

Guelph," recommend the use of Rape very strongly, especially as food for sheep, and it contend that the farmers of the Dominion do not sow it to the extent they should do. S.w in May, either broadcast or in drills; 4 to 6 lb., broadcast per lb., 11c., or 15c. postpaid. Special quotations for large quantities.

Sown broadcast, rape requires no hoeing.

Mangels in the States.—I really begin to believe that there is a future for the root-crop in the Northern States. A year or so ago, I published an extract from the Vermont Watchman, containing a speech of Mr. Aitken's, in which he spoke of the feasibility of growing mangels with a profit in the State of Vermont. This year, Dr. Hoskins publishes the following in the same paper:

"Beets at four cents a bushel.—Mr. Aitken, manager of the Billings farm at Woodstock, gives the following account of his last year's crop of stock beets (Norbiton Giant). Those who were interested in his paper read at the dairymen's meeting a year ago will be glad to read the following: "This year we raised 124 tons from a fraction over two acres, at a little more than fifty tons per acre, the largest crop I ever raised; and as the expense of growing them, with the exception of harvesting, is practically the same as would be required for a crop of twenty-six tons, it is very evident that they would cost much less than the smaller crop. As this was an unusual crop, we will take an average one of thirty-four tons and call the cost of raising them four cents per bushel. We raised a year ago on 2.18 acres seventy-five tons—thirty-four tons, 282 pounds, or 1,138 bushels per acre, which at \$1.48 per ton, the food value given them by chemists, gives us \$63.13 per acre for the roots alone. The leaves, according to chemical analysis, are worth \$2.07 per ton, and would weigh 10.5 tons, which at the value just given would amount to \$22.55, making the whole crop, roots and tops, \$85.68, deduct \$45.52, the cost of raising them, and we have a net profit of \$40.16."

I do not quite understand the figures; for instance: the mangel leaves are said to be worth \$2.07 a ton, and the roots \$1.48, a ton: 59 cents less! This must be a mistake, as, practically, the leaves are very poor food, and theoretically, according to Wolff, the roots are worth \$2.80, a ton, and the leaves, \$2.00. In England, the leaves are rarely harvested; the sheep—generally the ewe-flock—are run over the field after the roots are carried off, and they tread in more than they eat.

This crop of mangels is almost equal to Mr. Séraphin Guévremont's great crop of swedes—grown in 1887—which I laid at 1,600 bushels to the acre.

I have no doubt that, in time, Mr. Aitken—a Scotchman I presume—will persuade his neighbours that singling roots is not such a terribly expensive job as some people think.

Analysis.—Professor Henry "finds oats a very fine feed for milch-cows," "They have been esteemed so to be in England for some hundreds of years. But, then, the professor adds with perfect honesty: 'They have a value beyond that shown by any analysis.' "So, I may say, have swedes and other roots.

Prices of nitrogenous manures.—In England, to-day, nitrogenous manures are reasonable enough in price. In sulphate, ammonia is worth there, 11 cents a pound, in nitrate of soda, 10 cents. As we can get ammonia here, in sulphate, for 13 cents, there is no temptation to import it, an end at which I have been striving for the last 9 years.

Testing fertilisers.—As, from all I can gather, there seems every prospect of a good trade being done in artificial manures

in the province, and as there may be some purchasers who would like to be certain that the lots they are dealing with come up to the analysis as marked on the bags, it would not be amiss to lay down certain rules as a guide to the taking of samples intended to be submitted to the government analytical chemist for his inspection. I think the following, always under submission, would answer the purpose:

Immediately on arrival, one bag out of every three, for small lots, four of every ten, for large lots, should be opened—before one or more witnesses—the contents thoroughly mixed, and from $\frac{1}{2}$ a pound to a pound taken. This should be packed in a perfectly dry box, and forwarded to the government laboratory without delay, another equal weight being sealed up in another dry box and retained by the purchaser for fear of accidents.

Hunting and barb-wire fences.—It is a very curious fact, but a fact that most observant minds must have noticed, that when anything has been brought by art and skill to perfection, the knell of its doom may be soon expected to toll! Towards the year 1840, the coaches on most of the English high-roads were under such consummate management, and the horses were so carefully selected and so equally matched, that although they carried from 14 to 16 passengers, with their luggage, besides the guard and the coachman, the contractors had no difficulty in keeping the time, which was in general, 10 $\frac{1}{2}$ miles an hour, including stoppages—equal to 12 miles an hour all through. In five years from the above date, the railroads had driven every coach off the road, except those running in the North of Scotland and in Cornwall.

And so, now that hunting whether of the fox, the stag, or the hare, has arrived at a pitch of perfection entirely unknown to Backford or any of his contemporaries (circa 1760); when hounds run faster, carry a better head, and, in spite of their increased speed, are as patient over a cold scent as the coarser bred hounds of my younger days; when the horses are better bred and the servants (huntsmen and whips) are more sober and equally skilled in judging of the line of the fox; now, when all things in the hunting field are as near perfection as they can be, I see by the English papers that many Masters, are talking of giving up their respective countries on account of the injury done to both horses and hounds by the horrid barb-wire fences.

Use of artificials and dung.—A question has been asked me as to the benefits derived from the addition of a moderate dressing of artificial manure to a half-dressing of dung. The answer is simply this: for some weeks after the application of farmyard manure to the land, it exerts no influence on the growth of the crop sown. The fertilising constituents of the droppings of animals must first be converted into a liquid state before they are fitted for plant food, and this, together with the previous nitrification of the ammoniacal matters takes some time. But the artificials have been converted by the chemical action induced in their preparation into a readily accessible form, and the tiny radicles of the young turnips or mangels can feed upon them almost immediately after they protrude themselves from the seed, the natural moisture of the land liquefying them in 24 hours. Thus the young plants find themselves supplied at once with food suited to their infantine powers of imbibition; they start at once into rapid growth; and continuing to feed upon their carefully prepared sustenance for the first month or so, at the expiration of that time their now robust roots find themselves in contact with the dung which by that time will have become perfectly cooked—so to speak—and thoroughly adapted to carry on their growth to maturity.

It is this pushing forward of the young plant by artificials that