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Notes by the Way.

Oats.—By a stupid miscalculation, we stated in last month's Journal, that our dear old farm tutor, Wm. Rigden, had grown 148 bushels of oats to the acre. It should have been 140 bushels, as the original phrase ran thus: seventeen quarters and a half.

Sugar-beets.—At the Belœil meeting of the farmers of the counties of Verchères and Richelieu, in January last, great satisfaction was evinced with the crop of beets grown in '94

and with the profits derived therefrom. But we must be allowed to say that we entirely disagree with the proposal to grow beets on raised drills. Monsieur Alfred Musy, writing in the "Journal d'Agriculture" of February last, says: "Richness in sugar will be obtained by invariably growing 30,000 beets to the arpent" about 35,000 to the acre. At what distance apart must these be set out? Should they be horse-hoed with the ordinary implement? If so, the drills must be at least 24 inches apart, or the young plants will be smothered. Will the necessary pulling down of the drills, the beets being thereby left partly naked, not render it obligatory to earth them up afterwards?

By the bye, M. Musy says in another part of his communication: "We did not dare to make any deduction on delivery for the necks, leaves, and dirt, that were sent in with the beets, though it would have been justifiable." Now, M. Séraphin Guèrremont, in a letter dated Nov. 21st, 1864, says: "The roots, weighed for the factory at Berthier, with a deduction made of 12 o/o and 15 o/o... turned out to be 35 tons." (1) Why this deduction was made M. Guèrremont does not say, and we should like to know, for it makes a difference of something like \$7.00 an arpent in the return of the crop. Any how the crop paid, and the after-crops will feel the effects of the perfect cultivation from one end to the other of the rotation. See p. 222 of last year's Journal for a fuller statement of the case: in the last line but one, for "quantity" read "quality."

Winter-dairying.—The campaign among the Insututes of Winter-dairying has been, we hear, very successful, particularly at those in Rimouski and Lake St. John.

The Ensilage Meeting, as it used to be called, now, "The Central Canada Agricultural Society's Convention,"—which is too long a title to be convenient—seems to have been very successful. As far as we can judge by the papers—our unfortunate deafness renders our attendance at public meetings fruitless—the general discussions appear to have been more largely developed than usual, for, unfortunately, as a general rule, one or two of these present at our agricultural gatherings seem to usurp two large a share of the talk.

Mr. Ramage's paper on "Farmyard Manure" spoke of the advisability of mixing the dung of the different kinds of stock; manuring in the fall was wiser if the manure was not ploughed in too deep. Straw should be chaffed for bedding, as it would in this form absorb more of the urine.

Professor Shutt dealt with the chemistry of farmyard manure. Humus is the decayed vegetable matter left in the soil; after decomposition, it sets free certain gases that exercise a beneficial effect as plant-food. As long as manure is kept moist, it will retain the ammonia, and, so, in the professor's opinion (and in ours) it is desirable to keep the liquid and solid manure together. The lighter the soil, the more thoroughly should the dung be rotted.

Mr Garth, of Ste-Therèse and others spoke on this subject. Mr Brodie advocated the practice (an invariable one in our country) of carting the dung out into a wide low pile, making the horses draw it on to the heap, pressing it down as both cart and horse

(1) Three arpents.

pass over it. This may be seen in practice any day on the farm of the Montreal College in Sherbrooke street, where a hose is constantly kept a work in summer throwing water over the mizen to prevent "fire-fanging."

M. Perreault described the English system of box-feeding, which, in short, is this: the earth is dug out two feet, or so, deep, and divided by rails into a double row of boxes of from 6 x 6 feet, for small Canadian cows, to 8 x 8 feet for big shorthorns, a passage being kept down the middle. In each box, is a trough and a crib, the trough being moveable up and down. Litter is daily put in as needed, and the beast moving about tramps down the manure so tightly that no smell of fermenting dung is ever perceptible. It generally takes about 4 months to fill a 2-foot deep box with dung. The division rails must be wide enough apart to allow of the beast putting its head through and withdrawing it easily, as we remember losing a noble fat steer—in 1851—through his hanging himself between the division rails.

M. Perrault is mistakenly reported we hope, as saying that "the place is kept perfectly dry by means of draining," as that would do away with the chief object, as regards the manure, of this system: the urine is all retained in mechanical combination with the solid faeces, and yet the animal never shows a speck of dirt on its coat. Beast never lie down in dung if they can avoid it. As we wrote in December 1884:

"Many people, who ought to know better, fancy that this plan of box-feeding must be unwholesome. It is not so; the fermentation that takes place is so slow and stealthy (*eremacausis*) that no ammonia is evolved, and the only smell perceptible, even when the boxes are full, is the pleasant odour of linseed, always supposing that invaluable food is employed."

"When well managed, box-feeding prevents any waste, by drainage, of the most valuable parts of the manure; there is no loss by evaporation of ammonia; the manure ferments regularly and slowly; and both liquid and solid excrementitious matters, *neither of which are perfect fertilisers when applied separately*, are preserved together in the most admirable manner." v. Journal, vol. VI, p. 178.

Mr. Fisher spoke of animals doing better at large than when tied up. This is the principle of the *hamils* used in Scotland for fattening beasts, but the enormous quantity of straw required for this system renders it utterly out of the question here. Boxes, on the contrary, take up very little litter.

Sir Donald Smith remembered when the farmers of Manitoba used to throw their manure into the Red River. They don't do so now.

Professor Shutt spoke of special education in agriculture. Agriculture was the oldest of all arts, but as a science, it could only reckon fifty years from birth.

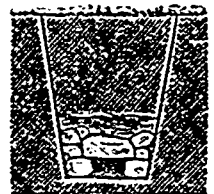
Prof. Saunders drew attention to the fact that the sugar-beet was a comparatively exhausting crop. Of course Mr. Saunders did not mean that the beet is more exhausting, *per se*, than any other root-crop, if consumed on the farm, but it is all exported, and if nothing in the way of artificial manures or foreign food is imported to supply its place, the farms on which it is largely cultivated will soon tell tales.

Canadian farmers, continued Mr. Saunders, have much to learn on the subject of manuring.

Mr. S. A. Fisher was elected President; Mr. Albert Garth, Vice president, and Mr. C. D. Tylee was re-elected secretary-treasurer for the ensuing year.

M. Gigault, Assist. Commissioner of Agriculture, described his tour in Denmark, Britain, France, and Ireland, which, as our readers know is, in course of publication in this Journal.

Stone-drains.—If any one will look at the out annexed, he will see at once why stone drains can only be profitably made in districts where labour is cheap and pipes dear. The difference between the weight of earth to be moved in making a stone drain, and the weight of earth to the moved in making a drain with 1½ inch pipes, is enormous. The last 15 inches of the pipe-drain being taken out with the steel semi-cylindrical spade need not be more than 4 inches wide at top and 2 inches at bottom; whereas, the bottom of the stone-drain must be at least 9 to 10 inches wide; and the selecting of the different sizes of the stones, getting them into the drains, and securely packing them, these are no slight jobs.



A STONE-DRAIN.

Top-dressing.—Professor Saunders, of the Government Experimental Farm, in his evidence before the agricultural committee at Ottawa, last year, referring to the loss of ammonia in dung spread as top-dressing in the summer, said: It was generally believed that if you dried manure in the sun, part of its fertilizing contents would be lost.

To ascertain whether this view was correct, our chemist dried barn-yard manure until it was quite brittle, and on analysing it he found there was practically no difference, so far as fertilizing qualities are concerned, between the dried manure and the same manure when it was fresh, showing that in drying it lost only water. Any ammonia formed at the time the drying process began would be lost by the drying, but that loss was so trifling that it made no appreciable difference in the results of the analysis. The question of leaving manure in the yard until spring, or drawing it out in the winter and scattering broadcast, was replied to as follows: "I think if the ground is fairly level it is better to set it out. It depends a great deal on the amount of slope the land of a farm has. If delayed until spring it is not always possible to get all the manure out on the ground and ploughed in in good time for sowing. Where there has been snow, the manure should be put out in moderately sized heaps. The frozen ground underneath the heaps prevents the manure from leaching, and when spread in the spring before the ground thaws, you get a more equal distribution of the fertilizing material."

As we have always practised top-dressing young seeds as well as old meadows, and found the benefit of doing so, we are glad to see the practice corroborated by theory, as of course we knew it must be after Prof. Shutt's experiment published in this periodical in 1893, p. 107. This being so, we hope the question is at rest for ever, and that we shall no longer hear