Agricultural Department.

AN ENGLISH PRIZE FARM.

We cannot imitate in all things the practice of the best English farmers; but there are many things of the utmost utility in the management of land which we can learn from them, much to our advantage. Hence it is that we frequently direct attention to their practice, which is far more economical, while it is far more intensive than our Western system. The farm to which the first prize of $200 was paid by the Royal Agricultural Society of England, in class 5 of farms, had 11 competitors. It is called the "Waterside Farm," and its owner is Mr. Richard Mackereth. This farm is in Lancashire, about two miles from Lancaster. It contains 112 acres, of which 29 acres are arable. This arable land is divided into four equal-sized fields, with perfectly straight fences, and in their management the four-course system is adopted—viz., wheat, grass-seed, oats, and roots. The grass-seed, as soon as the wheat is off, receives a top-dressing of manure. This grass is grazed with sheep and cattle for one year, and is then broken up for oats; and this crop is followed by rutabagas, mangels, or potatoes. The rutabagas are grown with artificial manure only, while the mangels and potatoes receive from ten to twenty loads of dung per acre. These rutabagas are grown thirty inches apart in the rows, and the plants eighteen inches apart. There are 22 shorthorn cows, the milk of which is made into cheese. The heifer calves are all raised. The bull calves are sold young as veals. As the young heifers come into the dairy the old cows are fatted and drafted out, and generally bring $150 each. The cows are kept through the winter on Swedes and oat-straw, at the rate of 56 lbs. of each, given uncut. After calving, hay, Swedes, and oil cake, or Indian corn-meal, are given. In the summer they run on the pasture lands. About $100 is paid for horse-dung and $200 of bone and turnip fertilizers are purchased annually. The bone-dust is used for a portion of the pastures every year.

He purchases every year 80 Cheviot ewes of full age, at a cost of $12 dollars per head. To these he puts a Teeswater ram; and his produce last year was 140 lambs, or at the rate of 1¾ lambs to each ewe. These he fats, selling them at $6 to $7.50 per head. The ewes are shorn and clip from 4 to 5 pounds of wool each and sold when fat at $12.50 to $13.50 per head. They are wintered on the grass-lands, with plenty of roots and some cake or grain after lambing. Only two working horses are kept. The management was of the best order, and its productions of cheese, grain, lambs, mutton, and beef were most commendable and sufficient to take the award of the first premium on farms of that size. This is a synopsis of the management, but it lacks the actual income. The management of the sheep is a feature that is well worthy of remark. The consumption of the produce, of course, supplied large quantities of manure. But it will be seen that, to keep it up, there were $300 spent, besides what was made; and, of course, there was money in the operation, or it would not have been undertaken.—*Michigan Farmer.*

WINDOW GARDENING.

To begin, then, we will remind you that indoor plants require far more care than those grown in the garden, for nature supplies nearly all the wants of plants grown in the open air.

Get healthy plants to begin with. Plants that have blossomed through the summer, or for several months previous, will not do. There is, perhaps, no one thing that has caused more disappointments and failures than want of attention to the thing here named. Many persons seem to think that if a plant is large and full of blossoms, it is, therefore, desirable But such plants have, in most cases, reached maturity, and if they are annuals, are just ready to perish; and in any case are less fitted to endure the change to which they are subjected in bringing them from the garden or green house to the close, dry parlor. Be sure to select small but thrifty growing plants.

In the next place, give your plants plenty of light during the day (not in all cases the noon-day sun) and darkness and a cooler atmosphere at night. Plants will no more endure late hours or a stifling heat at night than human beings. One reason, and it is a great reason, why plants drop their leaves on being brought into the house is the dry, suffocating heat by night as well as by day.

"The reason," says a practical florist, "of so many window plants showing long, white, leafless stalks, with a tuft of leaves on the end, is too great heat and too little light. Proportion the two and you obtain a short, stocky, healthy growth. In rooms this proportion is always unequal. In winter there are eight hours of sun to sixteen of darkness; we keep the plants at a temperature of seventy to eighty degrees all the twenty-four hours. In the greenhouse, on the contrary, the temperature falls to forty degrees at night, rising by the heat of the sun by day to a maximum of seventy." The mode of heating the rooms in which plants are kept cannot be controlled altogether by the needs of the plants, but must be controlled, to a great extent, by the appliances in use for warming the rooms. Still, whatever be the appliance in use for heating the rooms, it should be connected with some method of throwing moisture into the air, as by the constant evaporation of moisture.

A furnace is injurious to plants, by reason of its dry heat only; the little gas escaping from a good furnace is not sufficient to affect plants injuriously. But, if possible, avoid the use of illuminating gas in the room where plants are kept. The products of its combustion, especially if the gas contains sulphur compounds, is very injurious to all plants, fatal, indeed, to the more delicate.

Again, cleanliness is essential to the health of plants. Mr. Vick, of Rochester, somewhere tells us that one of the greatest enemies of house plants is dust. We endorse this statement. The leaves of plants are covered on both sides with little mouths, called "stomata," through which they breathe. These apertures are extremely minute, and, therefore, easily stopped. These stomata differ in number in the leaves of different plants, from several hundreds to more than one hundred and fifty thousand to the square inch of a leaf. We are careful to bathe ourselves frequently, lest, as we say, the pores of the skin become obstructed, yet we allow our plants to go unwashed for a whole winter when their pores are much smaller, more delicate and numerous than those of the body. It is well to wash both the upper and under side of the leaves with tepid water once a week, using a sponge or soft cloth. However, when plants have hairy leaves, a syringe is best. This latter class of plants are somewhat impatient of water upon their leaves.—*Christian Advocate.*

A HOLLAND DAIRY.

The best pupils of the Agricultural College at Grignon, in France, are sent, at the public expense, on an excursion each year, to examine the improvements in some agricultural district. In 1876 they visited Holland, and gave an account of a 500 acre farm, reclaimed from Haarlem Lake. After this land was drained and rendered fit for miscellaneous crops, Mr. Amersfoordt devoted it principally to dairy purposes, keeping the justly celebrated black or Holstein breed. Many of his cows are said to produce 4,865 quarts yearly; the average yield per cow being 13 quarts per day, or an annual yield of 4,000 quarts per cow. It is said that sixty-six gallons of milk produce eighteen lbs. of butter and forty pounds of cheese; and that the average gross income per cow is about $112 of our money. This large gross income per cow is made from the large quantity of milk yielded, and not from the peculiar richness of the milk; for sixty-six Dutch gallons would weigh fully 660 pounds, so that it requires 36.66 lbs. to make a pound of butter and 11⅓ lbs. of milk to mak a pound of cheese, whilst we often make a pound of cheese from ten pounds of milk—that is, one pound of butter and two pounds of cheese from thirty pounds of milk.—*National Live Stock Journal.*

A CHOICE IN COWS.—A French chemist thinks he has found some very remarkable differences in the effect of climate upon cows, the differences being between the various breeds. The Salers breed gives milk that has less butter and more casein in summer than in winter. The Ferraud breed, on the contrary, produces a milk that contains more butter in summer than in winter. The milk of the Charollais breed differs but little. These breeds are all from Auvergne. Normandy cows, according to this authority, give a milk that contains much butter and little casein. If such differences could be fully established, a selection would have to be made for localities that depend upon cheese-making or butter-making, for in the modern way of producing these articles in large factories it will evidently make a considerable difference whether the milk for a cheese factory is drawn from butter-making or from cheese-making cows. Some doubt has been thrown upon this chemist's methods of study, but the subject certainly deserves attention, and nowhere more than in America.—*Galaxy.*

—The *Prairie Farmer* says that so much attention has been excited of late in regard to artichokes as food for stock, and especially hogs, the following table giving analyses of their value as flesh and fat formers, as against the other vegetables named, will be interesting. It will be seen that in carbonaceous matter—starch or its equivalent—they are inferior only to the potato. In this connection it should be remembered that in the West no vegetables can be afforded to be raised as a substitute for corn; but as aids thereto, in keeping animals in health during winter, vegetables have a distinct value, and when fed in connection with corn assist the animals materially in their capability to assimilate not only corn, but the cereal grains generally. The table is as follows:

	Flesh Formers.	*Fat Formers.*
Potatoes	14	189
Carrots	6	66
Parsnips	12	70
Mangolds	4	102
Sugar Beets	9	136
White Turnips	1	40
Artichokes	10	188

Here it will be seen that potatoes contains 203 parts of nutriment and artichokes 198 parts in 1,000 parts; while the turnip, that has made English agriculture a living progress, contains only 41 parts in 1,000. What has made English agriculture progressive through the cultivation of roots is the fact that they may be fed on the land, without gathering. In our climate the root crop must not only be fed, but they must be protected from frost. The artichoke is perfectly hardy, of the easiest cultivation, and swine may help themselves at will, when the ground is not frozen.

—An abstract of Herr Von Hensen's investigation into the agricultural value of worms appears in the *Nineteenth Century*. In order to ascertain the precise part taken by the worm in making vegetable mold he tried the following experiment:—Two worms were placed in a glass vessel filled with sand, on the surface of which was spread a layer of fallen leaves. The worms set to work at once, and after about six weeks the surface of the sand was found to be covered with a layer of mold nearly half an inch deep, while many leaves had been carried to a depth of three inches. Worm tubes ran in all directions through the sand; some were quite fresh, others had a wall of mold an eighth of an inch thick, others again were completely filled with mold. In short, the soil of the vessel was already perfectly well prepared for the growth of plants. Herr Von Hensen finds that, although the earth worm weighs only about 46 grains, it produced in four hours nearly eight grains of excrementitious matter. On an average he finds about 34,000 worms to an acre of ground. Their combined weight is therefore over 220 pounds, and they produce about 37 pounds of mold in 24 hours. Besides this they produce a uniform distribution of the mold, open up passages in the subsoil for roots, and render the subsoil fertile.

— In answer to enquiry about orchard grass at the New York Farmers' Club, a member replied that all beasts are fond of it, both as grass and hay. Orchard grass is permanent, while clover is short-lived. It grows in the shade; hence is called orchard grass, and any soil is suitable, if not wet. For pasturage this member values orchard grass, because, first, it stands drought better than any other, will bear heavier stacking, and comes forward in the spring very early. It also by its great amount of fibrous roots, improves, instead of impoverishes the soil. It is not, however, fit for a lawn, as it is liable to grow in bunches, especially when sown alone or when sown thin. In soils where clover will grow there are no two grasses that can be sown together with greater advantage than red clover and orchard grass. They grow and flower together, come to maturity about the same time, and the clover is supported from falling by the uncommon strength of the orchard grass. When sown alone, John Henderson recommends two bushels per acre of orchard grass. When sown with clover, one bushel is sufficient.

—Last year, at the Michigan Agricultural College, Prof. Beal caused a number of the Northern Spy apple trees to be severely thinned of their profusion of young fruit with the intention of trying whether the bearing could not be changed. Every other year a profusion of fruit was gathered, and the off year there was a scarcity. It is stated that every tree that had been thinned of its fruit last year, was bearing a fair average crop of fruit this year, and the trees that had not been thinned, but let alone, as is the usual custom of orchardists, were standing next to them without any fruit on them.

— At the Belchertown show the great attraction was the trained oxen of Darius Morgan. They are five years old and weigh 3800, can be driven with or without a yoke, at command will lie down, sit up, walk on their knees, pass around each other, &c. They were also, one at a time, placed on a bench 6 feet long 4 2-3 feet wide and 23 inches high, on which they performed many marvellous feats, and then both got on and performed. Cattle were the first thing at the show and horses the second.

DOMESTIC.

PREVENTION OF DAMPNESS.

Dampness in walls is often a great annoyance to housekeepers, and in moist climates good precautions should be taken to keep it out of the walls and buildings. It may be prevented from rising in brick or stone walls by a thorough application of asphaltum to the upper portion of the foundation, or to several of the lower tiers of brick. Asphaltum thoroughly applied to the outside of brick work will also prevent the ingress of dampness. The walls may be painted over the asphaltum, if desired.

Another method is also recommended by a leading scientific paper, as follows: Three-quarters of a pound of mottled soap are to be dissolved with one gallon of boiling water, and the hot solution spread steadily with a flat brush over the outer surface of the brick work, taking care that it does not lather; this is to be allowed to dry for twenty-four hours, when a solution formed of a quarter of a pound of alum, dissolved in two gallons of water, is to be applied in a similar manner over the coating of soap. The operation should be performed in dry, settled weather. The soap and alum mutually decompose each other, and form an insoluble varnish which the rain is unable to penetrate, and thus cause of dampness is thus effectually removed.

Alum is also a valuable preventive of mildew. Cloths or other fabrics dipped into strong alum water, are proof against mildew, no matter how much they may afterwards be exposed to damps or other causes favoring the growth of this disagreeable fungus.

About a year ago, says a correspondent of the *Journal of Chemistry*, I was filling up a large scrap book, and in the course of my work used in connection with it a goodly amount of paste, a small quantity that had alum in it. A spell of wet weather coming on before my book was dry, caused it to mildew badly throughout, except where the alum paste had been used; there no trace of mildew was to be seen. Upon observing this, I began trying various experiments with alum as a mildew preventive, all of which succeeded, though put to the most severe tests. I therefore feel that I have, by the merest accident, made a valuable discovery, and as such I take pleasure in offering it to the public—*Pacific Rural Press.*

WEIGHING AND MEASURING.

Weighing is the most trustworthy; but so many articles are made requiring tablespoonfuls, teaspoonfuls, cupfuls, etc., that it is quite impossible to prepare everything by weight. No two families are likely to have cups, tumblers, or spoons of the same size; but after a little experience one learns to become tolerably accurate. We give a table of measures that may be a guide for the inexperienced:

4 tablespoonfuls	½ gill.
8 tablespoonfuls	1 gill.
2 gills	½ pint.
4 gills	1 pint.
2 pints	1 quart.
4 quarts	1 gallon.
½ gallon	¼ peck.
1 gallon	½ peck.
2 gallons	1 peck.
4 gallons	½ bushel.
8 gallons	1 bushel.

A common sized tumbler holds half a pint.
A common sized wine-glass holds half a gill.
One quart of sifted flour equals one pound.
One quart corn-meal equals one pound two ounces.
One quart of powdered sugar equals one pound seven ounces.
One quart closely packed butter equals two pounds.
One quart granulated sugar equals one pound nine ounces.
A piece of butter the size of an egg weighs about two ounces.
Ten eggs are equal to one pound.
Four ordinary teacups of liquid are equal to one quart.

Graduated glass measures, found at any chemist's, are a great convenience to all housekeepers.

ONE WAY TO SAVE LABOR.—Two or three years ago, when from poor health I was unable to stand on my feet very long at a time, I learned when making a garment to always give a thought to the ironing of it, and to trim it accordingly. I found that children's every-day clothes look about as well trimmed with a bias piece of the same, or the stripe of some other kind, as when ruffled, and they were so much easier laundried. Indeed, it saved so much time and strength that I have ever since made their clothes plainly, feeling it to be of far greater importance for a mother to be able to be with her children in the future years to come, than it is to wear out her body and temper while they are small, in fostering their vanity over ruffles and needless trimmings. I like to see children nicely dressed, and a clean, plainly made garment looks much better, in my opinion, than an over-trimmed soiled one that you have a child wear just half a day longer because you so dread the ironing.—*The Household.*