

over the yield in England, instead of being exactly the same as in Wales, where cultivation, on the whole, is very backward.

In Scotland, in 1855, only 1,104,000 bushels of wheat was grown, on about 34,000 acres; in 1894, 45,000 acres produced 1,665,000 bushels.

England's wheat crop in 1891 was 56,088,000 bushels; in 1895, only 35,120,000.

FEATHER-EATING FOWLS.—This is due to a minute parasitic mite at the roots of the feathers, and not, as absurdly supposed by many people, to a vicious habit. The mites can be easily found among the white powdery matter at the base of the quill, the fowls pluck out the feathers to destroy the irritation caused by the mites.

CURE.—One part creosote to 30 of vaseline, rubbed into the affected area.

U. S. CROP OF POTATOES. In 1894, averaged 62.3 bushels—1.65 tons of 2240 lbs.; in 1895, 100.6 bushels—2.56 tons. We constantly hear of the very small quantity of potato-sets planted to the acre in the States, 6 and 8 bushels being commonly mentioned. The ordinary seedling in England is 22 to 24 bushels, or, in weight 12 cwt.—1344 lbs. One or the other quantity must be wrong.

Again, supposing potatoes are planted at 2 feet x 1 foot, it will take, in round numbers, 20,000 sets to plant an acre; so, if each set turns out only a pound of ripe tubers, the yield should be ten tons to the acre!

HARVEST IN MANITOBA IN 1895.—According to the final official reports of the results of the harvest in Manitoba, the actual outturn of grain from the machine shows a general increase in the yield per acre of wheat over the large estimates given in the August report. The following tables give a summary of the yields of the principal crops of the Province:—

Crops.	Acreage.		Production.	
	1895	1894	1895	1894
	Acres.	Acres.	Bushels.	Bushels.
Wheat	1,140,276	1,010,186	31,775,038	17,172,883
Oats	482,658	413,686	22,555,733	11,907,854
Barley	153,839	119,528	5,645,036	2,981,716
Potatoes	16,716	13,300	4,042,562	2,035,336

The wheat crop, which exceeds that of the previous year by over 80 per cent, is said to have enabled farmers to sell sufficient grain to pay off pressing liabilities, while still holding the greater part of the crop. The oat crop is stated to have been fully matured and very heavy. In past years, it is observed, farmers have invariably sold short of wheat and even of coarse grains, not having enough on hand during the following summer to feed hogs and poultry properly. The surplus of wheat and coarse grains this year will materially change conditions in the coming season, when the proceeds of the grain fields will be marketed as feed products in the form of cattle, hogs, poultry, and dairy produce. Owing to the protracted harvest, caused by the heavy work entailed, the amount of land prepared for next year's wheat crop is much below the average.

PIG FEEDING.

PIG FEEDING.—The "Deutsche Landwirtschaftliche Presse" has published an account of various experiments in feeding swine carried out at the Dairy Institute of Proskau during the summer of 1894. Four pairs of pigs, of about seven weeks old, were selected. The objects of the experiments were to determine whether feeding with whole grain barley was deleterious, when given in large quantities; to compare the feeding properties of barley and maize, both given in conjunction with skim-milk; and to determine more exactly the nourishing value of whey. During the earlier portion of these trials (April 21—June 24) the first pair were given whole barley, the second crushed barley, the third crushed maize, and the fourth crushed maize with whey. Numbers 1, 2, and 3 were also given equal quantities of potatoes; and the weight of whey given to the fourth pair was about three times the weight of potatoes given to the third pair, equal amounts of maize being given. The same quantity of skim-milk was throughout given to all four pairs.

Until the 24th June (nine weeks) the process ran perfectly smoothly with all the pigs. After this date, several variations in the quantity and kind of food given were at different times introduced, the weights of the animals being throughout carefully noted. By about the beginning of August, it had been established that the crushed barley had produced better results than whole grain; also that up to this point the crushed barley had proved superior to the crushed maize.

The experiments were interfered with so far as concerned the pigs receiving the maize, by these refusing their food at the same time as they were attacked with "bone-stiffness" (Knochensteifheit). This may very possibly have been due to the feeding of such young pigs with too much maize. The effect of increasing the daily rations of whole grain barley on the first pair was also deleterious, for they also refused their food simultaneously with the advent of a severe attack of "bone-stiffness."

The period during which the animals were in ill-health has been rejected in instituting comparisons of the different feeding stuffs.

The general result of the experiments led to the conclusion that giving barley in whole rough grains is harmful, not only dietetically, but also from the point of view of complete assimilation of the food, and that it is not advisable, with young pigs, up to about four months old, to give them a concentrated feed of maize, but that later, if it is merely a question of aiming solely at the more rapid fattening of the animals at the same outlay, the maize should have the preference over the barley. The quality of the meat has not been taken into consideration. The comparison of the whey with the potatoes led to no result, as one of the fourth pair suddenly refused its food, and thus invalidated the experiment.

REPORT OF THE OFFICIAL ANALYST.

MILK.

Professor Macfarlane, has kindly sent us a copy of his report on the milk-supply of the principal towns of the Dominion, from which we gather the following facts:

Out of 260 samples collected, 187 were genuine, 11 were watered, 7 were partly skimmed, 20 were under average in total solids, 19 were under average in cream.

A general improvement has taken place in quality, particularly in Halifax, N. S., Quebec, London, and Saint-Thomas, while Montreal and Toronto remain stationary; and Ottawa has retrograded.

How comes it that Sorel, the soil of which is poor enough in all conscience, should yield about the richest of all the samples? It cannot be from the breed of the cows, for except some slight cross of the Guernsey from our bull "Refus," by "Presto" of "Préel," out of "Rougette" of "St. Andrews," the stock at Sorel is a mongrel lot. However, the official analysis stands thus:

Sorel, P. Q.									
Nov. 5	15843	Pierre Salvealla, St-Anns...	85.69	5.09	9.22	14.31	1.0337	G. guineo.	
do 5	15844	Nap. Salvealla, St-Anns.....	85.52	5.16	9.32	14.48	1.0340	do	
do 5	15845	N. Cartier, Queen St.....	87.34	1.97	3.69	12.66	1.0344	do	
do 5	15846	P. Guèvremont St-Anns.....	87.16	3.90	8.94	12.84	1.0343	do	
do 5	15847	S. Guèvremont	86.50	1.55	8.95	13.50	1.0349	do	
do 5	15848	N. Pelletier, St-Pierre.....	83.44	1.43	9.13	13.56	1.0353	do	
do 5	15849	P. Guèvremont St-Anns.....	86.54	1.35	1.11	13.46	1.0347	do	
do 5	15850	S. Guèvremont	86.39	1.25	9.36	13.61	1.0353	do	
do 5	15851	S. Guèvremont	86.76	1.66	8.58	13.24	1.0327	do	
do 5	15852	S. Guèvremont	86.82	1.50	8.68	13.18	1.0333	do	
do 5	15853	N. Pelletier, St-Pierre.....	86.97	1.42	8.61	13.03	1.0330	do	
do 5	15854	N. Pelletier, St-Pierre.....	86.81	1.30	8.89	13.19	1.0338	do	

And a very creditable showing it is Toronto, on the other hand, out of 16 samples, has only half returned as genuine; Montreal, 16 out of 22.

BUTTER, CHEESE, &c., IN LONDON.—The price of dairy produce in the London market, according to the "grocer," the organ of the trade, stood thus in January, 1896; we only quote the highest prices:

Butter.....per 112 lbs	
Cork, 1st.....121—0	
French baskets.....122—0	
Danish, &c.....116—6	
Fresh roles (foreign) per doz. lbs...	15-6

CHEESE

	s. d.
Cheddar.....	68 0
Cheshire.....	81 6
Gloster.....	56 6
Wiltshire.....	60 5
Ha! The Cheshire pastures are not easily beaten even now.	

PRESERVATION OF FRESH BUTTER.—The "Bulletin des Halles", a Paris organ of the market of that city, has an article, in a recent number, on a novel way of preserving butter, which we condensed for the benefit of our readers.

After expatiating on the difficulty of preserving fresh butter from rancidity, the paper continues as follows:

In England 4 p. c. of finely pulverised salt is generally used, but in some places a mixture, consisting of 2 parts of salt 1 part of saltetre 1 part of sugar is preferred. This gives to the butter a

less sharp taste than salt alone.

Again, it has been essayed to create in the vessel containing the butter an artificial atmosphere, perfectly free from oxygen, and for this purpose the air is replaced by carbonic acid.

Such, for instance, is the case with butter enclosed in soldered tin-boxes, with 3 grammes of tartaric acid and 1 gramme of bicarbonate of soda to the pound. The box being soldered down, the carbonic acid is produced slowly, finds no means of escape, and impregnates the butter uniformly. As for the use of salicylic, boric acid, and other antiseptics, their use should entirely be forbidden; for they are decidedly unwholesome, and, if their use is persisted in, the consumer must inevitably suffer. Besides, they impart a flavour of their own to the butter, which has spoiled a great deal of the best product of Normandy.

Something, then, had to be discovered; something easy to use, and that would give no special taste to the butter, or, which is better, capable of taking away any bad taste already existing in it. This was the problem from the hygienic point of view. Viewed practically, it was necessary to avoid the use of great, heavy jars or cans; and the

covers too must not need soldering, lest the expense of the vessel should eat up the profits. Mr. Villar, the inventor of the new process, proposes to employ a recently discovered material called "crysoline" colourless and soluble, in small quantities, in water. The butter is worked in the usual machine, and, during the operation, some of the solution (1 to 200 of water) is added by degrees. The lumps are then simply packed in large but light cans, which are filled with the same solution. This done, each can is closed by a cover fastened by a press-screw, and an "amianthus" joint insures its hermetical tightness.

When the butter is to be handed over to the customer, it is taken out of the can and worked over with water. The crysoline is thus disengaged from the butter and leaves no trace of its flavour or odour. The butter thus treated can be kept for months without injury. The cost of the agent employed is a mere trifle.

We hear that the Dairy-school at St. Hyacinthe will probably institute experiments to test the value of this invention.

SPAYING HEIFERS.—This operation was common enough in England sixty-years ago, but since so much attention has been devoted to breeding good stock, it has been in great measure given up. The operation consists of cutting into the flank of the cow and destroying the ovaries by the introduction of the hand. The meat of a spayed heifer was always esteemed of very superior quality, and, of course, the fattening of such was very rapid. It is a great pity the sow-pigs not wanted for breeding are not spayed; they