

with a large stock of animals, and short supplies of feed on hand. His only resource is to accumulate stock food to take the place of hay from every source that may be available. Last week we suggested cabbages for late fall and early winter feed, and fodder corn to use later. There is yet time for these crops. Oats may be sown and cut green, and cured to take the place of hay, and turnips are a seasonable crop. There are many crops, in short, which may yet be grown to use instead of hay next winter, and it is prudent for every farmer to use foresight and make some of them available."

LIME AND SALT MIXTURE.

Prof. Johnson recommends for fertilizing purposes to mix one bushel of salt and two bushels of dry lime under cover, and allow the mixture to decompose gradually, thus forming an intimate chemical union of the two materials. For this purpose the mixture should be at least six weeks before use, or, still better, two or three months, the heap mentioned being turned over occasionally. This salt and lime mixture, when applied at the rate of 20 or 30 bushels per acre, forms an excellent top-dressing for many crops. It acts powerfully on the vegetable matter of soils; 56 bushels applied to a turnip crop have produced as large a crop as barn-yard manure. It is also very destructive to grubs and insects in soil. Like salt, it attracts moisture from the air, and is useful against drought. Its decomposing power is remarkable, and if three or four bushels of it are mixed with a load of swamp muck, the latter will be reduced to powder.

MANURE WELL.

A correspondent of the *Country Gentleman* gives the following advice:—"It does not pay to run over so much surface for so little a crop. Learn this truth, and take measures accordingly. Manure well, and stop planting when the manure heap fails; grow up your land to forest trees, turn them to pasture, let them lie fallow, or, make commons of them rather than skim over them year after year for such meagre returns. Better a little farm half tilled than a large one half dusted and 'skimmed.' 'Ten acres' is enough for very many—too much for some. Don't be eager to possess all you can see over of surface, but dig deep to find the gold."

A HINT FOR AGRICULTURAL DEPARTMENTS AND SOCIETIES.

A correspondent of the *Maine Farmer* asserts that "of the whole Board of Management of the State Agricultural College, one possibly may be a farmer, while there are two lawyers, a merchant, a lumberman, and a U.S. official; men not identified with, or even practically interested in, agriculture, who have the supervision and management of that school wherein farmers' sons are taught 'what they know about farming.' The tendency of the whole matter would drift out of agriculture into literature," or anything else.

THE CABBAGE FLEA.

In the first place, I have learned one thing while fighting potato bugs, and that is that we can protect our cabbage plants from the little black flea with Paris Green. It may be mixed with water, or what is, I think, still better, mix it with plaster, or flour, say one part of Paris Green to 20 or 25 of plaster, and sprinkle it on the plants when the dew is on. There is one step ahead; let us be thankful for that.

TURKEYS AS INSECT DESTROYERS.

For a general destruction of insects, I know of nothing equal to young turkeys. Shut the old one up in a coop, feed her and the young ones well, three times a day, with corn meal and plenty of onion tops cut up and mixed with it, and as soon as the early cabbage comes on, give each of them plenty of the leaves and they will scarcely touch anything that is growing; but their industry in hunting insects from morning till night, is almost marvellous. Potato bugs they will not touch.

The cut worm does its damage in the night, and then hides in the earth, consequently

they can not find them; but against the currant worm, the Spanish bug, grasshoppers and many other things, their protection is sure and perfect.

THE CURCULIO.

Now for the curculio. I have not failed to have a good crop of plums a single year since my trees became large enough to bear. In fact some of them have ruined themselves by overbearing. I keep the ground well cultivated beneath and about them, and always have a brood or two of chickens running about under the trees. My theory is, that they pick up the insects as fast as they appear above the ground, and of course there are none left to get upon the trees. At all events, my trees are always full, and I can account for it in no other way.

SALT AS A MANURE.

The application of salt has been found in many soils to be followed with most beneficial results. In our western country the ordinary farm manures receive but little attention. On account of the fertile character of the soils most farmers are unwilling to bestow the labor necessary for its accumulation and hauling upon the land. But in this we think they greatly err. The application of three or four bushels of salt to the acre is a matter of small cost and little labor which would, in many instances, be repaid several times in a single crop. Besides the increased quantity in the crop when applied to wheat land, the crop is often hastened to maturity eight or ten days earlier than wheat on similar land not salted, and this gain in time may often save the crop by rust or the mildew. The proper time to apply salt on wheat land is at the time of sowing seed.

SOWING GRASS ALONE.

A writer in the *Rural New Yorker* says:—"Now, I do not advise in any of the old-time course of sowing grass seed or clover with out, rye or wheat, just because somebody has said it was the best way. If a man wants a field seeded with timothy, sow that and nothing else; and the same with any other kind of grass, or even clover, for any of them will grow far better alone than when crowded, shaded, or the soil about the roots robbed of its moisture by some coarse, rank growing grain. Of course on rich, moist soils, a man may seed down with grain and thereby save on season; but it is poor policy to follow this system on old, nearly worn-out soils, even if our fathers and grandfathers always did so. Then again, it is folly to mix clover and timothy together in the same field, for they are never both in proper condition for cutting at the same time, and a little timothy over-ripe clover, mixed in with the hay, adds not a little to its value. By keeping both separate each can be cut when in the best condition for hay; and this rule will hold good with all kinds of forage plants."

PLASTER FOR POTATOES.

According to Mr. Compton, author of the prize essay on the cultivation of the potato, very remarkable results are obtained from plaster by dusting the vines with it as soon as they are through the soil; again immediately after the last plowing and hoeing; and at intervals through the whole growing season. The first application may be light, the second heavier, and after that more bountiful say 200 pounds to the acre. It renders the plants less palatable to insects, and appears to be fatal to many of the fungi family. The vines retain a bright, lively green color, and the tubers continue swelling until growth is stopped by the frost; besides, potatoes thus grown are so sound and free from disease as to be easily kept for the spring market, without loss by rot. Mr. Compton says he has seen a field, all planted with the same variety at the same time, on one-half of which, that had received no plaster, the yield was but 60 bushels per acre, and many rotten; while the other half, to which plaster had been applied, yielded 360 bushels per acre, and not an unsound one among them.

MUCK OR PEAT.

A writer in the *Boston Journal of Chemistry* thinks farmers give themselves much trouble in carting muck for very little end. He has analyzed several specimens which contained from 1200 to 1700 lbs. of water to the ton, and the greater part of the balance was sand and clay. These specimens only contained from seven to ten per cent. of organic matter. In other words, a farmer carts 2000 lbs. in order to get from 140 to 200 lbs. of decayed vegetable matter, the only thing of value to him.

Stock and Dairy

"ONE THING AT A TIME."

The *National Live Stock Journal* notes that the history of stock husbandry in Europe and in this country satisfactorily proves that few men succeed in any marked degree as breeders of more than one race of domestic animals, or of more than one variety of a single race. A farmer well situated to do so may attain a certain measure of success in raising and selling horses, cattle, hogs, sheep, and poultry—his operations with each may be profitable—but we believe that there are not two instances on record where remarkable eminence as a breeder has been attained by one individual with more than one class of stock. The maxims and arguments in favor of a mixed system of husbandry in this country have little force when applied to live stock husbandry alone. The practice of mixed husbandry so often advised consists simply in growing some grain, some vegetables, some fruits, some grasses and some stock—the proportions and varieties of each to be determined from year to year by the surrounding circumstances and the prospective markets. For the general farmer this is unquestionably the safest and best, but it is not the system which gave celebrity or fortune to the Bakewells, the Colmings, the Bateses, the Booths, the Hammonds, and others now living. "One thing at a time as a leading specialty, and that always," seems to be a good law for the breeder who seeks distinction.

SUGAR BEETS FOR FATTENING SWINE.

Jonathan Talcott gives a statement in the *Boston Cultivator* of an experiment performed on a Suffolk pig, where sugar beets were largely employed in fattening. The animal was about a year old, and the feeding on boiled sugar beets, tops and roots, began on the 16th of August, and was continued three times a day until the 1st of October, after which ground feed was given, consisting of two parts of corn and one of oats, three times a day, till the animal was slaughtered, the meal being mixed with cold water. The result was, on the 16th of August, when the sugar beet feeding was begun, that the weight was 360 pounds; Sept. 1st, 390 pounds; Oct. 1st, 450 pounds; Nov. 1st, 520 pounds. This is the substance of the statement given, by which we perceive that the increase the last of August, when fed on boiled sugar beets, was at the rate of two pounds per day; the same rate of increase on the same food continued through September. When fed on ground corn and oats, made into cold slop, the gain for the next thirty days was less than a pound and a half per day.

NUTRITIVE VALUE OF MILK.

A chemist of Providence, R.I., states that milk is more nutritious than meat. The nutritive value of milk, as compared with other kinds of animal food, is not generally appreciated. There is less difference between the economical value of milk and beefsteak (or eggs and fish) than is commonly supposed. The quantity of water in a good quality of milk is eighty-six per cent; in round steak seventy-five per cent; in fatter beef sixty per cent; in eggs about sixty-eight per cent. From several analyses made last winter, I estimated sirloin steak (reckoning loss from bone), at thirty-five cents a pound, as dear as milk at twenty-four cents a quart; round steak, at twenty cents a pound, as dear as milk at twenty-four cents a quart; eggs, at thirty cents a dozen, as dear as milk at twenty cents a quart. Many laborers, who pay seventeen cents for corned beef, would consider themselves hardly able to pay ten cents for milk, when, in fact, they could as well afford to pay fifteen cents.

Milk is a most wholesome and economical food for either rich or poor. It ought to be largely used. If the money expended for veal and pork were expended for milk, I doubt not it would be an advantage both to the stomach and pocket, especially during the warm season. Relatively speaking, then, milk at ten cents, or even twelve cents a quart, is the cheapest animal food that can be used. Whether farmers can afford to produce it cheaper is a matter for them to decide. It is very probable that were they to ask twelve cents, a very large number of poor people would refrain from its use from mistaken notions of economy, notwithstanding they are excessive meat eaters.

A NEW METHOD FOR PACKING BUTTER.

A Michigan dairyman has lately published his method of packing butter. He has oaken tubs, with heads at each end. They are 14 inches in diameter at the top, 9 inches at the

bottom, and 16 inches high. In packing, a cambric bag is made to fit the tub. The butter is packed in the tub as it stands on the small end—the sack being long enough to extend above the edges of the tub—and is pressed down firmly until within an inch and a half of the top, when a circular cloth is laid over it, the edges of the sack turned down over that, and a layer of fine salt placed on it. The head is now put in its place, the tub turned up, and the butter in the sack, of course, falling down to the bottom, leaves a space all around it, which is filled with brine poured through a hole in the small end. When full, the hole is corked up tight. The butter floats in the brine, and is effectually preserved from the air, and will keep for an almost indefinite period.

We fancy we can see a few million dollars thrown into Canada farmer's hands by this or some other means of sending our butter to market. If we were to inform a farmer's wife that she was not making butter, but merely grease, should we not have her about our ears! But such is the fact. Canadian butter, as now sent out, passes off as grease. Real first-class butter commands nearly four times the price in the world's market. We can realize double the price we are now obtaining if we make and pack our butter properly. The above plan appears to us a much better one than those now adopted, and such as will pay to use to some extent.

BREEDING STOCK FOR THE DAIRY.

Mr. Nimmo, of Napanee, says he has thorough-bred, Ayrshires and Short-horns, but he believes the best breed for the dairy is obtained by crossing common Canadian cows with thorough-bred Durham. He deprecates pure breeds for the dairy, and recommends crosses of thorough-breds of good milking families on the best milkers of common Canadian cows. He has had much experience in raising stock. A cross between a good native cow and a pure-bred Durham, and then crossed with an Ayrshire, produce excellent milkers. He has seven cows which yielded 7,800 pounds of milk during 1870. Cows must have plenty of good food, and an abundance of good water, for a cow well fed and cared for is better than three poorly treated.

DESCRIPTION OF A SHORTHORN.

Professor Wrightson gives the following as the points of shorthorns, as generally recognized by breeders, and we think it gives a general description that will be readily understood by farmers, and as it comes from a Professor of agriculture in one of the most important agricultural institutions of Great Britain, it may be taken as good authority:—

"The color may be red, white, red and white, or roan, but black is not allowed on any part of the body. The hair is plentiful, long, lying in various directions, and of mossy, rich appearance. The animal is docile, the female carrying a sweet-looking head, with a quiet eye. Horns of moderate length in the cow; short, thick, and spreading in the bull. The muzzle is cream-colored, and the horns are waxy, with streaks of red at the base. The bull had a noble carriage and fine head, with hair curling over his forehead and between his horns. It is the head which gives what is termed 'character' among breeders. The rump-bone, when the animal is lean, should be about two inches off, and the upper portion of it level with the under side of the tail (Wright.) When the animal is narrow at this point, there is often a want of flesh and substance between the rump and hips. The quarter, or length from rump-bone to hip, should be long, and full of lean flesh; the hips should be wide across, especially in the female, and the hip bones rounded and well covered; the loin must be flat and wide; the space between hips and ribs moderate; the ribs well arched and deep, giving a round 'barrel'; the back straight, the breadth of the loin well maintained by the spring of the ribs, and shoulders wide across; the belly line parallel with the back, giving a uniform cylindrical body; the flank well let down, thighs heavy-fleshed and deep, buttocks full on both sides; shoulders snugly laid back into the crops; the bosom deep, wide and prominent; the neck thick at the base, but tapering to the head; the head broad between the eyes, and tapering to the muzzle. Whether viewed from front, back, sideways, or from above, the animal should approximate as nearly as possible in general outline to a parallelogram form. This is difficult to realize, but a glance at truly