

**Turning out to grass.**—Calves should not be let run with the cows at first. Keep them in the orchard, so that they have a shelter of some sort or another to ward off the scalding rays of our very powerful sun. If calves are properly fed, there is no danger of their being lousy; but should the parasite peculiar to the calf, and there is such a thing, attack one, an emulsion of coal oil and strong soap suds will easily get rid of the beasts.

**Lime.**—Strangely enough, in the part of England with which we are best acquainted (Kent) lime in the form of burnt or quick lime is hardly ever used on the land. There is chalk (carbonate of lime) in abundance to be had for the drawing, but farmers seldom or never use it, though not forty miles off, in the neighbourhood of Reading, Windsor, &c., in Berkshire, the autumn sees hundreds of acres white with chalk. What does lime, in any form, do for the soil? 1. It supplies food to the plant, but it very seldom happens, and then only on very neglected farms, that there is not sufficient lime naturally in the soil to supply all that any crop requires; 2. lime sweetens sour land, rendering harmless certain compounds of iron which it neutralises; 3. it cooks, so to say, the organic matters in the land, thereby rendering them so much the more easily assimilated by the plants; 4. it sets potash free from the mineral portion of the soil, for there is in most soils, but especially in clays, any amount of potash but in such a condition that it is not available as plant-food. Lastly, lime lightens, by disintegration, heavy land, and causes sandy soils to become more adhesive.

**A new Churn.**—A novel way of making butter has been introduced into England by its inventor, a Swede named Solenius. The milk is heated in the Pasteuriser up to 160° F. and runs thence into the skimming chamber of the machine. As fast as the cream is disengaged, it rises into the churning chamber, being cooled down to 50° as it passes by means of very small cooling frames, through which iced water is constantly passing, and which revolve with the skimmer at the rate of 6,000 revolutions a minute. The cream is driven through a tube pierced with tiny holes, from which it emerges on to each successive layer of cream as it rises, and, as its force is great, converts it into butter by concussion. The butter, in granules, falls through a tube together with the buttermilk into a tub. A spatula, of wood, then stirs the mixture up and down for a few minutes, and the butter is taken to the worker and the process completed. The whole operation does not take longer than is taken by the ordinary separator.

**Green-meat; How to sow; Should wilt.**—*Lucerne* or *alfalfa*, is a very valuable fodder plant, but it is better suited for turning into green meat than for hay or pasture. Some American writer, in the Bulletin of the Ohio Station, recommends sowing from 20 to 30 pounds of seed. We have grown lots of it and always found that 15 pounds was enough. "No crop is to be expected the first season," continues the bulletin, "but when it comes up, the mow should be passed over it to nip off the weeds." We used to sow it with the barley-crop, and always found it did well. After the second year, very energetic harrowing in the late fall will destroy

most of the weeds, and will not injure the lucerne. No use trying it in a damp corner, surrounded by bush, and with a damp subsoil, as a friend of ours did at Longueuil. It wants a free circulation of air, and liberty to send its roots down four or five feet into the subsoil. Mr. R. H. Stephens, of St. Lambert's, wrote to us, in the year 1879, to the following effect:

"We began cutting lucerne on Monday last, June 1st; it is now 2 to 2½ feet high, and, yet, up to Monday, we have had no rain for 4 weeks. Last year, we cut it for the second time on June 21st. We got four crops during the season."

R. H. STEPHENS

5 June, 1879.

The land we should select for this crop we should treat thus: taking a field that grew potatoes in 1895, we should sow it this year, 1896, with roots of some kind—swedes or mangels—heavily manuring it, and making it perfectly clean. In the fall, plough it a fair depth in as wide stitches (lands or ridges) as the soil will bear, draw out the water-farrows with great care, and let it lie till the snow is gone and the land is fairly dry in the spring; then, work it well with the grabber, harrow, and, if needed, with the roller, drill in the usual seeding of grain, and harrow again thoroughly. Next, sow 12 lbs. of lucerne seed to the arpent—15 lbs. to the imperial acre—cover it with the chain-harrow or the lightest set of harrows you have, and when the plant is fairly up, pass a roller of it and work is done.

A good deal of labour and trouble, no doubt, but when you consider that, if the land is properly prepared, and the seed good, lucerne will lie out for from six to ten years, it seems to us that the crop must pay a good percentage on the outlay. We are waiting, impatiently, for the snow to go, to see in what state it will leave the lucerne on the Seminary farm in Sherbrooke St., Montreal. Of course, it was sown just where it ought not to have been sown, i. e., just under the drip of the trees, but it looked so well all last summer, that it will probably stand, and our readers shall have the earliest notice possible as to its condition in April.

When lucerne is cut for green-meat, it should lie in the swathe for six hours or so, to wilt. It may be fed off by cattle or sheep, but they must be watched while grazing on it, for it is mighty apt to "blow" them. It is at its best just as the bloom appears, but becomes sticky soon after it expands. Why people will bother themselves about growing—or rather trying to grow—*sacaline* and *lathyrus silvestris*, which do not seem to be of any good anywhere, and neglect such plants as *lucerne* and *sainfoin*, both of which have been successfully cultivated in all sorts of climates and on all suitable soils for more than 100 years, is rather a puzzle. Sainfoin is the plant above all for limestone soils.

**Kent sheep.**—In our last number there was an engraving of a couple of Kent or Rowney-Marsh sheep, none of which breed has been ever seen, we believe, on this continent. They have been vastly improved, we hear, since we left the old county, but, ever then, they were a remarkably useful sheep; very hardy, able to stand the driving rains and winds of that bleak, exposed district, shearing a good close fleece of combing wool, and though not equal

to the Downs as mutton, their flesh was far superior to any Leicester, Lincoln, or other long wool meat. (1)

We have said so much about *Hampshire-downs*, in previous numbers of the Journal that we need not expatiate here on their merits, but merely call attention to the charming engraving of a lot of lambs of that breed, for the original of which we are indebted to that exquisitely got up periodical "Farming," published at Toronto.

**Mangels for spring-food.**—All sorts of stock are fond of mangels, but their greatest usefulness is for spring-food for cows and ewes after parturition. We never heard of their being given to horses, but if there are neither carrots nor swedes at hand, there is no reason why, when succulent food is needed, horses should not have some. We were told, in 1853, by a very successful Essex farmer, that he never gave mangels to his pig cows, as, from a somewhat costly experience, he found that they caused them to miscarry! The farmer in question, Mr. Cottingham of Little Chesterford, had been originally brought up for the medical profession, and was thoroughly trustworthy.

**Cotton-cake.**—"For growing stock and milch cows," says "Farming," "cotton-cake is peculiarly adopted, but for young calves or for very young stock of any kind, it is not advisable to use it on account of its indigestibility. Feeders often give the preference to the undecorticated kind of cake, on account of its greater astringency, which render it very useful to obviate a scouring tendency among cattle or sheep grazing on young, luxuriant pasture," or, as we said above, in wet seasons on any kind of pasture. We prefer linseed-cake or meal, in spite of the theoretical superiority of the cotton-cake.

**The price of cheese in England.**—Fancy *Cheshires* are hard to buy holders asking 80s to 84s (\$19.20 to \$20.00) a cwt. Fine *Cheddar*, which is getting scarce, is worth 60s to 66s (\$14.40 to \$15.84). *Double Gloucesters* sell for 46s to 56s (\$11.00 to \$13.44). The choicest quality of *Canadian Cheddars* are worth 45s to 46s (\$10.80 to \$11.80).

**Stock-feeding on potatoes.**—Professor Shaw, late of the Ontario Agricultural College at Guelph, has been lecturing the Minnesota farmers on stock-feeding. He does not approve of growing potatoes as an exclusive food for cattle, for, when used in large quantities, they only being about 7½ cents a bushel, whereas when fed moderately they return 15 cents. A lot of 16 sheep were shown that had been pastured for nearly six months on an acre of land! The increase in weight showed that they had in that time paid twenty-two dollars for their keep = \$1.37 a head, or rather more than 1/10 of a cent a day. So it took each sheep about a week to add one pound of live-weight to his frame that is, supposing sheep to be worth in Minnesota 5 cents a pound as they stand. We are not precisely told what crop they were grazing on during the 6 months, but from what is said in the latter part of the report, we gather that Mr. Shaw is a great believer in sorghum: "By experimenting here, we have found that one of

(1) About August, when the Downs are getting scarce, the Kent mutton is in high favour in the London district. Very thick on the loin.—Ed.

the best articles for pasture is sorghum, particularly for sheep. It is quite a new discovery, but from the results of our experiments, I predict that it will come into quite general use for pasture."

**Roots; Change of food.**—Do people ever reflect upon the autumn treatment of stock? Does it seem rational to take cattle into winter quarters, after they have been for six or seven months on grass alone, and at once, suddenly, without any preparation, put them on dry, hard food? If there are many farmers in this province who despise the root-crop, surely they must see that cattle need some succulent food or other mixed with their "roughage," to gradually accustom them to the enormous change that their digestive powers are about to undergo. The cheapest food, in the long run, is that which agrees best with the animal, and unless some succulent food is given to an animal just off the pasture, it is sure to go off its feed, and suffer accordingly. Cattle, sheep, horses, it is the same with every kind of stock.

**Carrots.—Their cultivation; horse-hoeing; cost of hoeing.**—As the White Belgian will certainly produce from 3 to 5 tons an acre more than any red-carrot, and is just as good for horses as any kind, we do not see the use of growing any other. The analysts make a trifling difference between the digestible constituents of the white and the red kinds, but it is so slight as not to be worth attending to. Besides, red-carrots have to be dug up, but the White Belgian stands so well out of the ground, and, if the horse-hoe has been kept regularly at work as long as its passage did not injure the crop, is so easily pulled up, that the harvesting of the crop is a very easy job. The growing of this plant is simple enough: steep the seed for 24 hours; let it drain in a bag, which hang up in a warm place till the seed is "chipped," that is, till the little white lamp at the end of the seed makes its appearance; sow in drills 24 inches apart, manured with well rotted dung, and roll after the seeding with a light roller. A few ounces of turnip-seed mixed with the carrot-seed will indicate the rows and let the horse-hoe get to work within ten days after sowing. Horse-hoe close up to the rows: no fear of disturbing the plants if an inch on each side of the row is left unmoved. To single, use a 3-inch sharp hoe—part of an old scythe-blade answers well—; out out gaps in the rows so as to leave bunches about 5 or 6 inches apart; use the hoe both ways, i. e., thrusting from you and pulling towards you, children follow and separate the bunches, leaving the best plant standing; keep the horse-hoe going particularly in the hot season, as deep as possible; edge-hoe when needed. By *edge-hoeing*, we mean hoeing with a 6-inch or 7-inch hoe on each side of the row of carrots, leaving the middle between the rows to the horse-hoe, whose business it is. A man in practice will edge-hoe an acre a day easily. Lastly, sow early, and not less than 4 lbs. of seed to the imperial acre. The singling and edge-hoeing ought not to cost more than \$4.50 an acre, and the probable crop, on suitable land, being about 800 to 1,000 bushels, the cost for the two operations, taking the lower yield, would be a tiny fraction more than half a cent a bushel!

**Raps.**—The *Karmer's Advocate* of London, Ont., says that Mr. W. G. Pottit, of Freeman, Ont., states that "he has had gratifying experience in