

soils, by experiment, has taken its place. If, as we see in the reports of one of the stations in the States, the peach growers of New-Jersey have doubled their crop "by acting on the advice of the chemist at the station," and using potash, any ordinary farmer of intelligence could have rendered their reference to the chemist unnecessary by tilling them that worn-out sandy land is always grateful for a dressing of wood ashes.

PORK.—Again, if the chemist tells us that nitrogenous foods make lean pork, any common English farmer would observe that his countrymen had been giving pease and skim-milk to their hogs from time immemorial.

PRACTICE, therefore, in our opinion, has made use of foods and manures, and theory has stepped in and, most beneficially, explained why the foods and manures have been efficient.

GUERLOT.—After a good deal of investigation, we find that the name of the weed we have mentioned several times in this publication, is not *guerlot*, as commonly pronounced, but *grelot*, a word signifying *little bells*, and evidently derived from *grêle* = hail. The botanical name is *lobelia*.

CATTLE AT THE CHICAGO FAIR.—We are told that Mr. Valancey Fuller travelled 23,000 miles, and through 23 States, to get his selection of Jerseys together, and that the A. J. C. C. allowed him \$25,000 for his expenses, &c. The sum furnished Mr. Caldwell on the part of the Guernsey men was only \$5,000, and Prof. Long, in his report of the test, speaks as follows:

"Great things have been expected from the big dairy display at the World's Fair. Two big things have so far resulted—a very perfect trial of dairy cattle, which, in spite of its one-sided nature, will remain as a wonderful instance of scientific testing, and a great victory for Canadian dairymen. I was unable to see in Chicago any feature in the working dairy itself which especially commends itself to British readers, for I believe we do the work better altogether. The test of the three breeds, Jerseys, Guernseys, and Shorthorns, is, so far as its comparative value is concerned, worthless; from other points of view it is admirable. There are in the United States, unquestionably, Jerseys of great butter-making merit. These have been freely drawn upon by the Jersey Cattle Club, which I am informed placed 25,000 dols. in the hands of Mr. Valancey Fuller with the object of obtaining a collection of twenty-five representative cows, and this gentleman spent six months in the work, with the result that his herd will win, hands down, and the cows will still milk well when they go back to their owners. The Guernseys in the States are few, and of very mediocre quality; they have been neither boomed nor subjected to costly produce tests. Very little money was spent in obtaining from owners specimen cattle, and the collection in the Guernsey barn is, from a British point of view, inferior. The Shorthorns—well, the least said about our national dairy-breed the better. There are a few useful animals, but I could select from fifty Cheshire herds a far better collection than is fighting for the honour of the Dairy-shorthorn in No. 3 barn on the shores of Lake Michigan. The competition

is no competition at all, it is a bare trial between the best available teams representing three important breeds, one of which is extensively cultivated throughout the States, while the others are comparatively little known or understood. No, the interest in the trials relates wholly and solely to the elaborate system which is being carried out by some very excellent men of science and practice."

The first 30 days milk and butter yield of the three herds—where were the Ayrshires?—is thus stated officially:

	Milk lbs.	Butter. lbs.
Jerseys.....	25,392	1,477
Shorthorns.....	24,765	1,004
Guernseys.....	22,401	1,225

At the end of the week, July 21st to 27th, the Jerseys were far ahead in their milk yield, the produce of the week being—

	lb.
Jerseys.....	5,659
Shorthorns.....	4,667
Guernseys.....	4,482

Thus, it will be observed that things called Dairy-shorthorns only gave between 28 and 29 pounds of poor milk a day. Why, on earth, were cattle of this kind entered at all? One would almost suspect that 'an enemy had done this!'

"Curiously, the Jersey tops the list as a cheesemaker, making more and better cheese than the other breeds. For each pound 9.10 lb. of milk were required, whereas it required 9.67 lb. of Guernsey milk, and 11.31 lb. of Shorthorn milk; but this is not English experience. I trust our friends on the other side will not accept this as Shorthorn data. The cheese test lasted from May 16th to May 25th in reality, although it commenced May 11th. The cows received, in addition to the foods already named, hay, silage, and maize meal. The following was the result:—

	Milk. lb.	Cheese. lb.	Grain in weight. lb.	Value of Produce. \$	Cost Food. \$	Net profits. \$
Jersey herd.....	13,296	1,451	327	217	98	119
Guernsey herd.....	10,938	1,130	480	164	76	88
Shorthorn herd.....	12,186	1,077	709	180	99	81"

The samples of Cheddar-cheese, of United-States production—the Canadian exhibit Mr. Long was too late to taste—are put down in the report as but moderate, much inferior, in fact, to the best English make: the butter, very bad.

Farm Operations---October.

THE ROOT HARVEST.—Although Mr. J. X. Perrault said at the Meeting of the Ensilage Society, last February, that the French-Canadians would not grow roots, on account of the labour their cultivation absorbed, we are glad to know that in certain parts of the province, Sorel for instance, there are fields of roots to be seen, grown by French Canadians, that would do credit to the best farmed districts of the United Kingdom.

All roots should be safe in the root-house or cellar, in this part of the province, by the 20th or 25th of October. The most tender, the mangels, should be secured first, then, the carrots, and, last of all, the hardiest, the swedes.

To pull all these on well cultivated land is easy enough, unless red-carrots are grown, for the Belgian, the best for all purposes, grows well out of the ground, and yields to a very little force. A piece of old scythe, stuck into a wooden handle, will serve to trim the tops of swedes and carrots; the leaves of the mangels should be wrenched off, as that root does not like bleeding. Take care that the men do not strike the knife into the swedes as a handy way of lifting them: swedes are hardy enough, but even a swede will rot out its juices when wounded.

As the carrots will be required at once for the cows and horses, they should occupy a part of the cellar where they can be got at easily. Mangels, being the last roots to enter into consumption, may be packed away at the back.

We do not say anything about parsnips, as hardly any are grown here, except by market-gardeners. They can remain in the ground all the winter, if it is thought worth while; but, in our opinion, they should be stored, though as late as possible, as this root is much improved in sweetness by a touch of frost. The digging of parsnips, left out till spring, causes a great mess, as the land is generally too wet to be properly meddled with, and the subsequent drought makes it a mass of steelly lumps.

We object to earthing-up any crop except celery: it confines the range of the roots. But, on heavy land, where the loose earth between the drills is 4 or 5 inches deep—as it ought to be—we should feel inclined to run the double-mouldboard plough between the drills before carting off the roots, to prevent the poaching of the land. This would not involve much labour or take up much time, as it would suffice to plough out 3 drills, for the horse and wheels of the cart, every 20 yards, say, and the pullers having, of course, thrown the roots into heaps, they can be easily cast into the cart as it passes between the rows of heaps.

Silage-maize.—The harvesting of this crop has been so well and so practically treated by Mr. Fisher, Mr. Barnard, and others, that we beg to refer our readers to the various articles, by these gentlemen, in the reports of the Dairy-men's Association, the Farmers' Congress, &c. And we do this the more readily as we never filled a silo in our life, and we are not accustomed to describe operations we never practically performed.

Fall-ploughing is not universally approved of here; probably, because a broad furrow, laid over flat, as too many furrows still are, does not benefit much by the operation, the spring rains beating it still flatter. But a well laid up furrow, ten by seven inches, or thereabouts, lets the rain pass through between the crests of the plough-furrow, and yields readily to the attacks of the harrows. Water-furrowing should be particularly attended to on slopes, side hills, &c. Only fancy the time that would be saved in the sowing season, if all land intended for grain were ploughed in the autumn!

Dairy-cattle will of course be all housed at night, and begin their course of winter-feeding. We hope to see a vast quantity of butter made in the cold season. Fine idea, feeding cows from November to May and getting no return from them for their keep!

The ewes, now being put to the ram, should be in good condition. Poor ewes rarely twin, and twins are really desirable, unless you mean to use your sheep only as scavengers to clean up the weeds of the farm. Pea straw, clover,

and a few roots, will do the ewes well during pregnancy, timothy hay, give to the horses: it is wasteful to feed cows or ewes on it.

Horses will have hard work this month, what with carting off roots, deep-ploughing, &c. As there are no horse-beans grown here—or next to none—a few pease will help the teams wonderfully—say half a bushel a week and 6 pecks of sound oats, with chaffed clover and straw, and long hay in their racks at suppering-up time. A peck or so of carrots daily, in addition to their hard food, will prevent the change from grass to dry-meal being too sudden. If you have any young horses to sell, remember that a pound of linseed, ground up with a few oats to prevent clogging the mill-stones, given daily, will make their coats glisten beautifully.

Swine ought to be in their warm winter-quarters towards the end of this month. The spring-pigs are, or ought to be, in a pretty forward state, and some of them must be nearly ready for the knife. As you will, we trust, have plenty of skim milk, from your fall-calved cows, there will be no want of stuff to push the autumn-farrowed pigs along. By the end of January, these ought to be fit for the West-end Montreal trade, and if well fed on the dairy-refuse, pease, and corn- or barley-meal, should pay well. Neat, tender, young pigs of, say 16 to 20 weeks old, are always saleable in Montreal throughout the winter. It is a pity they are so rarely met with. They should be fat, but not too fat, and the Improved Yorkshires, like those of Mr. Tait, of St-Laurent, or of Mr. Greenshields, of Danville, are about the best sort.

Buildings—It would be well, if you can spare the time, to look to the state of the warmth and ventilation of the cowshed and stables, lest an early winter set in and you be taken unprepared. Mr. Gilbert's valuable articles on poultry will afford all necessary information about their treatment.

The Farm.

ENGLISH CROPS: 1893.

CORN CROPS, 1893.

	Wheat.	Barley.	Oats.	Beans.	Peas.
Over average.....	38	50	50	11	29
Average.....	117	18	101	29	80
Under average.....	294	292	363	262	155
Total.....	449	450	514	302	264

PERCENTAGES, 1893.

Over average.....	8.5	11.1	9.7	3.6	11.0
Average.....	26.0	24.0	19.7	9.6	30.3
Under average.....	65.5	64.9	70.6	86.8	58.7
Total.....	100	100	100	100	100

HAY, POTATOES, AND ROOTS 1893.

	Hay.	Pota- toes.	Tur- nips.	Man- gels.
Over average.....	9	228	138	71
Average.....	21	147	151	103
Under average.....	479	95	199	264
Total.....	509	470	488	438

PERCENTAGES, 1893.

Over average.....	1.8	48.5	28.3	16.2
Average.....	4.1	31.3	30.9	23.5
Under average.....	94.1	20.2	40.8	60.3
Total.....	100	100	100	100

We give next the comparative percentage tables, so far as they are available, for the seven years ending with 1893, and for the bad year 1879:—