farmer's social life needs development, and he is now doing better in this respect than formerly.

President Ware in opening the subject for debate had a word to say about the value of an education in the sciences, and said that it should be our great aim in life, to make ourselves useful, and not to make money.

Rev. O. S. Butler was introduced as an educator, and dissented from Mr. Bartlett in regard to what he said about the newspapers. No man, said the speaker, owed more to the newspapers than himself, but would agree with Mr. Bartlett that the young should be educated on the line of American citizenship, and have them inform and educate themselves to statecraft.

The 72nd Institute, and the last of the season was held in Town Hall, Beverly, on Wednesday, April 2nd, and the subject in the forenoon was "Small Fruits" opened by Albert Emerson of Haverhill, who read an able essay on the subject, first treating of the berries as food, claiming that they should be eaten at every meal, ripe and in their natural state, and not covered up with artificial sweetness, or spices, the cultivation and eating of small fruits tend to temperance, morality and health. It is economical to grow fruits, they should be grown for the family and for use, for a market crop they pay as well as other crops when grown by the right man and marketed at the right time. In growing, a moist soil is best for most berries, but grapes do better on higher ground.

Mr. J. S. Needham of West Peabody, a veteran in the business, said that although he had been raising fruit so many years, he did not consider himself an expert, and the more he was in it, the more uncertainty he found; the great demand is for large berries, especially the strawberry, though the smaller ones have more juice, flavor and richness. He believed that the strawberry did best on light land made rich by fertilizers, but would advise selecting the right variety for the right land. Mr. Aaron Low of Essex, spoke of the peculiarity of the strawberry and thought different varieties did better in different localities: some kinds would not do well on a heavy loam soil;

he thought the success of raising strawberries for profit was in having a good home market.

The subject for the afternoon session was "Ensilage and Silos," opened by Rev. O. S. Butler of Georgetown, who is an advocate of the silo, and has given it a great deal of careful study. The different conclusions he alluded to in his essay, he arrived at from the answers to many questions he had sent to different people in a period of the last ten years.

Mr. Butler made the statement that this method of preserving green fodder for winter use, is not a modern invention; he made this point to show that the silo is a long established success and not a modern invention. Roots have been preserved in silos for 200 years. Mr. Butler proceeded to give a history of the silo for the last 25 years, stating that the first one built in this country was in Winchester County, New York, in 1875, for the storage of Brewers' grain, with success, and afterwards the experimenter tried fodder corn with such success that he has filled three silos with corn every year since. In 1879 Dr. John M. Bailey of Billerica, built the first silo in New England—now there are forty in Essex County that I have received answers to my questions from, and many more I have not sent to.

Ensilage may be fed to all kinds of stock with advantage. Colts and brood mares thrive on it. Grass, preserved in boxes, packed tight when cut, on the silo principle, is voraciously devoured by poultry. The milk and butter made from ensilage is as good as that from June grass, and more uniform, and ensilage does not give a taste to the milk.

To get the best results from ensilage it should be fed with some other nutritious dry fodder. All kinds of grass, grain, roots and apples may be used in the silo with success, but corn is best.

There is little choice in the varieties of corn.

The best method of storing is to cut fine, say in half inch lengths, pack solid and weight heavily, make it entirely impervious to the air; the cost of producing and storing on an average is about \$2.50 per ton, and the cost of building a stone or brick silo with good cement is about \$1.50 per ton.

President Ware gave some of his personal experiences; he said that if water gets into the silo, the ensilage it touches will be spoiled. If straw is put on top of ensilage in the silo it will rot during the winter.

Mr. C. F. Emerton spoke of the importance of weighting heavily.

Mr. Warren Brown of Hampton Falls, N. H., said he was not an early convert to the silo, but he had got all over his suspicion; his first experience was with Brewers' grain (which is very perishable); put into the silo he had kept it a year with very little waste.

Mr. James P. King said last year he sold \$100 worth of ears from an acre of ensilage corn in addition to 23 tons of fodder put into the silo.

ESSAY ON THE CARE AND FEEDING OF STOCK FOR DAIRY PURPOSES.

BY GEORGE A. ROGERS.

To secure the best results from dairy stock certain requisites must be provided, and it is to these that I will first call your attention.

The stable should be made as near air-tight as possible. Then provide ventilation to furnish the necessary amount of pure air in such a manner as to avoid drafts.

Remember that with every shiver there disappears a quantity of food from the barn as well as some of the milk from the cows. An animal cannot use up all its food in

keeping warm and at the same time make milk. Milk is from the surplus of the food after all the bodily wants and needs of the animal are supplied. Whenever a stream of cold air pours in upon the cattle or when they are miserable or uncomfortable, a stream of wasted food pours out all the time through the same opening.

The value of sunshine is not appreciated. If possible have your cattle stalls on the south side of the barn. Then put in the windows close together. Give the stock all the sunshine possible, it does not cost much and it is a great factor toward bringing them out in good condition in the spring as well as in making them happy *all* winter. Every spring and fall whitewash the walls, ceiling and mangers. It makes the stable sweet and clean and makes it look more cheerful. Provide good tight mangers and an even floor raised slightly in front.

Next in importance to the stable is the water supply. The water furnished stock should be absolutely pure. Don't try to filter impure water through a cow in the expectation of getting good milk. It is neither good for the cow nor for the persons using the milk. If possible have your watering trough in the barn or in an adjacent shed. Don't oblige your stock to go out in the cold months to drink. Cattle will do better kept in the barn from Nov. 30th to April 1st, than they would if obliged to spend two hours out doors each day. On bright pleasant days an hour's exercise will do them good, but on cold stormy days this time spent out doors would prove detrimental rather than beneficial.

It pays to warm water for stock. Experiments in France from those eating the same food, show that a cow supplied with water at a temperature of 113 degrees will give one-third more milk than one drinking cold water. The same is true here in Massachusetts and in my opinion it would pay any farmer keeping twenty cows to buy a boiler, and while he is about it he might as well buy an engine too. By using the former the water can be warmed

for the stock, food can be steamed, and the barn and chicken house warmed; while the latter will cut the feed, pump water, thresh, cut wood, etc.

Having provided a warm stable, plenty of sunshine, pure water and means of warming the water, and steaming the food, we are ready for the stock. What shall it be?

Many farmers have some favorite breed which they keep in its purity. I wish more did the same. If you have not the money to buy thoroughbred stock enough to fill your dairy, buy a thoroughbred bull and cross with your present stock. Avoid inbreeding by buying new bulls and continue this process until the fifth generation is reached when you will have cows thirty-one thirty-seconds pure blood. These cows for all practical purposes are as good as the thoroughbreds and would be considered such by all but expert judges. I trust that each farmer that reads this will resolve to improve his stock. I am convinced that it pays to raise good stock. We can raise it as cheap as we can buy it, besides cows that are raised and kept on the same farm are better contented, and generally do better than those bought.

A good dairy cow grows up from a well-fed, warmly sheltered calf. If a calf is dainty, dispose of it early, if the fault is not cured. Accustoming a young animal to a variety of food is the best way to develop a good appetite. "As the twig is bent so the tree will grow." As the calf is so will be the cow. If the calf is treated kindly it will love its master. When its love and confidence is once gained it can be taught almost anything. I commence to pet and handle calves when they are a few weeks old and when one year old they are as quiet and as orderly as any cow.

Yearlings and two year olds should spend five or six months of the year in the pasture.

Young stock will thrive upon coarse fodder or ensilage supplemented with roots or a light ration of grain. Many

farmers are prejudiced against feeding grain to young animals, but this prejudice is unfounded. Heifers should commence to give milk when from twenty-four to thirty months old. If they have been handled right you will have but little trouble with them. Still, patience and self-control are sometimes necessary. The worst thing that can be done to a cow is to strike or yell at her until she is badly scared. Such treatment worries her and worrying is as injurious to the health and good order of animals of all kinds as it is to the human family. You should speak to a horse as you would to a gentleman and to a cow as you would to a lady. Remember that the only recompense our faithful friends, the dumb animals, receive is board, shelter and kind caresses.

Man was created their superior and most animals are subject to him. He has a right to govern but not to abuse them. Would it be but fair for a man who ill-treats and abuses dumb animals to receive the same treatment from Him who is our superior, and to whom all of us are subject. Do unto others—even the dumb animals—as you would wish to be done by.

Cows should be fed regularly and at stated intervals and not every time you go to the barn. They soon get accustomed to either method. If the first is pursued they will lie and chew their cud until feeding time comes; if the other they will get up every time you go to the barn.

Our cows are fed twice a day, this gives them from 9 A. M. to 3 P. M. to rest and enjoy themselves. When cows first come to the barn in the fall they should be given the best of hay. As the days begin to lengthen it will do to increase the amount of rough fodder. When cows are first turned to grass in the spring the change from dry feed to grass should be as gradual as possible. It is useless to state here the amount of hay and grain that should be fed to cows; hardly any two require the same quantity.

Every farmer, to get the best results, must study the

wants of each individual cow and feed accordingly. I am satisfied that it pays to feed grain to cows and am at present using for a regular winter ration, two quarts shorts, and two quarts linseed meal per cow, supplemented with one peck mangel beets and all the English hay that will be eaten up clean. The silo has come to stay, but if a farmer feeds nothing but ensilage he will be disappointed. There is no more propriety in feeding ensilage exclusively in winter than there is of feeding nothing but green corn in summer. Don't be deceived in regard to the value of ensilage, remember that it is nothing more nor less than corn fodder well preserved. To properly use ensilage it must be as an article of partial diet. It furnishes green succulent food at a season of the year when nothing else can be had. Fed in connection with hay and grain, and in small quantities, it not only promotes the flow of milk, but increases the appetite, and adds largely to the comfort and thrift of the animals.

In feeding hay always feed a small quantity at a time. When this is eaten feed again. Remember that cows like a change of food as well as men. It is a good practice to put a small handful of salt in the grain once a day. The more water a cow drinks the more milk she will give. Cows should be milked regularly by the same man in the same order. Regularity of hour in commencing the milking of the herd is an advantage in securing the best results. Card and brush the cows every day, keep them clean. After you once commence to do this, the improved appearance of your herd will cause you to keep up the practice.

In closing let me again remind you to be kind to all animals and always treat them as you would wish to be treated were you in their place and they in yours.

OUR HOME MARKET.

BY CHARLES H. MANN.

An abundant harvest may not always be a sure indication of the prosperity of a farmer. His prosperity is assured only when his abundant harvest finds a good market.

The six cities of Essex county afford a market far beyond the ability of the farmers of this county to supply; they will take all that can possibly be raised and more too, and yet, as a rule, we find difficulty in marketing the produce of our farmers at prices which makes farming a profitable business.

They pay a high price for what they buy—we get a low price for what we sell—between us is the dealer who gets rich in a few years by bridging this narrow chasm between producer and consumer, and compels the people on both sides to pay a very high toll for a very short bridge.

A friend of mine became interested, one day, in watching a dealer in a city buy and sell a barrel of spinach. He bought it of a farmer for seventy-five cents. In a few minutes he had sold three single pecks for twenty-five cents each and got his money back again. He then filled two bushel boxes from what remained which he soon sold to a hotel steward for one dollar each, making a net profit of two dollars on an investment of seventy-five cents, within half an hour. This may be a little better than the average, but such trades are being made every business day in the year. Two hundred and sixty-six and two-thirds per cent. of profit is indeed a heavy toll for crossing so short a bridge.

In a few things farmers may find it profitable to deal directly with families but to carry it to any great extent would make them a race of peddlers. It takes too much time to retail out the crops of a large farm and the system is adapted only to a limited business. Hotel and restau-

rant keepers who have sudden calls for large quantities, could not depend on a market supplied in this small way; there must be stores and market houses keeping a stock equal to any emergency. But shall the keepers of these stores and markets control the business and prices without the producer and consumer having anything to say about it? Is there no better way, no more just and equitable way of connecting buyer and seller?

Let us see how our friends, the manufacturers, arrange this matter. Some of them sell through a commission house, which takes all their production and gets the best price they can for it, for a commission and guaranty of about six per cent. Others, the larger mills especially, have their own selling agents who are always on the lookout for what the market wants, advising as to what shall be made and ever quick and ready to take advantage of any circumstance favorable to their mills.

A combination of capital makes this possible, a combination of mills, or trust, makes it still more profitable.

Now, no one farm of the size we are used to can establish and supply a market house in the city and keep its own selling agent on commission, or on a salary large enough to obtain the services of a first-class man, but a combination of farmers could, and thereby ensure the ready sale of all they could raise at the least trouble and expense to themselves, realizing better prices than they do now and selling to the working men in the cities at far less prices than they now pay. A strong cooperative movement of this kind in our six cities would save thousands of dollars to the honest buyers, beside giving them fresher and better goods, and put other thousands into the pockets of our intelligent hard-working farmers.

One of the most unbusinesslike and wasteful things is our present system of "peddling milk," going all over a city to deliver a little one-horse load that could all be disposed of on one side of a very short street. It is a waste of

time and labor more than sufficient to reduce the price of milk to the buyer half a cent a quart and give the farmer who raises it another half cent. It is like one's carrying his own mail or express packages. It also gives too much opportunity for dishonesty, for among so many dealers there is more room for rogues and cheats.

We shall look in vain for any reformation in this line until the city people rise up in their might and demand strictly pure milk delivered to and distributed from central stations, subject to inspection, and condemnation with penalty, as far back as the stables and the condition and feed of the cows which produce it.

This is a matter of vital importance to the cities, the lives of their children may depend upon it. It is of equal moment to that of the purity of their water supply to which they devote millions of money, while for the milk, a poorly paid quack doctor with a political bias and a tin dipper is considered all sufficient.

Milk is a necessity in every family, and if an average price of four cents a quart will make milk raising a profitable business for the farmer, then five cents a quart should be the average price to the consumer. With proper regulations, one cent a quart is all it ought to cost to carry milk from the country barn to the city table. Under a rigid system of inspection we should hear of no more cases of deaths in the city being traced back to the use of milk from diseased cows. Cleanliness about the stable, greater care in handling the milk, and more intelligent feeding would follow and the whole tone of the business be raised, the demand enlarged and the profits increased. Farmers living at a distance from cities would be emancipated from the dominion of the contractor and be able to sell all the milk they could make, without danger of loss through a rebate on the surplus, for at the lower price, when the children of every poor man could use it freely, the demand would always keep ahead of the supply.

Another thing to improve our market is to prevent the sale of adulterations and counterfeits. Filled cheese, oleomargarine and compound lard may have their place and use, but it certainly is not legitimate that they should enter into competition with the pure articles they basely represent.

An eminent statesman recently said he wished it was possible to make adulteration of food a crime. The farmers of this county and every other county wish so too, and some day the possibility will come and the law be enacted.

It is on this broad ground of adulteration of food that the battle should be fought, and not in the narrow line of any one article. Put it all together and go for a law large enough to take it all in, with stringent enforcement and heavy penalties. A law in which no single article is picked out and gets the sympathy of the public as being the under dog in the fight, but taking the whole universally recognized evil together, which all classes in city and country, except those who are making money out of it, will heartily co-operate to suppress.

An improved market, favorable to both seller and buyer, will be best promoted by co-operation to make the exchange between them as direct and inexpensive as possible; make the bridge as nearly free as its proper maintenance will allow.

Establish a system of strict supervision which shall prevent cheating and being cheated by impure and unwholesome articles of food of every description.

Unite to make the adulteration of all food a crime and to prevent those fine appearing combinations of cotton-seed oil and tallow, which are indignantly refused into every foreign market, from becoming firmly established in our home market to the utter ruin of our dairy interests. Let our markets be governed by the law of supply and demand without the intervention and dictation of middlemen, contractors and speculators.

If such a movement could be inaugurated in this county its influence would rapidly extend to other counties until it became general throughout all the New England states to the benefit of every working man, whose first care is to provide good and wholesome food for his family on the one hand, and on the other, give the farmer an adequate reward for his labor, repopulate the deserted farms and furnish a speedy and unfailing cure for the depression of agriculture.

STATEMENT OF CHARLES J. PEABODY OF TOPSFIELD, OF
GREATEST PRODUCT OF MILK FROM OCT. 1, 1889
TO SEPT. 20, 1890, AWARDED FIRST PREMIUM.

Oct 1, 1889, I had eight cows of common and grade stock, then in milk from three to seven months; in November I sold one nearly dry, and replaced her with a new milch cow. In Feb. I added one by purchase and a heifer I raised, come in during that month. No other changes have been made; eight of the cows have calved within the year, the other two are due to calve next month, and have been dry three months past. I have averaged eight cows in milk through the year. They have produced twenty-one thousand four hundred and sixty quarts of milk sold and used in the family, and an estimated amount of four hundred quarts fed to calves. The milk is sold at the door at an average price of three and one fourth cents per quart the year through.

A total value of milk	\$666 66	
A total value of manure,	90 00	
Total income,	————	750 66

The cows are fed after the usual method among farmers, with English, meadow and salt hay, corn stover, meal and shorts.

The amount of hay is estimated at 18		
tons at an average price of \$12 per ton,	\$216	00
Two tons meal,	38	00
Two tons shorts,	35	00
Pasturing and green corn fodder,	75	00
Care of cows,	100	00
Bedding,	20	00
	-----	484 00
Net Profit,		266 66

Respectfully submitted,

CHARLES J. PEABODY.

REPORT ON ESSAYS AND REPORTS.

The Committee on Essays, Farm Accounts, and Reports of Committees, respectfully make their annual report upon the subjects referred to them. The committee are authorized to award premiums, 1st, for "original essays on any subject connected with agriculture, in a form worthy of publication." 2nd, "for best statement of actual farm accounts, drawn from the experience of the claimant, in a form worthy of publication." 3rd, for "reports of committees upon subjects for which premiums are offered."

These instructions, it will be observed, allow the committee considerable latitude in determining what papers are entitled to premiums, and yet are sufficiently indefinite to cause doubts to arise in some cases as to what the committee is permitted to do under the rules.

In the matter of farm accounts, for instance, the language used is so inexact, that farmers who wish to submit forms of accounts may be uncertain, as well as the committee, as to what sort of account is desired. One account was submitted to the committee this year, which was doubtless supposed to come within the rule, but the com-

mittee are unable, even with the most liberal construction, to see that it is sufficiently exact in its data. As this is a subject of some importance, since a simple and intelligible form of account would be useful to all careful farmers, the committee may do well to state what elements seem to be essential in such a statement.

A proper farm account should, we think, cover all the operations of the farm for a definite period, say for one year. The actual expenditures for a year should include payments for everything required in each season, and embrace all receipts, of whatever nature, and this would afford a fairer view of the actual business, than an account for any less period could do. This account should include all transactions affecting the result, stated in a specific manner. It is not necessary to exhibit a full detail of receipts and expenditures, but there should be such a classification of items, as will enable the reader to see, without doubt, just what has been done. Such an account would, of course, be made up from the daily entries of sales and purchases, or from such other sources as may be available and reliable. When the committee see an account of this character, they will be pleased to award it a premium.

The committee desire to call especial attention to the report of the Committee on Forest Trees, and the papers accompanying it, by Mr. Francis H. Appleton and Mr. John Robinson. These excellent documents contain a great deal of valuable information upon the subject and show how tree-culture can be made profitable and successful in Essex County. The experiments which have been made upon Mr. Appleton's farm near Sentaug lake, and upon Mrs. Phillips's estate, near Wenham lake, both of which are fully and carefully described, are very interesting, and worthy of study. There are hundreds of acres of gravelly soil in this county such as Mrs. Phillips used in her experiment, and here we see how such waste lands may be improved and increased in value. If the desert can be made to blossom

like the rose, or whether or no, it is clear that the rubbly hillsides of Essex County, may be clothed with foliage, so that they shall stand dressed in living green, and be a source of beauty and profit forever. It is sometimes questioned whether tree-culture is really a matter of farming, but we think that no one can read these documents and fail to see that the two subjects are closely allied. The committee have awarded ten dollars for the Report on Forest Trees, by Mr. Francis H. Appleton.

For the report of the Committee on Harrows, the committee have awarded eight dollars to Mr. J. J. H. Gregory. This paper contains an instructive account of Mr. Gregory's experience with harrows, which will be suggestive to others, and is carefully prepared, as Mr. Gregory's reports always are.

For the report of the Committee on Apples, the committee award six dollars to Mr. J. W. Goodell.

Two essays were submitted to the committee. They awarded ten dollars to Mr. George A. Rogers, of North Andover, for his essay upon "The Care and Feeding of Stock for Dairy Purposes." This important subject is treated by Mr. Rogers quite fully and in a very plain and readable manner. The subject is trite, and yet it is constantly new to the rising generations. Mr. Rogers pleads for light and warmth for dairy cows, and that they be protected from physical violence, and these points cannot be too strongly insisted upon.

To Mr. Charles H. Mann of Methuen, the committee award the premium of eight dollars for his essay on "Our Home Market." The subject is an important one to farmers. How to bring the producer nearer to the consumer, is one of the great studies of political economy. Mr. Mann urges some sort of cooperative system, which shall secure the largest returns for farm produce at the least cost of placing it in the market. No one can doubt that the general result which the essayist urges, is desirable, so

much so that it is expedient to keep it constantly before the public, but more definite plans than Mr. Mann suggests will be requisite to bring this about. The committee made no award of the first premium.

For the Committee,

GILBERT L. STREETER, *Chairman*.

COMMITTEE—G. L. Streeter, Salem; N. M. Hawkes, Lynn; D. E. Safford, Hamilton; N. A. Horton, Salem; Geo. B. Blodgette, Rowley; D. W. Low, Gloucester.

IN MEMORIAM.

In obtaining the names of members of the society deceased, a list of members was sent to the trustee of each town and city for revision, requesting date of death and age of each member deceased, with brief notice of each, in print or writing, from which, and from others, the following has been compiled by your committee :

CALEB CHILDS of Marblehead, died Jan. 5, 1890, aged 67 years. Mr. Childs lived nearly all his life on a farm inherited from his father, near the boundary line of Swampscott. He was a good farmer and a worthy citizen, being constantly sought for his judgment and counsel, which he willingly gave; naturally of a retiring disposition, and being an invalid for nearly five years, he became almost a recluse in society, but will long be remembered by those who know him best, for his strict adherence to the right and ever kind and thoughtful disposition.

PHILANDER HOLDEN of Swampscott, died in April, 1890, aged 78 years. He was a man very much respected; although he was a member of the society, he never took any special interest in agriculture.

LUTHER NOYES of Newbury, died Dec. 30, 1889, aged 80 years. He was a member of this society 30 years, and lived all his life on the farm, inherited from his father, in the centre of the town. He was a good citizen and very benevolent to the sick and needy. He was noted as raising the best strains of cows for milk and they were sold in all parts of the county.

ARTHUR C. BUXTON of Peabody, died March 21, 1890, aged 3 years, the youngest member of the society.

HON. EDWIN MUDGE, a son of Simon, died at his home at Danvers Centre, on Sept. 30, 1890, aged 72 years, one of Danvers' most respected citizens. He was until the formation of the E. & A. Mudge Company, the senior partner of the firm of E. & A. Mudge & Co., commencing the manufacture of shoes at the early age of 19 years. He had many offices of trust, among which were the offices of Selectman, State Representative and Senator. He contributed all of his salary received by him from the state, to the erection of the soldiers' monument, being much the largest single contribution. Very public spirited, though of a retiring disposition, he was loved and respected by all. He had travelled extensively, one of his last being a tour around the world with his daughter. He left a widow and one daughter. He was not a agriculturist, but deeply interested in the welfare of this society.

BENJAMIN F. PORTER died January 11, 1890, aged 52 years, 8 mos., leaving a widow, a son and daughter. His widow, a daughter of the late Hon. Robert Daniels of Peabody, died on the 9th of the following month of February, both of La Grippe. He was a son of Capt. Benjamin Porter and occupied the Nathan Reed mansion house and farm on Waters river, near the Iron Works, at Danversport.

EDWIN F. PUTMAN died August 18, 1890, aged 80 years, 1 month. He was in early life a shoe manufacturer. He

was always interested in horticulture and contributed to many of our exhibitions; has held many of the town offices. He was a son of the late Capt. Eben Putman.

HENRY HALE died in Salem, July, 8 1890. He was born in Salem Feb. 18, 1808, and his age was therefore 82 years, 4 mos., 20 days. He had been in active business on Essex street as a hardware dealer for more than 62 years and was well known to the farmers in the vicinity of Salem, having dealt largely in agricultural implements and seeds. He was a man of thoroughly honest character and always warmly interested in the public affairs, and in every class of ideas and issues that were potent in shaping of a public policy, though neither a politician nor an office seeker.

DANIEL POTTER died in Salem, August 15, 1890. He was born in Ipswich, Mass., March 24, 1800. His age was 90 years, 4 mos., 22 days. He was a good specimen of an old plain intelligent responsible citizen. He learned the blacksmiths' trade and for many years conducted that business in the West Yard in Salem, at one time in company with Benjamin Cutts. On the 10th of March, 1824, he was married to Miss Dolly N. Ferguson, who survives him. He was appointed deputy sheriff in 1852 and served for more than thirty years, until compelled by advancing age to retire. A man of cheerful temper, with a strong pervading sense of humor and was good company on all occasions.

HENRY GARDNER died in Salem, Jan. 20, 1890, at the age of eighty years. He was bred and continued through life a merchant, conducting his business in Boston, while residing in Salem. An honored and trusted citizen, but avoided all public offices, confining himself to the faithful performance of his duties as a private citizen. He was a vice-president of the Salem Savings Bank.

CHARLES A. ROPES died quite suddenly at his home in Salem, March 19, 1890. He was born in Salem, March 14,

1818. His age was 72 years, 5 days. He with his brothers were years ago associated in business together in New York and Salem, engaged in Buenos Ayres trade, importing and exporting and dealing largely in hides. They also started in the grain business and for many years ran packets with freight between Salem and New York. It was during or soon after the Civil War, Mr. Ropes engaged in business on his own account. Of late years he had carried on the flour and grain business, at one time alone and later in company with his son, Mr. Willis H. Ropes. Besides this business, he was also interested in tanning and currying leather in company with Col. Jos. A. Dalton, but discontinued within a year or two. He served in the common council in 1859 and was a member of the school committee for ten or twelve years, beginning with 1862. Mr. Ropes was a man of integrity of character and of great industry, always interested in the business welfare of Salem, an active and devoted member of the first Board of Trade. Of very charitable disposition, never withholding his subscription to any deserving object to which his attention was called.

MR. JAMES CHAMBERLAIN died in Salem, June 14, 1890, at the age of 87 years, 27 days. He was born in Salem, May 18, 1803. For many years he had been in the grocery business, doing a very large and successful business. He was a quiet and unobtrusive man and not ambitious of personal distinction. Nevertheless he was elected captain of the Salem Mechanic Light Infantry in 1824, succeeding the late Capt. Jeremiah S. Perkins. In 1836, 7 and 8, he was a member of the General Court. He was chosen a director in the Holyoke Ins. Co., Dec. 5, 1856, and of the Salem Bank, Oct. 18, 1858, both of which positions he held to the time of his death. A man of the strictest integrity, uniformly even tempered and a good citizen in every relation and walk of life.

EBEN SUTTON was born in the town of Peabody, then called South Danvers, on the 31st day of December, 1835, and died in North Andover on the fourth day of January, 1890, after a short illness of six days. His death was caused by pneumonia, following an attack of "La Grippe." When at the age of twenty, he began his business life in a wool merchant's store in Boston. After two years in the wool business, he went to New York to learn the dry goods commission business. In 1863, he became a partner in the firm. Farnham, Sutton & Co., and in 1864, he became the senior member of the firm Sutton, Smith & Co., dry goods commission merchants. After the death of his uncle Eben Sutton, in 1865, he came to North Andover to take charge of the Suttons Mills, in the manufacturing of flannels. In 1867, he with several other gentlemen, started the corporation of the North Andover Mills, after purchasing the property from Mr. Hodges. He was always very fond of military life, which he began when only sixteen years old as a member of the Salem Cadets. After passing through the various stages of promotion, he was elected Brigadier General of the 2nd Brigade, M. V. M., in 1876, which position he held for five years, when he resigned and returned to private life. He left a widow, two sons and a daughter.

JACOB FARNHAM of North Andover, died Jan. 15, 1890, aged 86 years and 8 months. Mr. Farnham was a life long member of the society, having joined at its first annual exhibition. He will be remembered by the older members of the society, as a large exhibitor of stock at our annual fairs, especially of working oxen and young stock and was awarded a larger amount in premiums, than almost any other member, exhibiting at that time. During the last years of his life, he was unable to compete for the premiums, but his interest in the society continued to the end. He was always present at the ploughing match, taking the same interest in the competition, as he did when he himself was a participant.

LUTHER ALLEN of Manchester, died March 30, 1890, aged 81 years. He was a cabinet maker by occupation ; as a citizen of the town, has always been held in high esteem, having held the office of selectman and been a member of the general court.

J. ADAMS ILLSLEY of Georgetown, died Jan. 14, 1890, aged 64 years. He was a man of strong physical powers, a blacksmith by trade but for some years had been engaged in farming and teaming, had taken premiums with draft horses, acted on committees and was interested in what related to the society ; a good citizen, his death was a great loss to the community.

SAMUEL G. BEAN of Andover, died July 27, 1890, aged 72 years. Mr. Bean was long and favorably known as an old hotel and stable keeper, had long been a member of the society and formerly contributed to its exhibitions.

JACOB P. GOODALE of Peabody, died March 12, 1890, aged 69 years, 9 mos. Mr. Goodale was a thorough farmer, long a member of this society, in which he took a great interest, a man of very strong characteristics and will, industrious to a fault, very hospitable and generous; although an invalid for more than ten years, his constitution which was very strong, finally gave away, but he was always ready with a smile and a joke to receive his friends.

WILLIAM C. WATERS formerly of Beverly, but latterly of Lowell, to which place he removed, was a very good farmer, a very nice and pleasant man and a good neighbor.

JACKSON B. SWETT of Haverhill, died Oct. 3, 1890, aged 75 years. Mr. Swett was a native of Haverhill, and lived there all his life. He was a prominent man and always interested in anything pertaining to Essex county, being one of the county commissioners for twelve years ; for over fifty years, he was a prominent business man, being a shoe manufacturer. In social life, he was a most genial man, benevolent and kind to the suffering and needy.

EUSTACE M. KIMBALL of Bradford, died Oct. 14, 1889, aged 65 years, 8 mos. He was born a farmer as well as his father before him and carried on a large farm.

ABRAM MERRILL of Salisbury, died June 30, 1890, aged 30 years. He was accidently killed while getting a mowing machine from his barn loft. He was a very exemplary young man.

DAVID SMITH of Newburyport, died Sept. 12, 1890, aged 73 years. Mr. Smith was a manufacturer of brick and farmer combined. He always took a prominent part at all the meetings of the society, especially the institutes, where he was ready to discuss any question.

MOSES P. ATWOOD of Groveland, died March 26, 1890, aged 75 years. Mr. Atwood was not a farmer, but was a member of this society many years, although not active in its affairs, but always pleased to receive its transactions.

MR. JOHN PEARL of Boxford, died June 7, 1890, aged 67 years, 11 mos. He had been a member of this society for many years. Mr. Pearl had been a life long farmer, of great worth to his family, as well as the whole community. It can be truly said of him, "An honest man is the noblest work of God." A more willing or ready man in sickness and want never lived. As an agriculturist and townsman, his place will be hard to fill. A man who never put his hand to the plough and looked back, but with a kind heart, a true soul, combined with hard toil and frugality he furrowed on to the end.

PAUL T. WINKLEY of Newburyport, died April 19, 1890, aged 80 years. Mr. Winkley had been a member of this society for many years and was formerly one of the Vice Presidents. He always took an active interest in its exhibitions and everything that pertained to its welfare.

CONSTITUTION

OF THE

ESSEX AGRICULTURAL SOCIETY.

ARTICLE 1. There shall be a President, four Vice Presidents, a Secretary, and a Treasurer, who shall be Trustees, *ex-officio*. The President, Vice Presidents and Secretary shall be elected at the annual meeting by ballot and the Treasurer by the Trustees, annually, at their meeting in November. In addition to these, one Trustee shall be elected annually for each town in the County, and the Trustee for each town shall be elected by members of the Society in said town, at a meeting called for that purpose,* in accordance with notice issued by the Secretary, and shall continue in office until another is elected in his stead; and such election shall be final, and shall constitute the Trustee so elected a member of the Board of Trustees⁷ of the Society; and the result of the election in each town shall be communicated as early as possible to the Secretary.

ART. 2. There shall be an Annual Meeting of the Society, at such times as the Trustees shall determine; at which all officers shall be elected. Twenty members at least shall be necessary to constitute a quorum for the transaction of business.

ART. 3. If at any meeting of the Society, or the Trustees, the President and Vice Presidents shall be absent, the members present may appoint one from among them to preside at such meeting.

ART. 4. The President, or, in case of his absence, either

*These meetings are held the last Tuesday of October, and the Trustees elected commence their duties at the November meeting of Trustees.

of the Vice Presidents, with the advice of the Trustees, may call a special meeting of the Society; or whenever a written application, with the reason assigned therefore, shall be made by any twelve members of the Society, to the Presidents and Trustees, they shall call such meeting.

ART. 5. The meetings of the Trustees shall be held at such time and place as they shall from time to time agree upon: seven of whom with the presiding officer shall make a quorum.

ART. 6. The Trustees shall regulate all the concerns of the Society, during the intervals of its meetings; propose such objects of improvement to the attention of the public, publish such communications, and offer premiums in such form and value as they think proper (provided the premiums offered do not exceed the funds of the Society); and shall lay before the Society, at each of its meetings, a statement of their proceedings and of the communications made to them.

ART. 7. The Secretary shall take minutes of all the votes and proceedings of the Society and of the Trustees, and enter them in separate books; and shall record all such communications as the Trustees shall direct. He shall write and answer all letters relating to the business of the Society.

ART. 8. The Treasurer shall receive all monies due or payable to the Society, and all donations that may be made to it, for which he shall give duplicate receipts, one of which shall be lodged with the Secretary, who shall make a fair record thereof. The Treasurer shall from time to time pay out such monies as he shall have orders for from the Trustees; and shall annually, and whenever thereto required, render a fair account of all his receipts and payments to the Society or a committee thereof. He shall give bonds for the faithful discharge of his duty, in such sum as the Trustees shall direct, and with such sureties.

ART. 9. A committee shall be appointed annually by the Trustees, to audit the Treasurer's accounts, who shall report to the Society; and the same being accepted, shall be entered by the Secretary in his books.

ART. 10. In case of death, resignation, incapacity, or removal out of the County, of the Secretary or of the Treasurer, the Trustees shall take charge of the official books, papers, and other effects, belonging to the office that may be vacated, and give receipts for the same; which books, papers, etc., they may deliver to some person whom they may appoint to fill the office until the next meeting of the Society, at which time there shall be a new choice.

ART. 11. *Any citizen of the County may become a member of the Society, by paying the sum of THREE DOLLARS to increase the permanent fund of the institution.

ART. 12. A committee shall be raised from time to time, to solicit and receive subscriptions for raising a fund for encouraging the noblest of pursuits, the Agriculture of our country; the same to be sacredly appropriated to that purpose.

ART. 13. All ordained ministers of the Gospel who reside within the County, shall be admitted honorary members of the Society.

ART. 14. In addition to the usual number of Trustees annually elected, the past Presidents of the Society shall be honorary members of the Board of Trustees.

ART. 15. The foregoing constitution may be amended by a proposition of the amendment in writing by a member at a regular meeting; the same to lie over for the action at the next annual meeting of the Society.

*Members will receive from the Secretary a "certificate of membership." No fines or assessments are ever imposed. Members are entitled to vote in all its transactions, with free use of the Library and a copy of the printed "Transactions" each year.

A premium of six dollars is now offered to the resident of the County obtaining the largest number of new members during the year ending Nov. 1.

Dr. GILBERT L. STREETER, TREAS., IN ACCOUNT WITH THE ESSEX AG'L SOCIETY. Cr

1889-90.

1889.

To Bank Dividends for October, State Bounty,	\$363 20	By Balance of previous account,	\$372 46
Bank Dividends for April,	600 00	By amount of Premiums and Gratuities awarded by Trustees,	1,646 00
Cash received for new members,	370 95	Rent paid to the Salem Athenæum,	25 00
Cash received for the Annual Exhibition,	189 00	Expenses of Farmers' Institutes,	149 69
State Tax on Bank Stocks refunded,	787 98	Expenses of Treadwell Farm,	41 24
Unclaimed Premiums,	257 11	Bills paid for Annual Exhibition,	38 00
Balance due the Treasurer,	97 75	Interest on Temporary loan,	21 66
Legacy From Estate of Moses Wildes,	177 01	Cash for Printing Annual Reports,	266 00
	1,000 00	Bills for Miscellaneous Expenses,	19 05
	<hr/>	Investment of Legacy of Moses Wildes,	1,000 00
	\$3,843 00	The Secretary's account,	211 40
		The Treasurer's account,	52 50
			<hr/>
			\$3,843 00

Funds Belonging to the Society, November, 1890.

10 shares in National Hide and Leather Bank, Boston,	\$1,101 87	Amount brought forward,	\$14,333 05
3 shares in National Revere Bank, Boston,	377 62	Less Balance due the Treasurer,	177 01
18 shares in First National Bank, Salem,	1,914 66		<hr/>
18 shares in Salem National Bank, Salem,	2,000 00		\$14,156 04
42 shares in Asiatic National Bank, Salem,	1,281 25	Amount reported last year,	12,960 59
12 shares in Mercantile National Bank, Salem,	1,226 50		<hr/>
23 shares in Merchants' National Bank, Salem,	1,189 50	Gain,	\$1,195 45
5 shares in First National Bank, Danvers,	375 00	G. L. STREETER, Treasurer.	
8 shares in National Exchange Bank, Salem,	800 00		
16 shares in Warren National Bank, Peabody,	1,595 40	SALEM, Feb'y 4, 1891.	
15 shares in South Danvers National Bank, Peabody,	1,471 25	The above account has been examined this day, and is found cor-	
Lombard Loan,	1,000 00	rectly added and properly vouched, and the securities as stated.	
	<hr/>	JOS. H. PHIPPEN, Auditor.	
	\$14,333 05		

List of Premiums Awarded in 1890.

FAT CATTLE.

J. P. Little, Amesbury, for oxen, first premium,	\$8 00
John H. Dodge, Wenham, second premium,	6 00

BULLS.

Peter E. Clark, Beverly, Jersey, first premium,	8 00
A. P. Gardner, Hamilton, Jersey, second premium,	6 00
J. O. Edwards, Beverly, for Jersey under 2 years old, first premium,	4 00
Wm. A. Russell, No. Andover, for Holstein, first pre- mium,	8 00

MILCH COWS.

John S. Ives, Salem, for Grade Ayrshire, first premium,	10 00
Wm. A. Russell, No. Andover, for best milch cow, of any age or breed, Holstein, first premium,	15 00
Wm. A. Russell, No. Andover, for best Holstein cow, 4 years old and over, first premium,	10 00
Wm. A. Russell, No. Andover, for best cow, either native or foreign, not less than four nor more than ten years old, first premium,	10 00
James H. Flynn, Salem, for Grade Jersey, second pre- mium,	4 00

HERDS OF MILCH COWS.

William A. Russell, No. Andover, for Holsteins, first premium,	18 00
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HEIFERS—FIRST CLASS.

Wm. A. Russell, No. Andover, for Holstein heifer, in milk, first premium,	9 00
James C. Poor, No. Andover, for Holstein yearling, first premium,	5 00
James C. Poor, No. Andover, for Holstein heifer calf, first premium,	5 00
James C. Poor, No. Andover, for Holstein heifer, under 4 years, second premium,	6 00

James C. Poor, No. Andover, for Holstein yearling, second premium,	4 00
Lyman Holman, Salem, for Holstein, 2 years old, second premium,	4 00
A. P. Gardner, Hamilton, for, Jersey, 2 years old, first premium,	5 00
A. P. Gardner, Hamilton, for Jersey, second premium,	4 00
Mrs. W. D. Pickman, Beverly, for Guernsey heifer calf, first premium,	5 00
Mrs. W. D. Pickman, Beverly, for Guernsey heifer in milk, second premium,	6 00

HEIFERS—SECOND CLASS.

City Farm, Salem, for heifer in milk, first premium,	9 00
James C. Poor, No. Andover, for heifer in milk, second premium,	6 00
Wm. A. Foster, Beverly, for 2 years old heifer, first premium,	5 00
John S. Ives, Salem, for yearling heifer, first premium,	5 00
John S. Ives, Salem, for heifer calf, first premium,	5 00
Aug. P. Prince, Beverly, for 2 years old heifer, second premium,	4 00
I. O. Edwards, Beverly, for 2 years old heifer, second premium	4 00
I. O. Edwards, Beverly, for yearling heifer, second pre- mium,	4 00

WORKING OXEN AND STEERS.

S. W. Weston, Middleton, for oxen, first premium,	12 00
R. F. Dodge, Wenham, for oxen, second premium,	10 00
Wm. P. Christopher, Middleton, for oxen, third premium,	8 00

STEERS.

Wm. P. Christopher, Middleton, for steers, first pre- mium,	5 00
Herbert W. Patch, Hamilton, for steers, second premium,	4 00

TOWN TEAMS.

Beverly town team, oxen,	20 00
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STALLIONS—FIRST CLASS.

John Parkhurst, Boxford, for stallion, 6 years old, third premium,	4 00
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STALLIONS—SECOND CLASS.

H. H. Demsey, Wenham, for stallion, "Harry Dictator," 4 years old, first premium,	10 00
A. B. Forbes, Byfield, for stallion "Callista," 4 years old, second premium,	6 00
A. B. Forbes, Byfield, for stallion, "Lombardy," 6 years old, third premium,	4 00
L. H. Jones, Middleton, for stallion, 3 years old, first premium,	8 00
C. A. Lunt, Newbury, for stallion, 3 years old, second premium,	4 00

BROOD MARES—FIRST CLASS.

Richard T. Jaques, Newbury, for bay mare, first pre- mium,	10 00
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BROOD MARES—SECOND CLASS.

Edward Bates, Lynn, for sorrel mare, first premium,	10 00
Wm. H. Joint, Lynn, for mare, second premium,	6 00
Willis E. Churchill, Newbury, for gray mare, third pre- mium,	4 0 0

FAMILY HORSES.

D. J. Harrigan, Danvers, for family mare, first pre- mium,	10 00
C. Moynihan, Newbury, for family horse, second pre- mium,	6 00
S. F. Newman, Newbury, for bay mare, third premium,	4 00

GENTS' DRIVING HORSES.

George Brewer, Beverly, for horse Harry, first premium,	10 00
Wm. P. Bailey, West Peabody, for horse Dick, second premium,	6 00
Wm. P. Bailey, West Newbury, for horse Tom, third premium,	4 00

FARM HORSES.

John H. Perkins, Lynnfield, horse over 1200 lbs., first premium,	10 00
H. C. Strout, Peabody, for bay mare over 1200 lbs., second premium,	6 00
Hugh Hill, Beverly, for horse less than 1200 lbs., first premium,	10 00

W. J. Currier, Danvers, for horse less than 1200 lbs., second premium,	6 00
F. W. Lyford, Danvers, for horse less than 1200 lbs., third premium,	4 00

PAIRS OF FARM HORSES—FIRST CLASS.

A. P. Gardner, Hamilton, first premium,	10 00
Wm. Tucker, Andover, second premium,	8 00

PAIRS OF FARM HORSES—SECOND CLASS.

Moses H. Poor, West Newbury, for pair horses, first premium,	10 00
Fred A. Dodge, Beverly, for pair horses, second pre- mium,	8 00

COLTS FOR DRAFT PURPOSES.

S. F. Newman, Newbury, for 2 years old colt, first pre- mium,	8 00
Calvin Putman, Ipswich, for colt 15 months old, first premium,	5 00
R. Jaques, Jr., Newbury, for colt 2 yrs. 5 mos. old, second premium,	5 00
S. F. Newman, Newbury, for colt 14 mos. old, second premium,	3 00
J. P. Kinnear, Ipswich, for colt 2 years old, third pre- mium,	3 00

COLTS FOR GENERAL PURPOSES—FIRST CLASS.

A. B. Forbes, Byfield, Newbury, for colt 4 years old, first premium,	8 00
Ware & Rose, Marblehead, for colt 4 years old, second premium,	5 00
Edwin Bates, Lynn, for colt 3 years old, first premium,	6 00
C. Moynihan, Newbury, for colt 3 years old, second premium,	3 00

COLTS FOR GENERAL PURPOSES—SECOND CLASS.

W. F. Kinsman, Ipswich, for colt 2 years old, first pre- mium,	8 00
C. Moynihan, Newbury, for colt 2 years old, second pre- mium,	5 00

James Manning, Topsfield, for colt 2 years old, third premium,	3 00
M. H. Connor, West Newbury, for colt 1 year old, first premium,	5 00
W. H. & L. P. Tufts, Middleton, for colt 16 mos. old, second premium,	3 00

SWINE—FIRST CLASS.

Harvey C. Strout, Peabody, for Jersey red sow and pigs, first premium,	8 00
Harvey C. Strout, Peabody, for Cheshire sow and pigs, first premium,	8 00
Harvey C. Strout, Peabody, for Chester white boar, first premium,	8 00
Harvey C. Strout, Peabody, for Chester white boar, second premium,	5 00
Harvey C. Strout, Peabody, for Poland China sow and pigs, first premium,	8 00
Simon P. Buxton, Peabody, for Chester white sow and pigs, first premium,	8 00
Simon P. Buxton, Peabody, for Yorkshire weaned pigs, first premium,	8 00
Wm. A. Fisher, Jr., Peabody, for Chester white sow and pigs, first premium,	8 00

SWINE—SECOND CLASS.

Harvey C. Strout, Peabody, for sow and 7 pigs, first premium,	8 00
Harvey C. Strout, Peabody, for boar, first premium,	8 00
Harvey C. Strout, Peabody, for litter of weaned pigs, first premium,	8 00
Simon P. Buxton, Peabody, for sow and 8 pigs, second premium,	5 00
Simon P. Buxton, Peabody, for boar, second premium,	5 00

SHEEP.

C. S. Emerton, Peabody, for flock 10 sheep, first premium,	10 00
C. S. Emerton, Peabody, for buck, first premium,	8 00

PLOUGHING WITH DOUBLE TEAM.

Lyman S. Wilkins, Middleton, first premium,	10 00
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PLOUGHING WITH SINGLE TEAM.

Wm P. Christopher, Middleton, first premium,	10 00
Peter E. Clark, Beverly, second premium,	8 00

PLOUGHING WITH HORSES.

Moses H. Poor, West Newbury, first premium,	10 00
A. P. Gardner, Hamilton, second premium,	7 00
William Bent, West Newbury, third premium,	5 00

PLOUGHING WITH SWIVEL PLOUGH.

S. W. Weston, Middleton, first premium,	10 00
R. F. Dodge, Wenham, second premium,	8 00
Fred A. Dodge, Beverly, horses, first premium,	10 00

SULKY PLOUGHING.

C. H. Abbott, Wenham, first premium,	10 00
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PLOUGHING WITH THREE HORSES.

M. H. Connor, West Newbury, first premium,	10 00
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IMPROVING WASTE LAND.

John H. George, Methuen, first premium,	15 00
Albert Titcomb, Rowley, second premium,	10 00

GRAIN CROPS.

Charles W. Nelson, Georgetown, crop of corn, first premium,	10 00
Maurice H. Connor, West Newbury, crop of rye, first premium,	10 00
Oscar Gowen, West Newbury, crop of wheat, first premium,	10 00
Wm. Little, Newbury, crop of rye, second premium,	5 00

ROOT CROPS.

Charles C. Blunt, Andover, crop of parsnips, first premium,	10 00
John H. George, Methuen, crop of potatoes, first premium,	10 00
Daniel Carlton, North Andover, cabbage crop, first premium,	10 00
David Warren, Swampscott, cabbage crop, second premium,	5 00

SMALL FRUITS.

J. W. Barton, Danvers, strawberry crop, first premium,	10 00
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NEW MEMBERS.

Daniel D. Adams, Newbury, for most new members, premium,	6 00
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ESSAYS AND REPORTS.

Francis H. Appleton, Peabody, report of committee on forest trees,	10 00
J. J. H. Gregory, Marblehead, report of committee on harrows,	8 00
J. W. Goodell, Lynn, report of committee on apples,	6 00
George A. Rogers, North Andover, essay,	10 00
Charles H. Mann, Methuen, essay,	8 00

OTHER AWARDS.

Awarded by Committee on Poultry,	113 00
“ “ “ “ Harrows,	18 00
“ “ “ “ Agricultural Implements,	32 00
“ “ “ “ Carriages,	30 00
“ “ “ “ Dairy,	18 00
“ “ “ “ Bread, Canned Fruit, etc.,	19 50
“ “ “ “ Pears,	77 50
“ “ “ “ Apples,	70 50
“ “ “ “ Peaches, Grapes, etc.,	55 00
“ “ “ “ Plants and Flowers,	73 00
“ “ “ “ Vegetables,	180 50
“ “ “ “ Forest Trees,	20 00
“ “ “ “ Grain and Seed,	29 00
“ “ “ “ Counterpanes and Afghans,	23 00
“ “ “ “ Carpets and Rugs,	33 00
“ “ “ “ Manufact's from Leather,	27 00
“ “ “ “ Fancy Work,	48 75
“ “ “ “ Art Work,	49 00
“ “ “ “ Children's Work,	15 00
“ “ “ “ Manuf. and Gen'l Mdse.	20 00

RECAPITULATION.

FARMS.

Awarded for Improving Waste Land,	\$25 00
“ “ Ploughing,	98 00
	<hr/> \$123 00

FARM STOCK.

Awarded for Fat Cattle,	14 00
“ “ Bulls,	26 00
“ “ Milch Cows,	67 00
“ “ Heifers,	80 00
“ “ Heifer Calves,	15 00
“ “ Working Oxen and Steers,	30 00
“ “ Steers,	9 00
“ “ Town Teams,	20 00
“ “ Horses,	248 00
“ “ Swine,	95 00
“ “ Sheep,	18 00
“ “ Poultry,	113 00
“ “ Bees, Hives and Honey,	15 00
	<hr/> \$750 00

FIELD AND EXPERIMENTAL CROPS.

Awarded for Grain Crops,	35 00
“ “ Root Crops,	35 00
“ “ Fruit Crop,	10 00
	<hr/> \$80 00

FARM AND GARDEN PRODUCTS.

Awarded for Grain and Seed,	29 00
“ “ Vegetables,	180 50
“ “ Fruits,	201 00
“ “ Plants and Flowers,	73 00
	<hr/> \$483 50

DAIRY PRODUCT.

Awarded for Butter,	18 00
	<hr/> \$18 00

DOMESTIC MANUFACTURES.

Awarded for Bread, Canned Fruits, etc.,	19 50
“ “ Counterpanes and Afghans,	23 00
“ “ Carpetings and Rugs,	33 00
“ “ Articles Manuf. from Leather,	27 00
“ “ Manufactures and General Mdse.,	20 00
“ “ Fancy Work,	48 75
“ “ Work of Art,	49 00
“ “ Children's Work,	15 00
	<hr/> \$235 25

MISCELLANEOUS.

Awarded for Agricultural Implements,	50 00
“ “ Carriages,	30 00
“ “ Forest Trees,	20 00
“ “ New Members,	6 00
“ “ Essays, Reports, etc.,	42 00
	<hr/> \$148 00

The amount of \$1852.75 was awarded to 417 different individuals and firms in 33 different cities and towns in the county as follows, viz :

Amesbury, \$47.50 to 6 persons.	Methuen, \$33.00 to 1 person.
Andover, 25.00 “ 3 “	Manchester, 4.00 “ 2 “
Boxford, 21.50 “ 3 “	Middleton, 78.00 “ 11 “
Beverly, 423.75 “ 162 “	Newburyport, .50 “ 1 “
Bradford, 1.50 “ 1 “	Newbury, 120.00 “ 11 “
Danvers, 130.00 “ 27 “	No. And'r, 125.50 “ 7 “
Essex, .50 “ 1 “	Peabody, 228.75 “ 45 “
Georgetown, 10.00 “ 1 “	Rockport, 4.00 “ 2 “
Groveland, 2.00 “ 2 “	Rowley, 18.50 “ 4 “
Gloucester, 1.75 “ 3 “	Salem, 134.25 “ 47 “
Haverhill, 6.00 “ 2 “	Salisbury, 3 00 “ 1 “
Hamilton, 44.00 “ 7 “	Saugus, 8.50 “ 2 “
Ipswich, 19.50 “ 5 “	Swampscott, 25.50 “ 3 “
Lawrence, 3.50 “ 3 “	Topsfield, 19.00 “ 4 “
Lynn, 101.50 “ 20 “	Wenham, 69.50 “ 13 “
Lynnfield, 10.00 “ 1 “	W. Newb'y, 89.00 “ 9 “
Marbleh'd 41.75 “ 7 “	

FINANCIAL STATEMENT. FAIR AT BEVERLY, 1890.

Receipts for Admission to Hall,	\$1330 74	
“ “ “ “ Dinner,	171 00	
“ “ Grounds, Caterers, Swings etc.,	235 50	
“ “ Donation,	25 00	
	<hr/>	1762 24
Expenses, including tent hire and dinner,	1067 12	
	<hr/>	
Amount paid Treasurer,		\$695 12

OFFICERS OF THE SOCIETY.

FOR 1890-1.

PRESIDENT.

BENJAMIN P. WARE, of Marblehead.

VICE PRESIDENTS.

JAMES J. H. GREGORY, of Marblehead.

GEORGE B. LORING, of Salem.

JAMES P. KING, of Peabody.

OLIVER S. BUTLER, of Georgetown.

SECRETARY.

JOHN M. DANFORTH of Lynnfield.

TREASURER.

GILBERT L. STREETER, of Salem.

HONORARY TRUSTEE.

JOSEPH HOW, of Methuen.

DELEGATE TO THE STATE BOARD OF AGRICULTURE.

BENJAMIN P. WARE, of Marblehead.

TRUSTEES.

Charles C. Blunt, Andover. Wm. H. Allen, Manchester.

J. Henry Hill, Amesbury. Geo. W. Sargent, Merrimac.

Andrew Dodge, Beverly. Geo. B. Bradley, Methuen.

J. W. Chadwick, Boxford. Solomon Weston, Middleton.

S. W. Hopkinson, Bradford. Daniel D. Adams, Newbury.
 Andrew Nichols, Danvers. John W. Allen, Newburypt.
 Elias Andrews, Essex. Albert Berry, No. Andover.
 Sherman Nelson, Georget'wn. F. H. Appleton, Peabody.
 A. F. Harvey, Gloucester. Story D. Pool, Rockport.
 Abel Stickney, Groveland. Geo. B. Blodgett, Rowley.
 Alvin Smith, Hamilton. Henry A. Hale, Salem.
 E. A. Emerson, Haverhill. Wm. H. Greenleaf, Salisbury.
 Walter F. Gould, Ipswich. Samuel Hawkes, Saugus.
 H. G. Herrick, Lawrence. David Warren, Swampscott.
 Asa T. Newhall, Lynn. J. Arthur Lamson, Topsfield.
 John H. Perkins, Lynnfield. N. P. Perkins, Wenham.
 Amos P. Alley, Marblehead. Wm. P. Bailey, W. Newbury.

NEW MEMBERS—1890.

William Tucker, Andover. G. M. T. Piper, Danvers.
 Issacher Foster Jr., Beverly. D. Harrigan, Danvers.
 Alden Webb, Beverly. J. C. Vickary, Lynn.
 E. C. Sawyer, Beverly. L. H. Jones, Middleton.
 George Brewer, Beverly. John C. Rolf, Newbury.
 David Weir, Beverly. George C. Adams, Newbury.
 Charles M. Hilton, Bradford. Charles E. Adams, Newbury.
 William H. Wood, Boxford. John W. Perkins, Newbury.
 W. I. Chadwick, Boxford. M. H. Connor, W. Newbury.
 Henry Newhall, Danvers.

Members of Essex Agricultural Society.

DECEMBER, 1890.

Previous printed list was in 1888, corrected in 1889 and in 1890 Reports. If any errors are discovered in the following list, please report them to the Secretary. Trustees are requested to report death of members as soon as they occur, with printed notice, when convenient.

AMESBURY—23.

Bailey, O. S.	Gale, Edmund	Lane, T. W.
Burbank, C. U.	Gale, Foster	Morrill, Geo. T.
Cammet, Samuel	Goodwin, E. A.	Morse Daniel L.
Chesley, M. B.	Hill, Albert C.	Sawyer, Aaron
Chesley, John F.	Hill, J. Henry	Tibbets, William B.
Currier, W. H. B.	Hollander, Lambert,	True, Eben
Davis, B. Lewis	Huntington, B. F.	Vining, William F.
Felch, Elbridge S.	Little, J. P.	

ANDOVER—47.

Abbott, James J.	Chandler, Joshua H.	Johnson, Francis H.
Abbott, Nathan F.	Cheever, James O.	Johnson, S. K.
Abbott, Moses B.	Cummings, C. O.	Mason, George F.
Abbott, Hartwell B.	Flint, John H.	Morton, Marcus
Abbott, John B.	Foster, George W.	Noyes, Henry P.
Andrews, M. C.	Foster, Moses	Rea, Jasper
Barnard, Edwin H.	Foster, George C.	Reynolds, James H.
Bailey, Moses A.	Gutterson, C. G.	Ripley, George
Bailey, Samuel H.	Harriman, Thos. P.	Smith, James B.
Blunt, Charles C.	Hayward, Henry A.	Smith, John L.
Bodwell, H. A.	Hidden, David I. C.	Smith, Peter D.
Buchan, George	Holt, E. F.	Smith, Benjamin F.
Buchan, George W.	Holt, Joseph S.	Thayer, Samuel
Butterfield, J. P.	Holt, Ballard	Tucker, William
Carter, Charles L.	Jenkins, John B.	Upton, Edward C.
Carruth, Isaac	Jenkins, E. Kendall	

BEVERLY—92.

Andrews, Joseph F.	Foster, William B.	Paine, Charles C.
Appleton, Nathan D.	Friend, Seth	Perry, Albert
Appleton, Isaac	Giles, Benjamin V.	Phillips, J. C. Mrs.
Avery, Mark B.	Gray, William H.	Pickett, Charles
Baker, John I.	Haven, Franklin	Pitman, Mark
Bennett, Robert G.	Herrick, Joseph H.	Pope, Jasper
Burnham, O. B.	Hill, Hugh	Porter, Adoniram
Brewer, George	Howse, Thomas W.	Preston, Ezra
Carter, John W.	Killam, Charles W.	Raymond, John W.
Caldwell, Charles E.	Lee, Asa F.	Raymond, J. W. jr.
Clark, George	Lord, Cyrus W.	Roberts, Stephen W.
Clark, Arthur E.	Lovett, William H.	Roundy, George
Clark, Aug. N.	Lawrence, C. A.	Sawyer, E. C.
Clark, Peter E.	Loring, Augustus P.	Stephens, Augustus
Connelly, Stephen	Lovett, Francis S.	Stickney, George W.
Danforth, E. F.	Lovett, John W.	Stone, Samuel H.
Dodge, Andrew	Mason, Alfred A.	Swasey, E
Dodge, Benjamin N.	Mason, George	Trask, J. G.
Dodge, Benjamin B.	Mason, Charles A.	Trafton, Darling F.
Dodge, Fred A.	Mason, Lyman	Trask, Joseph W.
Dodge, Israel W.	Marsters, James A.	Vittum, Albert
Dodge, Joshua S.	Mayo, Josiah	Walker, Lawson
Dodge, Forest C.	Mitchell, John E.	Webb, Alden
Dodge, Lucius B.	Morgan, William C.	Wallis, Joseph A.
Dodge, Walter F.	Morse, John T.	Williams, Augustus
Elliot, John T.	Moulton, Charles	Whitcomb, Austin
Endicott, Robert R.	Moulton, John A.	Wier, David
Foster, David L.	Munsey, John G.	Woodbury, L., jr.
Foster, Henry W.	Murney, John M.	Woodbury, H. W.
Foster, Issacher jr.	Norwood, Francis	Woodbury, Rufus
Foster, William A.	Obear, Ezekiel F.	

BOXFORD—27.

Anderson, Chas. R.	Cole, David M.	Nason, James H.
Andrew, Isaac W.	Cole, John K.	Parkhurst, John
Austin, Charles F.	Cole, Warren M.	Parkhurst, John W.
Austin, George B.	Cole, Wm. Kimball	Pearl, Edw. E.
Barnes, B. S.	Day, Isaac C.	Pearl, John M.
Chadwick, Geo. W.	Day, Mrs. John	Perley, Charles
Chadwick, James W.	Herrick, Israel	Sawyer, Thomas
Chadwick, Walter I.	Killam, Oliver P.	Styles, Charles F.
Cleveland, James P.	Ladd, John I.	Wood, John T.

BRADFORD—38.

Bradstreet, Justin E.	Hilton, Charles M.	Little, Mrs. M. P.
Burpee, Hiram L.	Hopkinson, Sam'l W.	Ordway, Alfred
Cogswell, Doane	Johnson, Charles G.	Peabody, Walter S.
Cogswell, George	Johnson, Laburton	Peabody, Frank
Cogswell, William,	Kimball, Albert	Peabody, Daniel
Day, Albert J.	Kimball, A. Laburton	Perley, John
Ellis, John A.	Kimball, Leverett	Phillips, G. Franklin
Emerson, Charles B.	Kimball, Wm B.	Poor, Charles H.
Gage, Edwin V.	Kimball, M. Tenney	Tewksbury, John B.
Hale, H. H.	Kingsbury, John D.	Thornton, William
Hazeltine, Charles	Knight, Albert H.	Wales, Herbert E.
Hazeltine, John	Ladd, B. G.	Webster, Charles E.
Hilton, William	Ladd, George W.	

DANVERS—110.

Armitage, John S.	Harrigan, D. J.	Peart, William B.
Bartlett, James A.	Hood, Joseph E.	Perley, Dean A.
Berry, Allen A.	Hutchinson, Edward	Perley, Edward P.
Berry, Eben G.	Hutchinson, W. P.	Perkins, Henry A.
Bent, William	Jacobs, Wm. A.	Perkins, Warren G.
Batchelder, J. Q. A.	Jackson, Eben	Perkins, William P.
Bradstreet, Elijah	Juni, Conrad	Perkins, M. Sumner
Bodge, Horatio	Kimball, Francis O.	Perry, George S.
Bradstreet, William	Kimball, Joel jr.	Pettingill, David A.
Brown, William H.	Kirby, Patrick	Pillsbury, H. H.
Boardman, I. P.	Langley, J. R.	Piper, G. M. T.
Butler, J. C.	Learoyd, A. P.	Pope, Ira P.
Clark, N. J.	Lefavour, Mrs.	Porter, Benjamin F.
Carlton, O. Loring	Legro, Edmund	Pratt, Amos
Carlton, Wm. B.	Legro, John C. P.	Preston, Charles H.
Day, Clarence	Lyford, Francis W.	Putnam, Ansel W.
Dempsey, L. P.	Massey, Dudley A.	Putnam, Edwin F.
Dodge, Elnathan	Marston, Jacob	Putnam, Israel H.
Dodge, Francis	McCrillis, Ransom F.	Putnam, Joseph C.
Eaton, Winslow W.	Merrill, Walter S.	Putnam, John A.
Fellows, Alfred	Morrison, L. L.	Putnam, Joel
Fernald, Oliver	Mudge, Augustus	Putnam, Otis F.
Fisher, Franklin W.	Nichols, Andrew	Pratt, George
Fowler, Augustus	Nichols, Andrew jr.	Pratt, Samuel S.
Fuller, Solomon	Newhall, Benj. E.	Porter, John W.
Gould, Charles H.	Newhall, Henry	Pope, Daniel P.
Grout, John	O'Neal, T. H.	Proctor, Nathan P.
Gustin, John H.	Patch, Abraham	Richardson, James
Hill, Edward L.	Peabody, George H.	Richards, C. S.

Roberts, Oliver	Spring, Jacob E.	Waldron, E. T.
Rollins, Jonas	Tapley, George	Weston, Mrs. L. P.
Ropes, Joseph E.	Tapley, Gilbert A.	White, Henry A.
Rice, Chas. B.	Trask, Alfred M.	Woodis, Alden B.
Sears, John A.	Upton, Franklin W.	Woodman, Edw. E.
Spaulding, Sam'l W.	Verry, Augustus	Whipple, John F.
Swinerton, John	Verry, Henry	Wilkins, Fred'k A.
Smart, John L.	Walcott, Wm. H.	

ESSEX—16.

Andrews, Elias	Haskell, George	Low, Aaron
Burnham, Wash.	Knowlton, Aaron	Low, Josiah
Burnham, Wm. Howe	Knowlton, Moses	Lufkin, A. E.
Choate, Rufus	Knowlton, Herbert	McDonald, Daniel
Cogswell, Chas. B.	Knowlton, Perry B.	
Haskell, David L.	Lee, Edward K.	

GEORGETOWN—23.

Bateman, A. P.	Nelson, Sherman	Tenney, George J.
Butler, Oliver S.	Osgood, Stephen	Tenney, Gorham D.
Chapman, Jonathan	Perley, David E.	Tenney, Moses
Harriman, Hiram N.	Pettingill, Henry	Tenney, Orlando B.
Hoyt, John A.	Pillsbury, J.	Tidd, Luther P.
Hoyt, Martin L.	Poor, Samuel T.	Weston, George S.
Huse, Ralph C.	Ridley, Amos	Wheeler, William S.
Marble, Nathaniel	Spoofford, Sumner P.	

GLOUCESTER—78.

Babson, Fitz J.	Clark, John	Dolliver, William C.
Babson, Horatio	Cole, Israel H.	Dolliver, William P.
Babson, Osman	Conant, Thomas	Fears, Robert R.
Barrett, Charles P.	Cook, Benjamin F.	Ferguson, Thos. B.
Bennett, Charles	Corliss, Benjamin H.	Foster, Jeremiah
Bradford, George R.	Corliss, John	Garland, Joseph
Brown, Edward H.	Cronin, John	Griffin, Bennett
Burnham, A. M.	Curtis, Samuel jr.	Grover, Charles E.
Burnham, H. A.	Davis, James	Harvey, Alonzo F.
Burnham, S. A.	Davis, William P.	Haskell, H. C. L.
Calef, John C.	Dennen, George	Haskell, William H.
Carter, John S.	Dodd, Stephen	Herrick, Gardner W.
Carter, Sherman J.	Dolliver, John S.	Knowles, Thomas J.

Lane, Andrew	Plumer, David	Somes, John E.
Lane, George	Presson, David S.	Stacy, John H.
Lawrence, R. C.	Presson, Alfred	Stanwood, Barnard
Lovett, John H.	Price, Augustus E.	Story, Cyrus
Low, David W.	Proctor, Joseph O.	Thompson, Chas. P.
Low, Frederic F.	Proctor, Wilbur F.	Webster, Nathaniel
Marr, Chester jr.	Ricker, Richard W.	Wetherell, M. L.
Mayc, Israel C.	Roberts, Joshua	Wilson, John J.
Norwood, George	Rogers, Allan	Witham, Addison
Parsons, W. Frank	Rogers, John S.	Wonson, Augustus H.
Pattillo, Alexander	Rust, William P.	Wonson, F. G.
Pew, William A.	Sanford, H. G.	Wonson, George M.
Phillips, N. H.	Shepherd, Joseph C.	Wonson, J. W.

GROVELAND—24.

Balch, Thomas H.	Hopkinson, W. H.	Pemberton, L. K.
Curtis, Edwin T.	Ladd, J. B. P.	Savary, Charles P.
Fegan, Henry C.	Ladd, Nathaniel E.	Spofford, Henry H.
George, Edwin B.	Longfellow, N.	Stacy, Edward M.
George, Samuel B.	Longfellow, Samuel	Stickney, Abel
Harrington, Edward	Martino, Philip H.	Tenney, George H.
Harriman, Moses H.	Merrill, Burton E.	Wardwell, Z. C.
Harriman, Abel S.	Parker, Eldred S.	Woodbury, Louis A.

HAVERHILL—71.

Barnes, B. Frank	Farnsworth, J. H.	Mitchell, E.
Berry, J. M.	Fellows, Samuel	Moody, H. L.
Blake, J. Albert	Fellows, C. H.	Morse, John H.
Bodwell, Stephen	Flanders, Daniel D.	Merrill, Giles
Brickett, Barnard	Frost, Henry	Nichols, John B.
Brickett, Daniel	Gale, John E.	Nichols, J. B.
Butters, Charles	Goodwin, Rufus	Ordway, Joshua H.
Chase, Abel W.	Goodwin, John H.	Peabody, Stephen
Chase, C. W.	Hanson, M. W.	Peters, Daniel
Cheever, H. W.	Haseltine, Amos jr.	Poore, F. W.
Cook, Justin T.	Heath, Albert	Porter, Dudley
Corliss, Charles	Hooke, Daniel	Quinby, T. W.
Davis, James	Howe, Moses	Randall, John P.
Dewhurst, James	Ingalls, E. T.	Richardson, John B.
Eaton, B. F.	Johnson, Henry H.	Ridgeway, Jos.
Eaton, Harrison	Lackey, Andrew	Rhodes, C. N.
Emerson, Albert	Little, E. C.	Sanders, Thomas
Emerson, E. A.	Little, J. G. S.	Smith, Geo. S.
Emery, Benjamin	Marsh, John J.	Sprague, W. W.

Stewart, John	Webster, E. F.	White, James D.
Taylor, Martin	Webster, Richard	Whittier, Alvah
Taylor, Oliver	West, H. K.	Whittier, Warner R.
Titcomb, Beniah	West, James F.	Winchell, James H.
Wadleigh, Levi C.	West, Thomas	
Webster, Ebenezer	Wheeler, Allison	

HAMILTON—29.

Allen, Francis R.	Dunnels, Ira A.	Norris, George
Brown, William A.	Ellis, George W.	Norwood, C. J.
Creamer, George G.	Gardner, A. P.	Patch, Mrs. Oliver
Dane, Ephraim A.	Gibney, George H.	Putnam, Charles O.
Dane, George E. F.	Kimball, Isaac W.	Rankin, Eli C.
Dane, John jr.	Knowlton, Franklin	Robinson, E. P.
Dane, William A.	Knowlton, Isaac F.	Safford, Daniel E.
Dane, Sylvester	Knowlton, Joseph	Smith, Alvin
Dodge, Emerson P.	Lamson, Jarvis	Whipple, Em. A.
Dodge, George B.	Nason, Daniel A.	

IPSWICH—42.

Abbott, Joseph B.	Grant, Joshua B.	Marshall, Joseph
Appleton, Francis R.	Green, George H.	Perkins, Isaac E. B.
Appleton, Daniel F.	Haskell, George	Perley, David T.
Baker, S. N. jr.	Hobbs, John	Reddy, Michael
Bond, James W.	Hodgdon, George	Ross, Joseph
Brown, Everett K.	Hodgkins, Augustine	Rutherford, Aaron A.
Brown, S. Albert	Horton, Joseph	Shatswell, Nathaniel
Brown, William G.	Johnson, George E.	Smith, Webster
Caldwell, Abraham	Jordan, Mrs. Robert	Stone, Augustine
Clark, Erastus	Kimball, Daniel	Story, Alden
Fall, Tristram B.	Kinnear, James	Treadwell, William
Fellows, Alonzo B.	Kinsman, Joseph F.	Underhill, J. C.
Gould, John J.	Kinsman, William H.	Wade, Asa
Gould, Walter F.	Kinsman, Willard F.	Whittier, Maynard

LAWRENCE—36.

Ames, M. B.	Flynn, Edward	Hills, George W.
Bodwell, Asa M.	French, A. J.	Hood, Gilbert E.
Cabot, George D.	Goodwin, John	Holt, Lewis G.
Currier, Eben B.	Goodwin, Patrick	Hubbard, Leavitt
Currier, J. Merrill	Goodwin, Francis J.	Joyce, James W.
Drew, J. D.	Halley, T. D.	Keleher, W. A.
Durant, W. A.	Herrick, H. G.	Lewis, S. T.

McAllister, J. G.	Robinson, P. B.	Shattuck, Joseph
Merrill, George S.	Rollins, John R.	Small, Henry
Page, E. F.	Russell, George W.	Victor, F. M.
Patterson, D. H.	Russell, W. A.	Wellman, John R.
Richardson, E. P.	Saunders, Daniel	Wright, W. H. P.

LYNN—102.

Aldrich, A. P.	Haskell, John C.	Newhall, George T.
Allen, Walter B.	Harnden, Henry C.	Nichols, H. S.
Andrews, Randall	Harris, N. S.	Nichols, Otis
Baker, Ezra	Hawkes, Nathan M.	Nichols, Thomas P.
Bates, Edwin	Heath, Henry A.	Norris, George jr.
Bates, Walter E.	Heath, James	Noyes, Geo. C.
Bates, William H.	Hill, E. L.	Oliver, John E.
Bates, Fred H.	Hopkins, Fred I.	Parsons, Charles E.
Bates, Wallace	Hovey, Rufus P.	Pevear, G. K.
Beckford, Ebenezer	Ingalls, James W.	Pevear, H. A.
Beede, C. O.	Ireson, S. S.	Phillips, B. Frank
Berry, Henry N.	Johnson, Jacob A.	Potter, Edward P.
Berry, Benj. J.	Jepson, Eli	Preble, J. H.
Bray, E. E.	Joint, William H.	Ramsdell, Charles H.
Bray, Wm. A.	Kimball, Rufus	Richards, Edward A.
Breed, Amos F.	King, W. P.	Rogers, Ira D.
Breed, George H.	Knox, David	Roney, Simon J.
Breed, Henry H.	Lamphier, Joseph A.	Rounds, Herbert L.
Breed, Richard	Lamphier, W. L.	Rowell, B. W.
Butman, Joseph E.	Mace, Frank W.	Sargent, George D.
Butman, Wm. W.	Marsh, George E.	Sheehan, John
Cain, Julia A. Mrs.	Marsh, S. E.	Shorey, John L.
Chase, L. H.	May, Lyman A.	Shorey, George L.
Chase, Amos F.	McBrien, Richard	Sawyer, J. A. J.
Cross, Alfred	McKenney, John H.	Townes, Q. A.
Croscup, James A.	Merritt, Timothy	Tyler, Thaddeus W.
Cressey, John S.	Mockett, Joseph E.	Usher, Roland G.
Dwyer, Edward F.	Mower, A. A.	Vickary, J. C.
Emery, George E.	Mower, M. V. B.	Ward, Benj. A.
Farrar, Jos. E.	Mudge, John	Whipple, Geo. H.
Foster, George	Neal, Peter M.	Willey, James L.
Fry, Charles C.	Newhall, Asa T.	Wilson, J. C.
Goodell, J. W.	Newhall, G. A.	Winslow, Aaron
Goodwin, Joseph W.	Newhall, Hiram L.	Winslow, G. W.

LYNNFIELD—20.

Bancroft, J. K.	Cox, Thomas E. jr.	Danforth, John M.
Brown, Joseph	Cooper, C. A.	Derby, Charles H.

Gerry, Elbridge F.	Monroe, Harry W.	Perkins, J. Winslow
Griffin, George F.	Monroe, Wilbur J.	Roundy, George M.
Hawkes, George L.	Newhall, Frank	Roundy, W. R.
Herrick, George E.	Perkins, John	Smith, Henry E.
Mansfield, Andrew	Perkins, John H.	

MANCHESTER—12.

Allen, Wm. H.	Cheever, William M.	Merriam, Arthur M.
Baker, John	Coolidge, T.	Jefferson Price, John
Burnham, Frederick	Friend, Daniel W.	Rabardy, Julius F.
Cheever, John H.	Lee, Allen	Sturgis, Russell

MARBLEHEAD—14.

Alley, Amos P.	Dennis, W. John	Paine, Thomas W.
Appleton, Thomas	Gregory, J. J. H.	Phillips, Wm. S. jr.
Clough, A. W.	Hathaway, Amos C.	Ware, Benjamin P.
Cloutman, B. Henry	Hathaway, Joseph B.	Ware, Horace
Cronin, Michael	Hathaway, Seth W.	

MERRIMAC—11.

Adams, George	Loud, L. C.	Sargent, Geo. W.
Chase, William	Pike, James D.	Sargent, P. Willis
Clement, M. G.	Sargent, M. Perry	Tewksbury, D. M.
Haskell, Wm. H.	Sargent, Bailey	

METHUEN—27.

Bradley, George B.	Gage, George W.	Pedlar, S. J.
Buswell, Joseph E.	George, John H.	Phippen, G. S.
Butters, George A.	Goss, Chas. E.	Parker, Jas. O.
Butters, W. H.	How, Joseph	Rogers, William M.
Currier, Daniel	How, Joseph S.	Sargent, S. G.
Crosby, John S.	Mann, C. W.	Sleeper, Wm. C.
Dow, Virgil	Morrison, D. T.	Smith, Walter
Emerson, Jacob jr.	Ne vins, Henry C.	Thur low, J. E.
Frederick, John W.	Noyes, David W.	Tozier, C. L.

MIDDLETON—14

Berry, William	Jones, L. H.	Stewart, Mrs. S. A.
Christopher, Wm. P.	Phelps, William A.	Weston, Solomon W.
Currier, George A.	Stiles, Farnum	Wilkins, George P.
Flint, James	Stiles, Mrs. Farnum	Wilkins, Lyman S.
Hutchinson, J. A.	Stiles, Hiram A.	

NAHANT—1.

Goodale, Byron

NEWBURY—58.

Adams, Charles W.	Jaques, Richard T. jr.	Noyes, Justin
Adams, Daniel D.	Jaques, William	Noyes, Horace P.
Adams, George W.	Kent, Edward	Noyes, James
Adams, James K.	Knight, Edward S.	Noyes, Moses K.
Adams, George E.	Little, Carleton	Perkins, Wm. W.
Adams, Charles E.	Little, Edward F.	Perkins, Frank
Bray, Richard S.	Little, Joseph	Perkins, Paul A.
Bray, George W.	Little, Nathaniel jr.	Perkins, John W.
Boynton, Charles	Little, William	Plummer, Daniel
Coffin, Wm. P.	Little, Wm. Burke	Plummer, George H.
Colman, Moses	Longfellow, Horace F.	Randall, George A.
Dole, Nathaniel	Longfellow, Joseph	Rogers, Abial
Forbes, A. B.	Longfellow, Jos. Mrs	Rolf, John C.
Hale, Stephen P.	Lucy, Gideon R.	Rolfe, Joseph N.
Howard, Horatio M.	Lunt, Charles M.	Tenney, Henry L.
Isley, Edwin	Moody, Nath'l W.	Tenney, Elbridge
Isley, Paul M.	Moynihan, Cornelius	Tenney, Daniel G.
Isley, Joseph	Newman, Sidney F.	Toomey, Mathew H.
Jaques, Richard	Noyes, Edwin P.	Woods, Charles W.
Jaques, Richard T.		

NEWBURYPORT—66.

Adams, Philip D.	Batchelder, Dan'l C.	Cook, T. N.
Adams, J. Quincy	Bayley, Wm. H.	Cutter, Eben P.
Adams, Rufus	Cashman, Jeremiah	Delano, Otis
Allen, John W.	Capers, Thomas	Evans, Frank W.
Balch, John H.	Colby, George J. L.	Griffin, Eliphalet
Ballou, C. N.	Currier, Warren	Hale, Joshua
Bartlett, Chas. S.	Colman, James C.	Hamlet, Daniel
Bartlett, T. K.	Colman, William T.	Hart, James S.

Hewett, C. C.	Moseley, Edward A.	Poore, George H.
Huff, William,	Moseley, Edward S.	Rowe, D. T.
Jackman, George W.	Mosely, Fred'k S.	Sargent, John W.
Jones, William	Moulton, Henry W.	Smith, Joseph B.
Johnson, Wm. R.	Moulton, Joseph	Smith, Robert A.
Kent, Otis L.	Nelson, David O. jr.	Stanley, B. F.
Knights, George W.	Newhall, Asa T.	Stanley, J. C.
Knight, Joseph	Noyes, Isaac P.	Titcomb, Albert
Lewis, Samuel W.	Ordway, A. D.	Titcomb, Paul
Little, Hector	Ordway, Parsons	Tilton, Enoch
Little, John G.	Perley, R. M.	Toppam, Edward S.
Lunt, Charles	Perkins, Charles	Winkley, J. Otis
Maguire, C. N.	Plummer, Moses A.	Winkley, Paul T. jr.
Merrill, Enoch	Plummer, Wm. C.	Walker, George S.

 NO. ANDOVER—47.

Adams, Edward	Farnham, Mrs. B.	Loring, George B. jr.
Berry, Albert	Farnham, J. L.	Manion, John
Bodwell, S. B.	Farnham, W. Benj.	Montgomery, Jas. A.
Butterfield, Charles A.	Foster, J. Frank	Osgood, Isaac F.
Bassett, Leon H.	Foster, John P.	Peters, Nathaniel
Barker, John	Foster, Orrin	Phillips, Willard P.
Carlton, Daniel	French, J. D. W.	Poor, James C.
Carlton, Daniel A.	Fuller, Abijah P.	Riley, Henry
Chever, William J.	Goodhue, Hiram P.	Robinson, Addison M.
Davis, George G.	Greene, E. W.	Stevens, Moses T.
Davis, George E.	Holt, Peter jr.	Stevens, Oliver
Davis, George L.	Jenkins, Benj. F.	Symonds, Frederick
Dale, William J.	Jenkins, Milon S.	Wilson, Abiel
Dale, William J. jr.	Johnson, James T.	Wardwell, T. O.
Farnham, B. H.	Johnson, Charles F.	Wiley, John A.
Farnham, Byron K.	Kittredge, Hannah E.	

 PEABODY—80.

Appleton, Francis H.	Batchelder, Cyrus T.	Clark, A. B.
Bancroft, Sidney C.	Brown, W. H.	Cody, James F.
Barrett, E. Pope	Brown, R. S.	Colcord, J. L.
Barrett, Edward P.	Blake, E. L.	Cummings, Daniel
Bodge, Henry	Blaney, Stephen	Curtis, Andrew
Buxton, Henry V.	Buxton, Robert G.	Dole, William T.
Brown, Rufus H.	Buxton, Simon P.	Durkee, T. C.
Brown, Lewis	Carroll, Thomas	Emerton, C. S.
Bushby, N. A.	Chadwick, Orville B.	Foster, Ira

Foster, George M.	Mansfield, Arthur W.	Rogers, Jacob C.
Goodale, Jacob O.	Marsh, Frank	Saltonstall, Henry
Hayes, Andrew J.	Marsh, James	Sheen, William E.
Haven, C. B.	Merrill, Amos	Southwick, Sumner
Hills, Benjamin M.	Morris, R. F.	Swett, Samuel
Herrick, John E.	Needham, George A.	Taylor, Benjamin H.
Hoag, Charles E.	Needham, Joseph S.	Taylor, George W.
Hubbard, A. J.	Newhall, Orlando F.	Thomas, Josiah B.
Hutchinson, Samuel	Nourse, Samuel W.	Twiss, Everett M.
Hutchinson, C. K.	Osborne, Abraham C.	Viles, Bowman
King, George H.	Osborn, Lyman	Walcott, John G.
King, J. Augustus	Osgood, William E.	Wallace, David B.
King, James P.	O'Keefe, Timothy	Walton, George D.
King, Jonathan	Pepper, George W.	Wheeler, Benj. S.
Linehan, John	Preston, Levi	Whipple, Horace P.
Little, William H.	Quint, Nicholas M.	Wiley, William F.
Marsh, Fred	Raddin, Alonzo	Wilson, Robert H.
Mansfield, E.	Richardson, W. B.	

ROCKPORT—22.

Appleton, Zeno A.	Low, Martha J. Mrs.	Norwood, Gorham
Blatchford, Eben	Low, William	Patch, William H.
Dodd, Stephen	Manning, James	Pool, Story D.
Gott, Daniel S.	Manning, John J.	Rowe, Amos
Grimes, Loring	Manning, William N.	Smith, Allen
Lane, Andrew	Merriden, James B.	Smith, William H.
Lane, Andrew jr.	McNeil, William	Smith, Solomon
Lane, Horace		

ROWLEY—22.

Bartlett, B. W.	Hale, T. P.	Potter, Edward H.
Blodgette, George B.	Keyes, Eben S.	Stockbridge, Seth
Daniels, George E.	Lambert, Mary G.	Stockbridge, A. J.
Dodge, Joseph D.	Mahoney, John	Tenney, John H.
Dummer, Nath'l N.	Mighill, Charles P.	Todd, Frank P.
Hale, Clara A.	Pike, John	Todd, John F.
Hale, Daniel H.	Prime, Daniel B.	Todd, J. Scott
Hale, Thomas		

SALEM—66.

Andrews, Samuel P.	Hale, Henry A.	Pettingell, George
Almy, James F.	Holman, Lyman	Page, John G.
Abbott, Nathaniel	Horton, N. A.	Page, James E.
Barton, Gardner	Ives, John S.	Pickering, Benjamin
Bliss, Edgar	Jones, Samuel G.	Robinson, John
Curwen, James B.	Kemble, Arthur	Ropes, Reuben W.
Chase, George	Lamson, Frederick	Rogers, A. D.
Curwen, Samuel H.	Lord, William	Reynolds, Henry E.
Clark, Charles S.	Loring, George B.	Rowell, E. F.
Collins, Wm. F. M.	Lander, William A.	Ropes, John C.
Cresy, George W.	Mack, William	Saunders, Robert J.
Daland, John	Manning, Robert	Shreve, O. B.
Endicott, William C.	Merrill, E. H.	Spencer, Charles P.
Felt, John	Merritt, David	Swasey, John A.
Foote, Caleb	Morse, E. Henry	Streeter, Gilbert L.
Foster, Joseph C.	Northend, Wm. D.	Tracey, Patrick
Foster, William J.	Peabody, John P.	Ware, Horace C.
Goodhue, William P.	Perkins, E. R.	Wheatland, Henry
Gray, Benjamin A.	Putnam, Henry W.	White, Frank W.
Gardner, D. B.	Phippen, George D.	Whitmore, Wm. F.
Hathaway, John	Potter, William	Waters, David P.
Hanson, Clement R.	Pingree, David	Wyman, Isaac C.

SALISBURY—15.

Bartlett, Moses J.	Getchell, N. Tracy	Pettengill, Wesley
Dole, Edward G.	Greeley, Furmer H.	Pettengill John Q.A.
Dow, George A.	Greenleaf, Wm. H.	Smith, John F.
Eaton, John F.	Littlefield, Hiram	Thornton, Robert
Evans, John Q.	Morrill, Abram L.	True, P. Albert

SAUGUS—12.

Blodgett, J. W.	Hawkes, Samuel	Newhall, Joseph
Faxon, M. B.	Hawkes, Louis P.	Noble, William
Flye, John	Hill, Alfred C.	Penney, George H.
George, Henry M.	Newhall, Herbert B.	Whitehead, Joseph

SWAMPSCOTT—7.

Crosman, S. F.	Rowe, Allen	Warren, David
Pettingell, L. D.	Washburne, John	Warren, Mrs. N. J.
Pettingell, S. J.		

TOPSFIELD—17.

Averill, George F.	Leach, Thomas K.	Towne, Frank H.
Bradstreet, Dudley	Manning, James	Ward, Richard
Herrick, Charles	Mason, Alphonso	Wildes, Eugene L.
Hood, Salmon D.	Peabody, Charles J.	Wilson, James
Lamson, J. Arthur	Pike, Baxter P.	Woodbury, Isaac M.
Leach, Charles H.	Poole, Benjamin	

WENHAM—20.

Alley, Henry	Dodge, George F.	Pingree, David
Batchelder, T. Wilson	Dodge, William P.	Peabody, George
Cole, Zacariah	Edwards, Francis R.	Parsons, George W.
Conant, John P.	Hobbs, A. F.	Patch, Henry
Day, Everett K.	Hobbs, Henry	Perkins, Nathan'l P.
Demsey, H. H.	Kavanagh, J.	Tilton, George H.
Dodge, Robert F.	Morgan, William B.	

WEST NEWBURY—45.

Bailey, William P.	Gowen, Francis H.	Ordway, Cyrus D.
Bailey, Lawrence H.	Gowen, Oscar	Ordway, Cyrus K.
Bartlett, M. Walsh	Jacques, Romulus	Ordway, Thomas G.
Boynton, Eben M.	Jacques, Stephen A.	Ordway, Charles W.
Brown, Hayden	King, T. J.	Peirce, George J.
Bryant, William	Lane, Isaac N.	Peirce, Henry J.
Carr, E. Dole	Merrill, William	Poore, Moses H.
Carr, Samuel	Merrill, William E.	Poore, Amos
Connor, M. H.	Merrill, Henry	Prince, S. R.
Follansbee, B. A.	Moore, Alfred L.	Rogers, Calvin
Flook, George L.	Nason, Ezekiel G.	Rogers, George C.
Goodridge, David L.	Nason, Henry F.	Stanwood, Moses P.
Goodridge, H. M.	Nelson, Daniel P.	Talton, John C.
Gordan, J. R.	Newell, Richard	Thurlow, Thomas C.
Gowen, Mrs. C. W.	Noyes, Stephen E.	Titcomb, Silas M. C.

NON-RESIDENTS—136.

Allen, Henry C., Keene, N. H.	Balch, William H., Malden
Alley, James E.	Baker, John, Sanborn, Col.
Ames, Amos L., Tacoma, Wash.	Barker, John G., Boston
Babson, Gustavus, jr., Seward, Neb.	Beckford, C. H., Boston
Balch, Eustis, California	Blake, J. P., Newton
	Black, James D., Harvard

- Blunt, J. Milton, Springfield
 Bodwell, Henry A., Keene, N. H.
 Bodwell, Jos. K., Hallowell, Me.
 Brackett, H. Clarke, Virginia
 Burnham, Choate, Boston
 Burnham, Ira T., Lexington
 Butler, Benjamin F., Lowell
 Caldwell, L., Jacksonville, Fla.
 Campbell, Charles H., New Rochelle, N. Y.
 Carey, James, Quincy
 Carey, James, New York
 Chapin, W. C., Providence, R. I.
 Chase, Joseph S., Malden
 Cheever, John H., Somerville
 Clarke, Joseph F., Boston
 Cleaveland, H. W. S., Chicago
 Colby, Charles A., New York
 Currier, William A., Boston
 Day, Abraham, Boston
 Davis, Phineas E., Chicago
 Dodge, Albert W., Brighton
 Dodge, John S., Chicopee
 Dole, Francis F., Chicopee
 Drew, Charles R., Medford
 Eaton, Thos., Harristown, Ill.
 Emanuel, Henry, New York
 Estes, Alden C., San Landro, Cal.
 Gilman, Frederic, N. H.
 Farrell, Edwin C., Reading
 Felton, Wm. H., Sherborn
 Fernald, Henry B., Washington
 Flint, Horace P., Boston
 Foster, James B., Melrose
 Fowler, W. W., Plymouth
 French, Charles, Davenport, O.
 French, Geo. H., Davenport, O.
 Gannett, W. W., Boston
 Gaffney, Cornelius, So. Boston
 Gilman, S. E., Kingston, N. H.
 Gookin, Samuel F., Boston
 Green, John A., New York
 Greene, Arthur M., Philadelphia
 Gulliver, Francis, Binghamton, N. Y.
 Hadley, William, Boston
 Hale, Joseph S., Lugonia, San Bernardino Co., Cal.
 Hayes, J. F. C., Iowa
 Hicock, S. S., Rochester, N. H.
 Hill, Mark F., Derry, N. H.
 Holt, H. E., Lexington
 Hubbard, J. G., Hampste'd, N. H.
 Hutchinson, C. H., Rhinebeck, N. Y.
 Kent, Albert S., Colorado
 Kimball, Jonathan, Boston
 Kimball, W. F., Providence, R. I.
 King, D. Webster, Boston
 Knight, J. M., Maine
 Lamb, Wm. D., Southbridge
 Lake, Chas. H., Churchill, Md.
 Lovering, John H., Marlborough
 Low, Sidney, Groton
 Lyford, Geo. H., New York
 Mann, Ovis, Springfield
 Martin, Walter T., Dover, N. H.
 McFarland, L., Maine
 Merrill, George F., No. Hampton, N. H.
 Merrill, Hayden A., Dedham
 Mills, R. P., Abbott, Col.
 Mitchell, Charles, Milton
 Mitchell, Seth, Boston
 Moulton, Beverly S., Boston
 Nelson, D. Oscar, Portsmouth, O.
 Nichols, Albert, Chicago, Ill.
 Nichols, D. P., Boston
 Noyes, A. P., Lowell
 Ordway, G. W., Manch'r, N. H.
 Page, Adino, Metamora, Ill.
 Page, Nathan jr., Wakefield
 Palmer, Charles L., Cotton
 Wood, Idaho Co., Idaho
 Palmer, Frank H., N. Weymouth, Mass.
 Patch, A. H., Clarkville, Tenn.
 Payson, Samuel F., New York
 Phelps, N. L., Iowa
 Phillips, A. P., Medfield
 Phillips, Samuel, Brighton
 Pierce, William, Boston
 Poor, Henry, New York
 Porter, Dudley H., Saratoga
 Putnam, Benjamin C., Chelsea

Putnam, Moses W., Philadelphia. Snow, Jesse W., Boston
 N. Y. Spofford, Farnham, Washington
 Putnam, Wm. R., Red Wing. Stanley, Samuel S., Boston
 Minn. Stanwood, Joseph T., Malden
 Raymond, Samuel, New York Stickney, Charles, Fon du Lac,
 Rea, Loring B., Miles City, Wis.
 Mont. Stickney, Niles T., Chicago, Ill.
 Reynolds, W. B., Derry, N. H. Stone, Edwin M., Provid'ce, R.I.
 Robinson, John L., Manches-Tappan, S. B., Arlington
 ter, N. H. Taylor, George H., Everett
 Rogers, Isaiah S., Somerville Titcomb, Charles A., Boston
 Rogers, Benjamin, Malden Walker, Dexter M., Boston
 Rogers, William, Illinois Ward, Winsor M., Wakefield
 Safford, N. T., Dunbarton, N.H. Ware, Darwin E., Boston
 Sargent, Elmer P., Malden Webb, Michael jr., Cambridge
 Sargent, G. P., Philadelphia, Pa. Wentzel, David, Amherst
 Shattuck, Chas W., Winchester Wheeler, H. T., Worcester
 Shattuck, L. P., Boston Whitman, F. A , Lexington
 Sleeper, S. C., Plaistow, N. H. Whittemore, Chas. A., Boston
 Smith, Beaman C., Charlestown Whittemore, J. R., Chicopee
 Smith, George J., Boston Wilder, S. W., Lowell

Total number, December, 1890—1371 resident members.

136 non-resident members. Grand total, 1507 members.

1891.

PREMIUM LIST OF
Essex Agricultural Society,
FOR THE
SIXTY-FIRST ANNUAL CATTLE SHOW AND FAIR,
To be held September 22 and 23, in Lawrence.

Duties of Trustees.

The Trustee of each town is instructed to see the several members of Committees in his town previous to the Show, and urge upon them the importance of attending to their duties. Also impress upon exhibitors from localities near to the Exhibition, the importance of entering their exhibits the afternoon and evening of Monday, in fairness to those from a distance, who are obliged to come Tuesday.

To be prompt at the meeting in June for filling Committees, and at the meeting of the society for filling vacancies in committees on the first day of the Exhibition, making sure that the names proposed at those meetings are of persons who will serve.

Duties of Committees.

Committees on live stock and articles exhibited on the Fair Grounds should appear at the Secretary's office on the grounds, at one o'clock, punctually, on the first day of the exhibition, and there organize, take the books of entry, and proceed at once to business. Committees in hall should take the books of entry from the Superintendent, promptly after the entries close.

Full reports of awards by committees, on the blanks furnished by the Secretary, to be signed by all the members acting on the same, are required of each committee.

Three members of any committee consisting of more than that number are authorized to act.

No member of the Society shall act on any committee of which he is an exhibitor in the same class.

The Diploma of the Society being considered the highest premium that can be awarded, no committee is authorized to award it, except for animals and articles *of special merit*, deserving of inorsement and recommendation by the Society.

No committee is authorized to award gratuities, except the committee on agricultural implements, carriages, bread, honey, and canned fruits, domestic manufactures, fruits, vegetables in hall, and flowers; or any premium, unless the rules of the Society have been strictly complied with. Neither shall they award premiums or gratuities in excess of the amount appropriated.

No gratuity is to be awarded of less than fifty cents.

The several committees are requested to affix premium cards, and also on animals, blue, white, and red printed premium ribbons (which may be had of the Secretary or assistant on the grounds and at the hall), for the several animals or articles designating the grade of premium awarded each, and the name of the person to whom awarded, and special care should be taken that the cards issued correspond with the awards in their report to the Society.

The reports of awards of premiums on ploughing and on animals and articles exhibited at the Show, must be delivered promptly to the Secretary for announcement on Wednesday.

The Society offers liberal premiums for the best reports of committees; and the chairman of the several committees are requested to present to the Secretary a full report explanatory of the opinions of the committee on the matter referred to them, within two weeks after the awards are made at the Show, for publication in the Transactions.*

Reports on farms, crops, etc., to be presented previous to the meeting of the Trustees in November.

Any member of a committee who cannot serve on the same is requested to give notice to the Secretary, before the Show, so that the vacancy may be filled.

Each member of the several committees will receive a ticket of admission to the hall of exhibition, on application to the Secretary.

*Chairman of committees will please notice this request.

General Rules.

Competitors are requested to carefully read the rules and premium list before making entries.

Claims (entries) for premiums to be awarded at the Exhibition on the Fair Grounds, must be entered with the Secretary of the Society, or his agent, on or before 10 o'clock, A. M., and in the Exhibition Hall, on or before 11 A. M., of the first day thereof.

All claims (entries) for premiums on Fair Grounds, must be handed or forwarded to the Secretary or his agent, in writing, previous to the day of the Fair, if possible, or on or before 1 o'clock A. M., of the first day thereof.

Any person *not a member of the Society*, awarded seven dollars and upwards, shall receive a certificate of membership, for which three dollars of his award will be taken to increase the funds of the Society.

Diplomas awarded will be delivered and premiums paid, to the

person to whom the premium or gratuity is awarded, or an agent duly authorized, on application to the Treasurer, at First National Bank, Salem, on and after the fourth Monday of November

All premiums and gratuities awarded, the payment of which is not demanded of the Treasurer on or before the first day of September next succeeding the Exhibition, will be considered as given to increase the funds of the Society.

In all cases the reports of award of premiums and gratuities made by the several committees and adopted by the Society shall be final. *Committees should see that the premium cards issued, correspond with the premiums and gratuities awarded in their reports.*

No person shall be entitled to receive a premium, unless he complies with the conditions on which the premiums are offered, and by proper entry as required, gives notice of his intention to compete for the same: and committees are instructed to award no premium unless the animal or article offered is worthy.

No animal or object that is entered in one class, with one committee shall be entered in another class, except town teams, fat cattle, working oxen, working steers, and farm horses, which may be entered for ploughing, and milch cows, which may be entered with a herd.

In regard to all subjects for which premiums are offered it is to be distinctly understood that the Trustees reserve to themselves the right of judging the quality of the animal or article offered; and that no premium will be awarded unless the objects of them are of decidedly superior quality.

Pure Bred Animals, defined by the State Board of Agriculture.

The *proof* that an animal is so bred should be a record of the animal or its ancestors, as recorded in some herd book, recognized by leading breeders and the public generally, as complete and authentic.

Standards adopted:—American Jersey C. C. Register and American Jersey Herd Book, Ayrshire Record and Holstein Herd Book.

Premiums to be Awarded at the Show.

The Committees will take notice that no premium will be awarded unless the animals or objects are of a decidedly superior quality.

DIPLOMAS may be awarded for ANIMALS OR ARTICLES of special merit, in all departments of the Fair.

Cattle and Other Farm Stock.

TO BE ENTERED IN THE NAME OF THEIR REAL OWNER.

All animals, to be eligible to a premium, shall have been raised by the owner within the County, or owned by the exhibitor within the County, four months previous to the date of Exhibition, except Working Oxen, and Working Steers.

All animals, whether teams for ploughing, or animals entered for premium or exhibition, will be fed during the Exhibition, and longer when they are of necessity prevented from leaving, at the expense of the Society.

FAT CATTLE.

Fat cattle, fatted within the County, regard being had to manner of feeding and the expense thereof, all of which shall be stated by the exhibitor in writing, and returned to the Secretary, with committee's report.

For Pairs of Fat Cattle, premiums,	\$8, 6, 3
For Fat Cows, premiums,	\$7, 5

BULLS.

*Ayrshire, Jersey, Short Horn, Devon, Holstein, Guernsey, or of any other recognized breed, for each breed.

Two years old and upwards, premiums,	\$8, 4
Under two years, for each breed,	\$4, 3
Bull Calves under one year old, premium for each breed,	\$2

BULLS OF ANY AGE OR BREED.

For the best Bull of any age or breed, with five or his stock not less than one year old, quality and condition to be taken into account, and especially the adaptability of the animal to the agriculture of the County. Diploma and \$10

NOTE.—Competitors are required to give a written statement of pedigree, and committees are requested to be particular in this respect, and return them to the Secretary with report.

MILCH COWS.

For the best Milch Cow any age or breed, with satisfactory record in quarts or pounds by her daily yield of milk for one or more years, premium, \$15

For Milch Cows, either Foreign, Native or Grade, not less than four nor more than ten years old, with satisfactory evidence as to quantity and quality of milk, either by weight or measure, during the evening or morning of the first and last ten days of any month, premiums, \$10, 4

Milch Cows, Ayrshire, Jersey, Devon, Short Horn, Holstein, Guernsey, or any other recognized breed, four years old and upwards, premiums, for each breed, \$10, 4

For Native or Grade Cows, four years old and upwards, premiums, \$10, 4

For the Cows that make the most butter in any single week from June 1st to September 15th, premiums, \$10, 4

NOTE.—A written statement will be required of the age and breed of all Milch Cows entered, and time they dropped their last calf, and when they will next calve, the kind, quality and quantity of their food during the season, and the manner of their feeding, which statement is to be returned to the Secretary with Committee's report.

HERDS OF MILCH COWS.

For herds of Milch Cows, not less than five in number, to be exhibited at the Show, and a correct statement of manner of keeping and yield for one year preceding the show, premiums, \$18, 12

For the greatest produce of milk on any farm, in proportion to the number of cows producing it, not less than four, from April 1 1889, to April 1, 1890, statement to be made of the exchanges made, manner, and expense of food, use made of milk, and such other facts as will illustrate the entire management, special regard being had to the mode in which the account is kept, premium, Diploma, and \$15

NOTE.—The above mentioned statements are to be returned to the Secretary with Committee's report. The Committee can accept statements dating from January 1st, preceding the show.

HEIFERS.

FIRST CLASS.—Ayrshire, Jersey, Short Horn, Devon, Holstein, Guernsey, or any other recognized breed, under four years old, in milk, premiums, for each breed, \$9, 6

Two year olds of each breed, that have never calved, premiums, \$5, 4

One year olds of each breed, premiums, \$5, 4

Heifer Calves, under one year, premiums for each breed, \$5, 4

SECOND CLASS.—Native or Grade Milch, under four years old, premiums, \$9, 6

Two year olds, that have never calved, premiums, \$5, 4

One year olds and less than two, premiums, \$5, 4

Heifer calves, Native or Grade, under one year old, premiums, \$5, 4

WORKING OXEN AND STEERS.

Stags excluded. For pairs of Working Oxen under eight and not less than five years old, taking into view their size, power, quality and training, premiums, \$12, 10, 8

For pairs of Working Steers, four years old, to be entered in the name of the owner, premiums, \$10, 6

NOTE.—The Committee are required to consider the quality and shape of the cattle as well as their working capacity. The training of working oxen and steers will be tested by trial on a cart or wagon containing a load weighing two tons for oxen, and 3000 pounds for steers. At the time of entry a certificate of the weight of the cattle must be filed with the Secretary.

TOWN TEAMS.

For Town Teams of Oxen, ten yoke or more in a team, premiums, \$20, 12

For Town Teams of Horses, ten or more pairs in a team, premiums, \$20, 12

STEERS.

For pairs of three year old Steers, broken to the yoke, premiums,	\$8, 6
For pairs of two year old Steers, premiums,	\$6, 5
For pairs of yearling Steers, premiums,	\$5, 4
For pairs of Steer Calves, premiums,	\$4, 2

STALLIONS.

FIRST CLASS.—For Stallions for Farm and Draft purposes, four years old and upwards, diploma or premiums,	\$10, 6, 4
For Stallions for Farm and Draft purposes, three years old, premiums,	\$8, 5
For best Stallion of any age, and five colts of his stock, not less than one year old, quality and condition to be taken into account, Diploma and	\$15
SECOND CLASS.—For Stallions for Driving purposes, four years old and upwards, premiums,	\$10, 6, 4
For Stallions for Driving purposes, three years old, premiums,	\$8, 5
For best Stallion of any age and five colts of his stock, not less than one year old, quality and condition to be taken into account, Diploma and	\$15

NOTE.—No Stallion will be entitled to a premium unless free from all apparent defects capable of being transmitted. All Stallions entered in either class must have been owned by the exhibitor four months previous to the exhibition.

BROOD MARES.

FIRST CLASS.—For Brood Mares for Farm and Draft Purposes, with their foal not more than eight months old, by their side, premiums,	\$10, 6, 4
SECOND CLASS.—For Brood Mares for Driving Purposes, with their foal not more than eight months old by their side, premiums,	\$10, 6, 4

NOTE.—No brood mare will be entitled to a premium unless free from all apparent defects capable of being transmitted.

FAMILY HORSES.

For Family Horses, premiums,	\$10, 6, 4
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NOTE.—No horse will receive a premium unless free from all unsoundness.

GENTLEMEN'S DRIVING HORSES.

For Gentlemen's Driving Horses, premiums,	\$10, 6, 4
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FARM HORSES.

For Farm Horses, weighing 1200 lbs. and over, premiums,	\$10, 6, 4
For Farm Horses weighing less than 1200 lbs. premiums,	\$10, 6, 4

NOTE.—No horse will be allowed except those actually used on farms, whether the owner has a farm or not. The weight of load to be used in trial of Farm Horses is to be fixed upon by the committee of arrangements for drafting, the difference in the load for horses of 1200 lbs. and over, and those under 1200 lbs. to be 1000 lbs., and between the two classes of pairs 2000 lbs. No obstruction shall be placed either before or behind the wheels in trials of Draft horses of either class. If this rule is not complied with the premiums shall be withheld.

PAIRS OF FARM HORSES.

FIRST CLASS.—For pairs of Farm Horses, weighing 2500 lbs. and upwards, (see above note) premiums, \$10, 8

SECOND CLASS.—For pairs of Farm Horses, weighing less than 2500 lbs. (see above note) premiums, \$10, 8

COLTS FOR DRAFT PURPOSES

FIRST CLASS.—For Mare or Gelding four year old Colts, premiums, \$8, 5, 3

For Mare or Gelding three year old Colts, premiums, \$6, 3

SECOND CLASS.—For Stallion, Gelding, or Mare, two year old Colts, premiums, \$8, 5, 3

For Stallion, Gelding or Mare, yearling Colts, premiums, \$5, 3

COLTS FOR GENERAL PURPOSES.

FIRST CLASS.—For Mare or Gelding four year old Colts, premiums, \$8, 5, 3

For Mare or Gelding three year old Colts, premiums, \$6, 3

SECOND CLASS.—For Stallion, Gelding or Mare, two year old Colts, premiums, \$8, 5, 3

For Stallion, Gelding or Mare yearling Colts, premiums, \$5, 3

SWINE.

FIRST CLASS.—Large breeds, viz: Cheshire, Berkshire, Chester County White, Poland China, Large Yorkshire, and any other breed or grade weighing more than 300 lbs. at maturity.

For Boars, premiums, \$8, 5

For Breeding Sows, with their pigs by their side, premiums, \$8, 5

For Litters of Weaned Pigs, not less than four, between two and four months old, premiums, \$8, 5

SECOND CLASS.—Small breeds, such as Suffolk, Essex, Small Yorkshire, China, and any other breed or grade weighing less than 300 lbs. at maturity.

For Boars premiums, \$8, 5

For Breeding Sows, with their pigs by their side, premiums, \$8, 5

For Litters of Weaned Pigs, not less than four, between two and four months old, premiums, \$8, 5

SHEEP.

For flocks of sheep not less than ten in number, premiums, \$10, 6.

For best Buck, premium,	\$8
For lots of Lambs, not less than four in number, between four and twelve months old, premiums,	\$6, 4

POULTRY.

For pairs of Fowls, Light Brahmas, Dark Brahmas, Buff Cochins, Partridge Cochins, Black Cochins, White Cochins, Plymouth Rocks, Dominiques, White Leghorns, Brown Leghorns, Dominique Leghorns, Black Spanish, Hamburgs, Polish, Games, Dorking, Bantams, Black, White, and Mottled Javas, Wyandottes, White Wyandottes, Andalusian, Erminet, Langshangs, and Frizzle, and other recognized varieties, each variety, premiums, \$2, 1

For pairs of Chickens of above varieties, premiums, \$2, 1

For the best breeding pen of each variety—Diploma of the Society.

For the best pairs of Native Fowls, premiums, \$2, 1

Pairs can be exhibited in "breeding pens," by marking the competing female (with a ribbon on colored string), which, with the male will form the pair.

For lots of Turkeys, and Aylesbury, Rouen, Caouga, Pekin, White and Colored Muscovy, and Brazilian Ducks, and Toulouse, Emden, Brown China, and African Geese, premiums, \$2, 1

For ten or more Fowls exhibited, whether thoroughbreds, crossed or mixed, with an account for one year, showing cost and method of keeping, production and profit, premiums, \$8, 6, 5

As above, with an account for six months, premiums, \$5, 3, 2

For the best pair of dressed Fowls, Chickens, Ducks, and Geese, weight to be given, premium for each pair, \$2

For the best 12 Eggs from Asiatic, American, Game, French and Spanish classes (Hamburgs, Polish, Dorkings to compete in the Spanish class), premium for each class, \$1

Any exhibitor interfering with the Judges in the discharge of their duties or interfering with, or handling any specimen on exhibition, other than his own, shall forfeit all claim he may have in the premium list.

All breeds exhibited separately and to be judged by the rules of the "American Standard of Excellence."

For best exhibit of Poultry Appliances, \$5

PLOUGHING.

GENERAL NOTE ON PLOUGHING.—Stags are excluded. Teams must be entered in the names of their owners, and only double ox-teams to have drivers. A team consisting of one pair of oxen and a horse will be considered a double team. The owners of separate teams may unite the same and be allowed to compete for premiums. The ploughmen and drivers must have been residents of the County at least three months before the exhibition. Those who intend to be competitors must give notice to reach the Secretary on or before Saturday previous to the show. The lands will be staked, but each ploughman will be required to strike out his own lands in the presence of the "Committee on Striking out Grounds for Ploughing," after half past nine o'clock on the morning of the trial. Ploughmen with land side ploughs are to back furrow three furrows on each side of the stakes set, the last furrow to be of the depth required in the class. Ploughmen with swivel ploughs to turn the outside of their furrow to the stakes on one side, and to finish one foot from the stake on the other. Committees to note and report the kind of plough used.

PLOUGHING WITH DOUBLE TEAMS.—One-eighth of an acre, at least eight inches deep, premiums, \$10, 8, 6

PLOUGHING WITH SINGLE TEAMS.—One-eighth of an acre, at least six inches deep, premiums, \$10, 8, 5

PLOUGHING WITH HORSES.—With any form of Plough, except Swivel, one-eighth of an acre, at least six inches deep, premiums, \$10, 7, 5

PLOUGHING WITH THREE HORSES.—One-eighth of an acre, eight inches deep, without driver, premium, \$10

Same with four horses, with driver, premium, \$10

PLOUGHING WITH SWIVEL PLOUGH.—One-eighth of an acre with double ox-teams at least eight inches deep, premiums, \$10, 8

Same with single ox-teams, at least six inches deep, premiums, \$10, 8

Same with Horse teams, consisting of two horses, ploughing at least six inches deep, premiums, \$10, 8

PLOUGHING—SULKY PLOUGH.—For the best performances, taking into account ease of draft, amount and quality of work, premiums, \$10, 8

HARROWS.

For the best Harrow exhibited and its merits shown by actual test upon the ploughed ground, \$10, 8

NOTE.—Entry must be made with the Secretary before the day of the trial with description of Harrow.

AGRICULTURAL IMPLEMENTS.

For the best collection of Implements and Machines (no article offered in *collection* will be entitled to a separate premium),

Diploma and \$10

Best Market Wagon, premium, \$5

Best Farm Wagon, for one or two horses, premium, \$3

Best Horse Cart, premium, \$5

Best Hay, Straw, or Corn Cutter, premium, \$1.50

Best Ox Yoke, complete, premium, \$1.50

Best Fruit Evaporator, with sample of work, premium, \$5

Best set of Horse Shoes, including those for over-reaching, interfering, and stumbling horses, premium, \$5

For implements not specified above, the Committee may at their discretion award \$40.

No premium or gratuity will be awarded for any Mower, Horse Rake, Tedder, or other Machine or Implement, the merit of which can be known only by actual trial in the field; but manufacturers are invited to offer the same for exhibition and inspection.

CARRIAGES.

For carriages built in the County, and exhibited by the manufacturer, Diploma, and thirty dollars in gratuities, may be awarded by the Committee.

In Exhibition Hall.

Committees on articles exhibited in the hall should be especially careful that the premium or gratuity cards issued with the names, and sums awarded them, correspond with those in their reports to the Society.

Committees and Exhibitors will be governed by instructions, under heading of "Duties of Committee," "General Rules," "Premiums to be awarded at the Show," see first pages, and under "Fruit," "Domestic Manufactures," and "Flowers."

☞ All Fruit, Flowers, Vegetables, and Domestic Manufactures, must be the Product of Essex County, to be entitled to a premium or Gratuity.

DAIRY.

For specimens of Butter made on any farm within the County the present year, samples of not less than five pounds to be exhibited, with a full account of the process of making and management of the Butter, premiums. \$8, 6, 4

For specimens of New Milk Cheese, made on any farm in the County the present year, samples of not less than fifty pounds to be exhibited, with statement in writing of the method of making and preserving the same, premiums. \$8, 6, 4

NOTE.—Each lot presented for premium and the statement accompanying it, must be numbered, but not marked so as to indicate the claimant; any public or known mark must be completely concealed; nor must the competitors be present at the examination.

To the person who shall furnish to the Society satisfactory evidence of the greatest quantity of Butter made from any quantity of milk, being the whole produce of any single cow, for the first week of June, July, August and September next, stating the whole amount of Butter produced in each week, also the time when the cow dropped her last calf, and her feed and management all to be taken into account in making the award, premiums, Diploma and \$10, 5

NOTE.—The object in offering these last premiums is to elicit inquiry as to the value and quality of milk for the production of butter. As far as practicable it is desirable that the race and pedigree of the cow shall be given.

BREAD AND CANNED FRUIT.

For White Bread made of Wheat flour, premiums, \$3, 2, 1

For bread made from Graham flour, premiums, \$2, 1

For bread made from other grains, or other grains mixed with wheat, premiums, \$1.50, 1

All bread, entered for premiums, to be in loaves weighing not less than one pound each, and to be not less than twenty-four hours old, with a full written statement over the signature and address of the maker, stating the kind of flour used, quantity of each ingredient, how mixed, and length of time kneaded and raised, and how long baked, *which statements on all premium bread are to be sent to the Secretary with report of the Committee for publication.*

For first and second best collection of Pickles, Preserved Fruits, and Jellies, made from products of the County. *when premiums are awarded, the method of making to be sent to the Secretary by the Committee, for publication,* premiums, §3, 2

For the first and second best five pounds of Dried Apples, grown and dried within the County, with statements of process used and amount of labor and time required in preparing and drying, *such statement on premium fruit to be given to the Secretary for publication,* premiums, §3, 2

In addition to the above, are placed in the hands of the Committee for gratuities on other articles entered in this department, products of this County deemed worthy. §5

BEES, HIVES, AND HONEY.

For first and second best display of Bees, Hives and Apiarian Implements, accompanied with a written description of the bees, hives, etc., number of hives in use and amount of surplus honey taken from them during the season, premiums, §5, 3

First and second best Honey, ten pounds in comb and one pound of same extracted, made in the County, with statement signed of kind of bees and hive, and time of year when honey was made, premiums, §3, 2

Fruit.

All fruit must be entered in the name of the grower before 11 o'clock on the first day of the exhibition, and each exhibitor must certify to the same on the Entry Book, or on lists of the varieties of each class of fruit, or be filed when entry is made. (Committees are not authorized to make awards to those who do not comply with this rule.)

Tables will be labelled in a *conspicuous manner* by the hall committee *before the entry of exhibitors*, with the names of fruit, for which premiums are offered, all others of same class of fruit to be labelled miscellaneous. Exhibitors must place their several varieties of each class of fruit where indicated by such labels, or be considered by the committee as not competing for premium.

Plates of collections of fruit, when premiums are offered therefor, must be entered and placed by the exhibitor on the table assigned for the exhibit of collections of fruit.

To entitle exhibitors to receive premiums and gratuities awarded, they are required (when requested by the committee) to give information in regard to the culture of their fruit.

PEARS.

For best twelve specimen of the following varieties, which are recommended for cultivation in Essex County: Bartlett, Belle Lucrative, Bosc, Anjou, Angouleme, Dana's Hovey, Lawrence, Louise Bonne, Onondaga, Paradise d'Automne, Seckle, Sheldon,

Urbaniste, Vicar, Comice, Howell, and Clairgeau, each, premium, \$3

Doyenne d'Ete, Gifford and Clapp's Favorite (ripening early), are recommended for cultivation, but no premium is offered.

For each dish of twelve best specimens of any other varieties, deemed worthy by the committee, premium, \$1.50

For best collection of Pears, recommended for cultivation, premium, \$6

In addition to the above, are placed at the disposal of the committee, to be awarded in gratuities of not less than \$1 each, \$20

APPLES.

For best twelve specimens of the following varieties, which are recommended for cultivation in Essex County : Baldwin, Danvers Sweet, Tompkins King, Granite Beauty, Red Russet, Tolman's Sweet, Baily Sweet, Drap d'Or, Hubbardston, Hurlburt, Porter, Pickman Pippen, Roxbury Russet, Rhode Island Greening, Sweet Baldwin, Gravenstein, Hunt Russet, Smith's Cider, Snow, premium for each, \$3

Red Astrachan, William's Favorite, Tetofsky and Sweet Bough are recommended for cultivation, and no premium is offered (ripening early).

For best twelve specimens of any other varieties deemed worthy by the committee, premium for each variety, \$1.50

For best collection of Apples, recommended for cultivation, premium, \$6

For best twenty-four specimens of any variety of Crab Apple deemed worthy by the committee, \$1.50

In addition, are placed at the disposal of the committee, to be awarded in gratuities of not less than \$1 each, \$20

PEACHES, GRAPES, AND ASSORTED FRUITS.

For best nine specimens of Freestone, White Flesh, Yellow Flesh, Essex County Seedling, each variety, \$2

For best collection of Peaches, premium, \$3

For best four bunches of Concord, Worden's Seedling, Brighton, Hartford Prolific, Delaware, Martha, Moore's Early, Niagara, Grapes, each variety, premium, \$3

For Cold House Grapes, produced with not over one month's artificial heat, premiums, \$4, 3

For best collection of ten varieties, not less than ten pounds in all, premium, \$7

For best specimens of four bunches of Grapes, varieties other than above, deemed worthy by the committee, premium, \$1.50

For baskets of Assorted Fruits, premiums, \$4, 3

In addition, are placed at the disposal of the committee, to be awarded in gratuities of not less than 50 cents each, \$25

PLANTS AND FLOWERS.

RULES AND REGULATIONS.

1. All Plants and Flowers for competition and exhibition must

be entered for examination by the Committee on or before eleven o'clock, on the first day of the Fair, and all such Plants and Flowers must have been grown by the competitor, except native plants and flowers, and flowers used in bouquets, and baskets of flowers and floral designs, all of which (plants and flowers), must have been grown within the County.

2. When a certain number or quantity of Plants and Flowers is designated in the schedule, there must be neither more nor less than that number or quantity of specimens shown.

3. When only one premium from each exhibitor is offered for any article, only a single specimen or collection can compete, but when a second or third premium is offered, one, two or three specimens or collections may be exhibited for competition, but no variety can be duplicated.

4. No premium shall be awarded unless the specimens exhibited are of superior excellence, possessing points of superiority and worthy of such premium, not even if they are the only ones of their kind on exhibition.

5. No specimen entered for one premium shall be admitted in competition for another different premium.

6. Competitors will be required to furnish information (if the committee so request), as to their modes of cultivation, or in the case of Native Plants and Flowers, where such were found.

7. All Plants exhibited for premiums must have the name legibly and correctly written on stiff card, wood or some other permanent and suitable substance, and so attached to same as to be easily seen. Flowers when specified to be named to comply also with above rule.

8. Plants in Pots to be entitled to premiums must show skilful culture in the profusion of bloom and in the beauty, symmetry and vigor of the specimens; also Bouquets, Baskets, Design work, etc., must show taste, skill, and harmony in arrangement, both as to colors and the material they are made of, and purposes for which they are intended.

9. All flowers exhibited must be shown upon their *own stem*, flowers in "Design" work alone excepted; and this exception if overcome and avoided, to be taken into account by the committee in awarding the premiums.

10. The Committee are authorized to award gratuities for any new and rare plants and flowers or "Designs" of merit for which no premium is offered, but in no case shall the total sum (premiums and gratuities together), exceed the amount, \$150.00, limited by the Society for this department.

11. No member of the Committee for awarding premiums or gratuities shall in any case vote or decide respecting an award for which such member may be a competitor, or in which he may have an interest, but in such case such member shall *temporarily* vacate his place upon the Committee, and such vacancy for the time being may be filled by the remaining members of the Committee, or they may act without.

12. Attention is again called to above Rules and Regulations for Plants and Flowers, and General Rules of the Society, and all articles not entered in conformity therewith will be disqualified, and premiums will be awarded only to exhibitors who have complied with said Rules, etc.

PLANTS.

Plants competing for these premiums must have been grown in pots, Native Plants excepted, etc. See Rules.

For collections Flowering and Ornamental Foliage Plants, at least 25 specimens, premiums, \$10, 5

For collection Palms, at least 5 specimens, 5 varieties, premium, \$1

For collection Ferns (cultivated), at least 5 specimens, 5 varieties, premium, \$1

For collection Dracenas, at least 5 specimens, 5 varieties, premium, \$1

For collection Crotons, at least 5 specimens, 5 varieties, premium, \$1

For collection Fancy Caladiums, at least 5 specimens, 5 varieties, premium, \$1

For collection Gloxinias, at least 5 specimens, 5 varieties, premium, \$1

For collection Begonias, tuberous rooted, at least 5 specimens, 5 varieties, premium, \$1

For collection Begonias, 5 specimens, 5 varieties, premium, \$1

For collection Coleus, 10 specimens, 10 varieties, premium, \$1

For collection Fuchsias, 5 specimens, varieties, premium, \$1

For collection Cyclamen, 5 specimens, 5 varieties, premium, \$1

For collection Geraniums, double, 10 specimens, 10 varieties, premium, \$1

For collection Geraniums, single, 10 specimens, 10 varieties, premium, \$1

For collection Geraniums, fancy, 10 specimens, at least 5 varieties, premium, \$1

For collection Hibiscus, 5 specimens, 5 varieties, premium, \$1

For collection Carnation Pinks, 10 specimens, at least 5 varieties, premium, \$1

For collection Calla Lilies, 5 specimens, premium, \$1

For specimen English Ivy, premium, \$1

For collection of wood of native trees in sections, suitable for exhibition, showing bark and the grain of the wood, all correctly named with botanical and common name, at least 50 varieties, each variety to be shown in two sections, one of which to be a cross section and neither to be more than four inches in length or diameter, premiums, \$5, 3

FLOWERS.

For collection of Cut Flowers, cultivated, 100 specimens, at least 50 varieties, named, \$5, 3

For collection of Cut Flowers, native, 100 specimens, at least 50 varieties, named, \$5, 3

For pair of Bouquets, for vases, green-house flowers, premiums, \$2, 1

For pair of Hand Bouquets, green-house flowers, premiums, \$2, 1

For pair of Bouquets, for vases, of native flowers, premiums, \$2, 1

For pair of Bouquets, for vases, of garden flowers, premiums, \$2, 1

For Basket of green-house flowers, premiums, \$2, 1

For Basket of Native Flowers, premiums,	\$2, 1
For Basket of Garden Flowers, premiums,	\$2, 1
For arrangement of Native Flowers and Autumn Leaves, premiums,	\$3, 2
For Floral Designs, choice cultivated flowers, premiums,	\$5, 3
For Floral Designs, native flowers, premiums,	\$3, 2
For collections Japan Lilies, hardy, named, premiums,	\$3, 2
For collections Phlox, hardy perennial, named, premiums,	\$2, 1
For collections Pansies, at least 50 specimens, neatly and artistically arranged, premiums,	\$2, 1
For collections of Native and Introduced Weeds, with common and botanical name attached, premiums,	\$3, 2
For twelve Dahlias, large flowering, at least six varieties, named, premium,	\$1
For twelve Dahlias, Pompon or Lilliputian, at least six varieties, named, premium,	\$1
For twelve Dahlias, single, at least six varieties, named, premium,	\$1
For twelve Petunias, double, at least six varieties, named, premium,	\$1
For twelve Gladiolus (spikes), at least six varieties, named, premium,	\$1
For twelve Japan Lilies, at least six varieties, named, prem.,	\$1
For twelve Geraniums, double, at least six varieties, named, premium,	\$1
For twelve Geraniums, single, at least six varieties, named, premium,	\$1
For twelve Phlox, hardy perennial, at least six varieties, named, premium,	\$1
For twelve Cannas, at least six varieties, named, premium,	\$1
For twenty-four Carnation Pinks, at least six varieties, named, premium,	\$1
For twenty-four Verbenas, at least six varieties, named, premium,	\$1
For twenty-four Roses, at least six varieties, named, premium,	\$1
For twenty-four Garden Annuals, at least twelve varieties, named, premium,	\$1
For twelve Calendulas, at least two varieties, named, prem.,	\$1
For twelve Asters, Double Victoria, premium,	\$1
For twelve Asters, Double, Truffaut's Peony flowered, prem.,	\$1
For twelve Asters, Pompon, premium,	\$1
For twelve Phlox, Drummondii, in variety, premium,	\$1
For twelve Nasturtiums, at least six varieties, premium,	\$1
For twenty-four Pansies, in variety, premium,	\$1
For twenty-four Zinnias, double in variety, premium,	\$1
For twenty-four Marigolds, African, in variety, premium,	\$1
For twenty-four Marigolds, Dwarf French, in variety, prem.,	\$1
For twenty-four Petunias, single, in variety, premium,	\$1
For display of Coxcombs, in variety, premium,	\$1
For twelve Scabiosas, in variety, premium,	\$1
For twelve Delphiniums, in variety, premium,	\$1
For twelve Dianthus (double, annual), in variety, premium,	\$1
For twelve Salpiglossis, in variety, premium,	\$1
For collection of Sweet Peas, premium,	\$1

VEGETABLES.

Rules for Fruit apply to Vegetables.

- Beets—For best twelve specimens, Eclipse, Dewing, and Edmands, premiums, each variety, §3
- Carrots—For best twelve, short top, long Orange and Danvers Intermediate, premium, each variety, §3
- For best twelve, Short Horn Orange carrots, premium, §3
- Mangold Wurtzels—For best six specimens, premium, §3
- Flat Turnips—Twelve specimens. For best Purple Top and White Flat, premium, each variety, §3
- Ruta Bagas—Twelve specimens. For best Yellow and White, premium, each variety, §3
- Parsnips—For the best twelve specimens, premium, §3
- Onions—One peck. For best Danvers, Yellow Flat, and Red, premium, each variety, §3
- Potatoes—One peck. For best Early Rose, Beauty of Hebron, Clark's No. 1, Pearl of Savoy, Early Maine, premium, each variety, §3
- Cabbages—For best three specimens, Savoy, Fottler's Drumhead, Stone Mason Drumhead, Red Cabbage, All Seasons, Deep Head, each variety, premium, §3
- For next best, each variety, premium, §12
- Cauliflowers—For best three specimens, premium, §3
- For next best, premium, §12
- Celery—For best four roots, premium, §12
- Sweet Corn—For twelve ears ripest and best Early, premium, §3
- For best twelve ears in milk, Late, premium, §3
- Squashes—For best three specimens, Marrow, American Turban, Hubbard, Marblehead, Essex Hybrid, Bay State, Sibley, Butman, each variety, premium, §3
- Melons—For best three specimens, Nutmeg, Musk, Cassaba, Salmon Flesh, each variety, premium, §3
- For best two specimens Watermelons, premium, §2
- Tomatoes—For best twelve specimens, Acme, Emery, Cardinal, Essex Hybrid, Livingston, or any other variety, each variety, premiums, §3
- For exhibition of greatest variety of Tomatoes, premium, §3
- Cranberries—For pecks of cultivated, premiums, §3, 2, 1
- For collection of vegetables, not less than three of a kind, premiums, §8, 6, 4, 2
- Placed at the disposal of the committee for whatever appears meritorious, §30

☞ No competitor for premium to exhibit more or less number of specimens of any vegetables than the premiums are offered for.

☐ *Collections of Vegetables* where premiums are offered for a number of varieties must be entered and placed, not less than three of a kind, by themselves on the tables assigned for collections. No collection shall receive but one premium. Specimens of any varieties in such collections are not to compete with specimens of the same variety placed elsewhere. Exhibitors of such collections however, are not prevented from exhibiting *additional* specimens of any variety with and in competition with like variety. All vegetables must be entered in the name of the grower of them.

Size of Vegetables.—Turnip Beets to be from 3 to 5 inches in diameter; Onions, 2-12 to 4 inches in largest diameter; Potatoes to be of good size for family use; Squashes to be pure and well ripened. Turban, Marrow, Hubbard, Marblehead, each to weigh 8 to 16 lbs.

GRAIN AND SEED.

For best peck of Shelled Corn, Wheat, Oats, Barley, Rye, Buck-
 wheat, and Field Beans, each, premium, \$1
 For 25 ears of Field Corn, premiums, \$5. 3, 2
 For 25 ears of Pop Corn, premiums, \$3, 2
 For collections of Field and Garden Seeds, premiums, \$8, 6, 4, 2
 All grain or seed *must have been grown by the exhibitor in the*
County to receive premium.

Domestic Manufactures.

Contributors must deposit their articles at the Hall before 11 o'clock on the first day of the Exhibition. Articles not thus deposited will not be entitled to a premium. Gratuities will be awarded for articles of special merit for which no premium is offered ; but no premium or gratuity will be awarded for any article manufactured out of the County, or previous to the last exhibition of the Society.

COUNTERPANES AND AFGHANS.

For Wrought Counterpanes having regard to the quality and expense of the material, premiums, \$4, 2
 Gratuities will be awarded for articles belonging to this department, the whole amount of gratuities not to exceed, \$25

CARPETINGS AND RUGS.

For Carpets, having regard to the quality and expense of the material, premiums, \$4, 2
 For Wrought Hearth Rug, having regard both to the quality of the work and expense of the materials, premiums, \$3, 2
 Gratuities will be awarded for articles belonging to this department, the whole amount not to exceed \$25

ARTICLES MANUFACTURED FROM LEATHER.

For best pair hand made and machine made Men's Boots, Women's do., Children's do., each, premium, \$2
 Best Team, Carriage, and Express Harness, each, premium, \$5
 \$10 are placed at the disposal of this committee, to be awarded in gratuities.
 For the best exhibitions of Boots and Shoes, manufactured in the County, each, premium, Diploma of the Society.

MANUFACTURES AND GENERAL MERCHANDISE.

For displays of Bonnets, premiums, \$4, 3
 For Horn Combs, not less than one dozen, premium, \$2
 At the disposal of the committee in this department, to be awarded in gratuities not exceeding \$3 in any one gratuity, \$20

FANCY WORK

Of Domestic Manufacture not included in the above.

At the disposal of the committee in this department, to be awarded in gratuities not exceeding \$3 in any one gratuity, \$50

WORKS OF ART.

At the disposal of the committee in this department, to be awarded in gratuities not exceeding \$3 in any one gratuity, \$50

WORK BY CHILDREN.

For specimens of work performed by children under 12 years of age exhibiting industry and ingenuity, premiums, \$3, 2

At disposal of committee to be awarded in gratuities, \$10



List of Premiums to be Awarded by the Trustees in November.

FARMS.

Competitors for this premium must give notice of their intention to the Secretary on or before June 15th, and the farms entered for premium will be viewed by the committee twice during the year. Crops growing on farms that are entered for premium, cannot be entered with another committee for separate premiums—except crop specimens exhibited at the Fair.

Any person desirous of having *his farm inspected, without entering it for premium*, may make application to the Secretary, and it will be viewed and reported upon by the committee.

For the best conducted and most improved farm, taking into view the entire management and cultivation, including lands, buildings, fences, orchards, crops, stock, and all other appendages, with statements in detail, relating thereto, premium, \$30

IMPROVING WET MEADOW AND SWAMP LANDS.

For best conducted experiments relating to wet meadow or swamp lands, on not less than one acre, the course of management, and the produce, etc., for a period of two years at least, to be detailed, with a statement of all the incidental expenses, premiums, \$15, 10

NOTE.—The Committee is instructed to ascertain how many, if any, reclaimed swamps in this County have been abandoned or have returned to natural grasses. Persons knowing of such are requested to notify the Secretary or Committee.

IMPROVING PASTURE AND WASTE LANDS.

For best conducted experiments in renovating and improving pasture land, other than by ploughing, so as to add to their value for pasturage, with a statement of the same, premiums, \$15, 10

For best conducted experiments renovating and improving waste lands, so as to add to their agricultural value, with statement of the same, premiums, \$15, 10

No premium to be awarded to any person for a repetition of an experiment in meadow, swamp or pasture lands, for which he has already received a premium.

UNDER-DRAINING LAND.

For best conducted experiments in under-draining land, regard being had to the variety of soil, sub-soil, and other local circumstances, premiums, \$15, 1

NOTE.—The same instructions under “Improving Wet Meadow and Swamp Lands” apply to this Committee.

MANURES.

For most exact and satisfactory experiments, in the preparation and application of manures, whether animal, vegetable or mineral, premiums, \$15, 10

COMPARATIVE VALUE OF CROPS AS FOOD FOR CATTLE.

For most satisfactory experiments upon a stock of cattle, not less than four in number, in ascertaining the relative value of different kinds of fodder used in feeding stock for milk and other purposes, with a statement in detail of the quantity and value of the same, as compared with English hay, premium, \$25

FATTENING CATTLE AND SWINE.

For most satisfactory experiments in Fattening Cattle or Swine, with a statement in detail of the process and result, premiums, \$10, 5

GRAIN AND OTHER FRUITS.

Claimants on Grain and Root Crops will be required to state the size of the piece of land, when they enter, and conform to the following rules: Entries of Grain Crops to be made on or before September 10th; Root Crops on or before October 10; giving ample time for the crops to be examined by the committee before harvesting. Statement to be made in conformity with the following form, must be forwarded to the Committee previous to November 1st.

All calculations and figures given in reports of, and statements of Crops are to be made on the *basis of an acre*, results in all cases, to be given at the rate per acre.

In pursuance of authority delegated to the Board of Agriculture by Chap. 24 of Acts, 1862, Agricultural Societies receiving the bounty of the State are required to make use of the following form, and be governed by its conditions in the mode of ascertaining the amount of crops entered for premium.

ESSEX AGRICULTURAL SOCIETY.—Statement concerning a crop of———, raised by Mr.———, in the town of———, ———, 1890.

What was the crop of 1888? What manure was used and how much? What was the crop of 1889? What manure was used and how much? What is the nature of the soil? When, and how

many times ploughed, and how deep? What other preparation for the seed? Cost of ploughing and other preparation? Amount of manure, in loads of thirty bushels, and how applied?

Value of manure upon the ground? (What amount of Commercial Fertilizer used? How used? Value of same when applied?) When and how planted? The amount and kind of seed? Cost of seed and planting? How cultivated, and how many times? Cost of cultivation, including weeding and thinning? Time and manner of harvesting? Cost of harvesting, including the storing and husking or threshing? Amount of crop, etc. Signed by
———Competitor.

The committee, to whom is entrusted the award of the premiums on field crops, may award them according to their judgment, but for the purpose of furnishing accurate statistics for the benefit of agriculture, shall select certain of the crops, and require the owners thereof to measure the land and weigh the crops accurately, giving to the committee a certificate of the same, and give all possible information thereon over their own signatures, and return the same to the Secretary of the Society, to be published in the annual transactions.

In ascertaining the amount of crop, any vessel may be used and the weight of its contents once, multiplied by the number of times it is filled by the crop.

In measuring the land or weighing crops, any competent person may be employed, whether a sworn surveyor or not, and must give certificate.

The certificate shall state the weight of all crops only in a merchantable state.

In ascertaining the amount of a hay crop entered for premium, the measurement of the hay in the barn may be employed.

RULES OF MEASURE PRACTICED AND ADOPTED BY THE STATE BOARD OF AGRICULTURE.

Wheat, Potatoes, Sugar Beets, Ruta Bagas, Mangold Wurtzeis,	60 lbs. to bush,
White Beans and Peas,	62 " "
Corn, Rye,	56 " "
Oats,	32 " "
Barley, Buckwheat,	48 " "
Cracked Corn, Corn and Rye, and other meal,	
except Oat,	50 " "
Parsnips, Carrots,	55 " "
Onions.	52 " "

1. For the best conducted experiments of Rye, not less than twenty bushels to the acre, fifty-six pounds to the bushel, on not less than one acre, premiums, \$10, 5

2. For best conducted experiments of Wheat, not less than thirty bushels to the acre, sixty pounds to the bushel, on not less than one acre, premiums, \$10, 5

3. For best conducted experiments of Oats, not less than fifty bushels to the acre, thirty two pounds to the bushel, on not less than one acre, premiums, \$10, 5

4. For best conducted experiments of Barley, not less than forty bushels to the acre, forty-eight pounds to the bushel, on not less than one acre, premiums, \$10, 5

5. For best conducted experiments of Indian Corn, on not less than one acre, premiums, \$10, 5

6. For largest quantity and best quality of English Hay, on not less than one acre, regard being had to the mode and cost of cultivation, premiums, \$10, 5

7. For best yield of Field Beans, on not less than one-half acre, and not less than twenty-five bushels per acre, premiums, \$10, 5

ROOT CROPS.

1. For best conducted experiments in raising Carrots, fifty-five pounds to the bushel, premiums, \$10, 5

2. For best conducted experiments in raising Parsnips, fifty-five pounds to the bushel, premiums, \$10, 5

3. For best conducted experiments in raising Ruta Bagas, sixty pounds to the bushel, premiums, \$10, 5

4. For best conducted experiments in raising Mangold Wurtzels, sixty pounds to the bushel, premiums, \$10, 5

5. For best conducted experiments in raising Sugar Beets, sixty pounds to the bushel, premiums, \$10, 5

6. For best conducted experiments in raising Onions, fifty-two pounds to the bushel, premiums, \$10, 5

7. For best conducted experiments in raising Potatoes, sixty pounds to the bushel, premiums, \$10, 5

8. For best conducted experiments in raising Cabbages, premiums, \$10, 5

9. For best conducted experiments in raising Squashes, premiums, \$10, 5

10. For best conducted experiments in raising Summer English Turnips for the market, premiums, \$10, 5

Raised on not less than half an acre, and the quantity of crop to be ascertained by weight ; so far as practicable the crop to be free from dirt, without tops, and in a merchantable condition at the time of measurement.

Claimants for premiums on Grain and Root Crops must forward statement to chairman of committee *before Nov. 1st.*

FOREST TREES.

1. For plantation of either of the following species of forest trees, viz: White Oak, Yellow Oak, Locust, Birch, White Ash, Maple, Walnut, or White Pine, not less than three years old, and not less than 1000 trees, premium, \$20

2. For plantation of not less than 600 trees, premium, \$10

3. For ornamental trees, ten or more set on any street, road or farm, and cared for five years, premium, \$10

CRANBERRIES.

For best conducted experiment in the cultivation of the Cranberry, at least two summers, on not less than twenty rods of land, with written statement of the quantity and quality of the land, expense of planting, weeding and culture, and amount of crops produced. Premium to be paid in 1890 or 1891, \$15

For best experiment do., on not less than ten rods of land, premium, \$10

For best do., on not less than five rods of land, premium, \$5

STRAWBERRIES AND OTHER SMALL FRUITS.

For—

For best crop of Strawberries, on not less than twenty rods of land, expense of planting, culture, crop, etc., stated in writing, premium, \$10

For best crop of Currants, Raspberries and Blackberries, with statement as above, premiums, each, \$10

NEW WINTER APPLES.

For a new variety of Winter Apple, originated in this County, equal or superior to the Baldwin, premium, \$100

For a new variety of like character originating elsewhere, provided it has been cultivated in the County sufficiently to prove it equal or superior to the Baldwin for general purposes, premium, \$20

For a successful experiment in destroying the codling moth and other worms destructive to the apple, premium, \$25

NOTE.—Persons who consider themselves competitors will send Post Office address to Secretary, and others in the County wishing to compete for above must notify Secretary, and furnish a full statement of their apple, and also scions when called for under his directions, to be tested by the Society.

SEEDLING POTATOES AND EXPERIMENTS.

For best Seedling Potato, originating in Essex County, to equal in yield, earliness, and quality, the Early Rose, and to surpass it in one or more of these particulars, premium paid after three years' trial, \$25

In testing the value of a Seedling Potato, the committee are instructed to take sworn testimony of the cultivator with regard to the yield, after having inspected the crop.

For the most satisfactory experiment to extend through five consecutive years, to settle the following facts relative to raising potatoes:—premium, \$50

1st. Will whole, medium sized Potatoes, yield better results than pieces cut to two eyes?

2nd. What will be the result of continuously planting small-sized potatoes of the same strain a series of years?

3rd. Difference between hilling and flat cultivation.

4th. Effect, if any, of cutting off seed ends before planting.

5th. Effects of deep and shallow planting.

6th. Raising from sprouts alone from same strain.

7th. Can potatoes having dwarf vines be planted nearer than others?

8th. Best distances apart for seed in the drill.

9th. To show the effect of covering the top with earth at several times after they had come up.

To be raised on not less than a half acre of land, uniform in character, and all to receive the same kind and quality of manure and cultivation, and to be inspected by the committee at the time of gathering the crops.

ESSAYS AND FARM ACCOUNTS.

The Essays must be transmitted to the Secretary by the 1st of November, with sealed envelopes containing the names of their

authors, respectively, which shall not be opened by the committee, nor shall the names be known to the committee until they shall have decided upon the merits of the Essays.

For original Essays on any subject connected with Agriculture, in a form worthy of publication, premiums, \$15, 10, 8

For best statement of Actual Farm Accounts, drawn from the experience of the claimant, in a form worthy of publication, premium, \$10

For Reports of Committees upon subjects for which premiums are offered, premiums, \$10, 8, 6

Committee—G. L. Streeter, Salem ; N. M. Hawkes, Lynn ; D. E. Safford, Hamilton ; N. A. Horton, Salem ; Geo. W. Foster, Andover ; D. W. Low, Gloucester.

LIBRARY.

Committee—Henry Wheatland, George M. Whipple.

Special Committee—Benj. P. Ware, David W. Low.

ENCOURAGING AGRICULTURAL LIBRARIES.

It shall be the duty of the Committee to communicate with such persons in the several cities and towns in the County, as, in their judgment, will best encourage the establishment of, or improvement of, collections of books, pamphlets, reports, essays, newspapers, etc., relating to agriculture, and request their aid in thus advancing the cause of agriculture, and co-operate with such persons in promoting the object herein referred to.

Committee—Francis H. Appleton, Peabody ; Henry Wheatland, Salem ; James J. H. Gregory, Marblehead.

NEW MEMBERS.

For the person who obtains the largest number of new members for the Society from any Town or City before the first day of November next, premium, \$6

NOTE.—Names of new members, with name of person procuring them, can be sent as fast as obtained, to the Secretary of the Society, who will make a record of them.

Persons paying three dollars will receive a "Certificate of Membership" which is for life. No fines or assessments are ever imposed and members are entitled to vote in all its transactions, with the free use of the Library and a copy of the publication of Society's transactions each year.

Committee—Secretary, John M. Danforth, Lynnfield.

TREADWELL FARM.

Committee—Benj. P. Ware, Marblehead ; C. C. Blunt, Andover ; B. P. Pike, Topsfield ; G. B. Blodgett, Rowley, George B. Bradley, Methuen ; John M. Danforth, Lynnfield.

AUDITORS.

Committee—J. Hardy Hippen, Salem ; Benj. P. Ware, Marblehead, E. Pope Barrett, Peabody.

FARMERS' INSTITUTES.

Committee—Benjamin P. Ware, James P. King, C. C. Blunt, O. S. Butler, Andrew Lane, John M. Danforth, Lynnfield.

DELEGATES.

From the Essex Agricultural Society to attend Exhibitions of Societies, Farmers' Clubs and Fruit Growers' Associations in Essex County, and report any information that shall seem valuable for publication.

The Secretary to be notified of time of holding their exhibition, who will notify the chairman of Committee to assign Delegate.

COMMITTEES.

All Committees, including committees to judge of Crops, of Exhibits at Fair, and of the Arrangements for the Fair, are chosen by the Trustees at their June meeting.

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