

	Phos. acid soluble and reverted.	Ammonia.	Potash	Sale price.	Real value.	Difference in excess.
<i>Reliance.</i>						
Guaranteed.....	% 6 to 7	% 2.00	% 2 to 4	A ton.		
Found	6.49	2.12	2.92	\$27.00	\$16.11	\$10.89
<i>Victor.</i>						
Guaranteed.....	% 7 to 9	% 2 to 3	% 3 to 4			
Found	7.26	2.32	5.05	30.00	17.76	12.24
<i>Royal Canadian.</i>						
Guaranteed.....	% 9 to 11	% 4 to 5	% 5 to 6			
Found	6.46	6.10	5.61	38.00	30.56	7.44

Thus, it will be seen, the average difference in excess of cost over value, taking three tons of the various brands, is upwards of \$10 a ton. This is more than our farmers can afford to pay. The superphosphates come out better: both M. Choquette and I making the "Capelton" worth 60 or 70 cents more than the selling price, and the other brands not much out of the way. "No. 1" was guaranteed too high, and is to be rectified.

The lesson to be learned from these considerations is: that phosphoric acid can be bought at about its real value at Capelton, but that, as M. Choquette says in his report, "farmers will realise a great profit by themselves making the necessary admixtures of their artificial manures."

And about this mixture-question: we see that the average amount of nitrogen in the three brands is, in round numbers, 3 per cent. Now Lawes found long ago that it took $4\frac{1}{2}$ lbs. of nitrogen to produce a bushel of wheat over and above the natural yield of the land. I suppose every one who uses artificial manure for his wheat-crop aims at an additional yield of 8 bushels an acre. To gain this it is clear we must use at least 36 lb of nitrogen to the acre, and to secure this we must employ 1200 lbs. of a mixture of the three brands we are talking about, the cost of which would be about \$20 an acre!

The price of nitrate of soda of the very finest quality, containing, therefore, 16 $\frac{1}{2}$ per cent. of nitrogen is to-day, according to the manager of the Hamilton Powder Company, who kindly gave me the figures last week, a fraction over two dollars a cwt.—in England it is worth \$35 per 2,000 lbs.—, let us say, \$2.12; to add 36 lbs. of nitrogen in this form to the acre would cost only \$4.70, or thereabouts. To this add 400 lbs. of the "Capelton" superphosphate, at \$12.00, costing \$2.40, and you have for an acre of land a superb manure at the trifling cost of \$7.00! As for the potash, as I have often said before, I do not think much land in this province requires it. At all events it can be added in the form of kainit, or wood ashes, for a mere bagatelle. Our short seasons give potash very little chance to be assimilated, unless it be autumn-sown, and then the spring-thaws are to be considered. If hard-wood ashes are used, 100 lbs. of the superphosphate may be omitted.

Oh! if every parish in the province had one farmer who would sow on his barley, his oats, or his wheat, 100 lbs. of nitrate of soda to the acre, at two sowings, after the seed had braided, the face of the country would soon be changed.

This season, my friend M. Séraphin Guèvremont, of Sorel, will have to try the effect of 400 lbs. of superphosphate and 150 lbs. of nitrate of soda on an acre of land for swedes, without any manure from the yard or village—city, I mean.

400 lbs. superphosphate.....	\$2.40
150 lbs. nitrate of soda.....	3.18
	\$5.58

He generally uses 40 small loads of dung to the acre at 10 cents; now, these 40 loads have to be carted from the whatever you call it, village, town, city, if you like, at say another ten cents; they must be turned, carted on to the drilled up land, spread, &c. at, at least, 25 cents a load—I doubt if, when the dung is covered in, it has cost less than 50 cents a load, and that is equal to \$20 an acre. Allow $\frac{1}{3}$ of the dung—=\$6.66—to remain over after the roots or potatoes for the use of the subsequent crops, and supposing the whole of the artificials to be absorbed by the fallow-crop, still there will be a large balance left in favour of the hand-dressing.

Or, better still, divide the dressings, half-dung, half artificials: dung \$10.00 artificials, as above, \$2.79, and see the effect on a rotation with the other half-dose of dung given to the grass of the first year after the root- and grain-crops.

Something of the sort you must do, my friends, if you have any desire to retain your present position. Your market for hay, for barley, for potatoes, for pork, &c., has been ravished from you, and I doubt if the newly to be discovered markets will be in any way equal in power of consumption to the old one.

Now, the amalgamated Cotton-companies of Canada say that, owing to their proximity to the States, they can buy the raw-material cheaper than it can be bought in England, and that, therefore, they can sell the manufactured goods cheaper than the English can. If this be so, then owing to our proximity to South-America, we ought to be able to lay down nitrate of soda on the wharf at Montreal at least as cheaply as it is laid down on the wharf at Liverpool, that is at \$35.00 a ton or 1 $\frac{3}{4}$ cents a pound.

Agricultural schools.—Practical farmers in the United States, as well as Professor Sanborn and the earnest-minded Dr. Hoskins, of Vermont, are by no means satisfied with the work of the agricultural schools and stations. They insist upon the necessity of separating the classical colleges from the agricultural and technical schools.

Cheese.—The price of single Gloucester cheese, which had been very low all the summer and autumn, suddenly jumped up last month (December) to from 45s to 50s per 112 lbs.; but, as my brother writes me word, the farmers had previously pretty well cleared themselves out, so the rise in price would not benefit his tenants much. However, at his rent-audit, every one of them paid up in full, and that does not look as if the English dairy-farmer was in such bad condition as our American friends would seem to believe. The single Gloucester is the thin cheese, made from the night's milk skimmed in the morning, and added to the morning's milk. The fact is, the old pastures on the Severn bank are so rich, that it would be extravagant to make whole-milk cheese in the autumn from cows fed on their grass. What did M. Herreboudt mean when he said, at the Dairymen's Convention at Sorel, that "Canadian cheese sent to England was re-exported thence to Belgium as English cheese, and the bad English cheese was also sent there, ticketed 'Canadian-make'?" Surely, if the Belgians wanted cheap cheese, they would find some of the make of their neighbours, the Dutch, cheap enough and bad enough. I do not think our people will make their fortunes by sending their dairy-produce, eggs, &c., to Belgium, unless great care is taken as to the "agent intermédiaire" into whose hands their interests are confided.