

apply the bran and meal directly to our fields, than to pass them through the cattle; running the risk, or in most cases incurring the certainty, of losing an immense proportion of their valuable constituents by drainage and evaporation? It would seem so; but here steps in practice, and says—with infinite wisdom, it appears to me: "My dear Sir, don't bother yourself; trust to me and to my experience. Look first at the effects your food has on your cattle; if that is satisfactory, the rejected portions which find their way into your fields will not be wanting in performing the duties expected from them."

But there is another point on which I must insist strongly: when I buy linseed, pease, or other grain, I know what I am using; there is no fear of adulteration; I buy them in open market; I can vary my food as I please, in quality as well as quantity; if the price of one kind is abnormally high, I can use something else in its place, and I am not in the hands of merchants, who can charge just what they please. For instance: a few years ago, a manufacturer of linseed-cake refused to sell his stuff at less than its value in England; freight, insurance, brokerage, &c., being, according to him, unworthy of the slightest consideration.

Again: in every town in this province, at every feed-store, the veriest rubbish is retailed under the name of "moulé"; in most cases, a mixture of bran, reground, and just oats enough to delude the purchaser.

I confess that, all things considered, I prefer food that shows a low manurial value, because in this case it is clear that the animal consuming it reaps the greater benefit. I am using, as usual, pease, oats, and linseed, and the annexed table will show their cost, and their manurial values as compared with those of bran and cotton-seed:

Ton.	Nitrogen. at 18c lb.	Potash. 6c lb.	Phosphoric acid. 10 ct. lb.	Manurial va- lue per ton.
Linseed \$40	36.0	12.3	15.4	\$17.51
Pease 23	36.0	9.8	8.8	15.87
Oats 20	20.6	4.5	6.2	10.27
Bran 20	22.0	14.8	32.3	16.15
Cotton-Meal.. 30	62.0	21.0	29.5	30.74

The above table shows the amount of the three elements, nitrogen, potash, and phosphoric acid, in 1,000 pounds of the different foods, and the last column shows the value of one (1,000 lbs.), at the prices mentioned at the head of the columns, after it has passed through the stomachs of the animals. The prices are much lower than those estimated for commercial fertilisers; and so they ought to be, the price of nitrogen especially, because the plants probably take up all their nitrogen from the soil in the form of nitrates, and the formation of these from the nitrogen of the *solid* dung is a work occupying a considerable time. The nitrogen of the urine, however, is quite as valuable as that contained in sulphate of ammonia or nitrate of soda: its conversion into nitrates is very rapid, and its conveyance into the ditches equally so, which somewhat reduces its value.

All this shows how carefully farmyard dung should be guarded from waste. I do not hesitate to say that in the stables of all my neighbours nine-tenths of the urine is lost, and an immense proportion of the most valuable constituents of the solid matter is wantonly dissipated between the stables and the field. Within sight of my windows, as I write, is a vast pile of wheat straw, two years old, rotting away merrily, and the goodman's cattle are lying on bare boards, with their hind quarters clogged with filth. The owner is a man of some education, which is strange. He came into my stable on

Monday, for the first time, and declared that my cows must be dressed like horses every day! They have had neither curry-cumb, brush, nor wisp, over them in their lives, but they have lots of room, enough straw, and a trough behind them into which the dung and urine fall.

It seems to me that I get pretty nearly all the available good out of my cattle-food. Four 4-year old barren heifers bought in September, at an average of \$18.00 each, are still giving 8 imperial quarts of milk a day, and they are ready for the butcher whenever the College Stewart requires them: they weigh about 400 lbs of meat each, and are as good as can be. Now, to pay for what they have eaten, there is the milk 1600 qts, each, at Sorel price, 6 cents a quart in winter = \$96.00; 400 lbs of beef at 8 cents = \$32.00; skin, fat, &c., say, \$5.00: in all \$133.00! Of course Lincoln College is an excellent customer, but I have only charged what the Principal paid last year, before I took the farm in hand. Then, after the milk and meat, the value of the dung must be reckoned; but this will not represent a great sum, as dung is as cheap here as other things are dear. Still it must be worth twice as much as any I can buy, as it is all there.

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PEASE.

I was very much surprised, one day, as I was travelling on the north side of the St. Lawrence, at the sight of some very superior farmhouses, all built of squared stone, many of them four storeys high, with neatly kept yards, brightly painted jalousies, and with a general air of comfort and well-doing pervading the whole surroundings. These, succeeding a district occupied by poor log-houses, miserable cattle, and poverty-stricken people, naturally led me to the conclusion that the soil of the former farms was much superior to the soil of the other farms. However, to make sure, as the snow was too deep on the ground to allow me to judge for myself, I asked the driver of the mail-cart, in which I was sitting, if he could account for the wonderful difference, which I pointed out to him, between the appearance of the two lots of farms. "Easily enough," quoth he; where you see those fine stone houses, the land will grow pease; "where the log-cabins stand, it won't." And, no doubt, according to the then (1869) prevalent ideas, he was right: in those days, it was supposed that to sow pease on light land was a mere waste of seed, time, and labour. A most erroneous conclusion; according to our present notions; for a closer study of the nature of things has led us to the conclusion that the pea is as emphatically a light land plant, as the bean is a heavy land plant. "The pea," says the correct Mr. Stephen, in his *Book of the Farm*, "thrives best on light land." In clay, it produces a large bulk of straw, and the production of grain depends upon the season. On light land, the straw is not superabundant, but the yield of grain is plentiful. I wonder the Scotch ever sow pease; for the constant moisture of their climate, together with the very moderate amount of sunshine they enjoy, must render the pea a very uncertain crop. In fact, I hear that, even on the borders, where *pease-banmocks*, a very hearty, though to me a most nauseous, food, were commonly eaten by the peasants, a field of pease is now rarely seen.

Astonishment is often expressed by Canadians that the English labourers don't eat pease-soup. This is easily accounted for: the English pea won't melt in boiling. In Leicestershire, I believe, and near Tamworth, a few boiling pease are grown, but, as a general rule, they come out of the pot just as hard as they went in; and I know from my own observation, that the Mark Lane corn-factors buy no English