

head each year; and as he had boasted a little of his success in the culture of turnips and feeding them to stock, I thought I should derive many useful hints from him and his experience.

The stage put me down at a cross road about four miles from his house, and I soon put myself on the otherside of that distance. I met with a hearty welcome, and next morning we examined the stock and turnips. There were thirty head of very handsome two and three year olds, all sired by a thoroughbred bull, and a fine dairy of sixteen cows.

The two ten-acre fields of turnips, the growth of that year, were alone well worth the trouble of inspection. There were, I was assured, at least 750 bushels per acre, and each acre was destined to feed one bullock, and afford an abundance for a proportion of the living stock beside. The plan pursued was to fallow the land the previous year, and manure in September, leaving it well ridged up and drained. Early in spring, as soon as the first crop of weeds started, the cultivator was used freely, harrowing followed, and the land was again cultivated and again harrowed as the weeds sprouted. By the twelfth of June, the seed was drilled in, and $1\frac{1}{2}$ to 2 pounds an acre was sown—enough, as my friend said, for the fly and himself. The rows were twenty inches from centre to centre, and the plants were left about twelve inches apart in the rows. Their growth was most rapid by this course of cultivation, and a peculiar little cultivator or gang-plough, reversible in its action on the land, was passed at intervals between the rows. A most novel harrow was also used, made of a plank full of spikes. There was one great secret of success—never to allow the weeds to gain head. The cultivating and harrowing between the rows was soon done, but the hoeing was a more serious job.

The turnips were twice hoed *in the row*, the first time without much care except to reduce the young weeds, the second time more carefully, to thin out and single the young plants. Mr S. told me that he should like much to take a contract to raise any quantity of Swede turnips at four pence per bushel, delivered on the field in heaps. I could not think that this would pay, but he assured me that if the turnips were consumed on the farm, the value of the manure thus made would of itself pay him a small profit towards the expense of the turnip crop.

The figures given me were as follows, premising that the fallow had to be made at any rate, whatever crop was sown, and the manure for the turnips hauled out, supposing he were going to sow spring wheat. Winter wheat had not been as certain in its results for some years past as it formerly was—not even when new land was sown. He accounted for this by depreciated seed; in fact there was no other satisfactory way of doing

so, and the comparison was therefore made between the turnip crop and one of spring wheat, premising, as above, that the land was prepared for either turnips or spring wheat.

The account would stand thus:—

Dr.	
To seed wheat, $1\frac{1}{2}$ bushels at \$1..	\$1 50
Sowing, 25c.; harrowing, 50c..	75
Once cultivating	50
Cradling and binding, with board	1 50
Hauling ..	75
Threshing ..	1 00
	\$6 00

Rent of land .. 2 00

Cr.

By 15 bushels of wheat at \$1 ..	\$15 00
Value of straw as feed	2 00
	\$17 00

Turnip crop—Dr.

To seed, 2 lbs. at 30c ..	60
Twice cultivating at 50c ..	1 00
Twice harrowing at 50c ..	1 00
Drilling ..	1 00
Twice cultivating at 50c ..	1 00
Twice hoeing at \$1 ..	2 00
Digging, pitting, or hauling home, at 20c. per load ..	4 60
Cost of feeding covered by value of manure.	
	\$11 20

Cr.

By 750 bushels turnips at 6c .. \$45 36
Showing a vast preponderance in favour of growing turnips at 6c., instead of spring wheat at \$1, when only getting 15 bushels an acre; and this is about the average crop all over the province.

These calculations led me to enquire Mr S.'s opinion as to the practicability of growing sugar beet at \$4 a ton, or 10c. a bushel, cash, when delivered at the factory. He answered unequivocally that he would readily undertake the growth of 100 acres at that price, provided the delivery could be effected without hauling more than from one to two miles. I afterwards obtained a similar opinion from two or three practical turnip growing farmers. The chief objection made to the comparative advantages of growing sugar beet when hauled off the farms, instead of turnips consumed on the place, was the absence of the large quantity of manure made by the feeding of turnips to the cattle. One man who farms 225 acres of land informed me that he had grown as high as twenty acres of turnips a year, and fully corroborated the foregoing statement, and, as additional statistical facts, added, that all the farmers to the north of Guelph, about Elora, and still further northward, had for some years depended almost entirely on the growth of turnips and fattening cattle; but he considered it paid better to consume at least a bushel a week of chopped peas, or its equivalent in other grain, to each head of cattle fed. The manure was still better,

and the cattle fed much quicker. His figures were as follows:—

To purchase of steer, four years old	\$30 00
Three months' feed of grain at 1 bushel per week at 6c ..	7 20
200 bushels turnips at 6c ..	12 00
Straw <i>ad libitum</i> .	
	\$49 20

His steers averaged, when fat, 1,300 lbs. each, and he obtained \$5 to \$5 25 per 100 pounds for them, live weight, and amounting to about \$70 each, showing a good profit on the transaction, besides the manure. No hay was fed, but straw substituted. In the manure he considered himself repaid for his labour of feeding by this article alone. He assured me that he had kept separate the manure obtained from ten head of cattle, and that during the three months they were stall-fed he had hauled out thirty loads of the best manure. Of course, the cattle were liberally supplied with bedding. This was applied to a fallow where barley was grown, and the manure was carefully distributed over nearly three acres of the land. The proceeds of the three acres so sparsely manured was measured and compared with the yield of the same quantity of the same field, but unmanured, and resulted in an increase of twenty-eight bushels of barley, which at 80 cents, the price obtained, made the manure absolutely worth, from these ten cattle, less the cost of hauling to the field, \$22 40, or nearly \$2 25 to each beast fattened.

I thought the value very low stated, as certainly the effect of the manure would be felt in several subsequent crops, and I should have been willing to place it at double the value he gave me on this account alone.

C.

Manure—Gypsum.

"Gypsum," "Sulphate of Lime," or, as it is generally known, "Plaster of Paris," is used greatly, and with usually beneficial results, by the majority of our Canadian farmers. The fertilizing powers of this manure upon certain crops and on certain soils, have been very favourably reported upon by many eminent American and British agriculturists.

The name Plaster of Paris was given when gypsum first came into general notoriety, from the fact that large beds were found and worked in the hill of Montmartre, near Paris.

The analysis of gypsum shows it to contain, of

Parts	
Pure calcareous earth or lime, about	
	30 or 33
Sulphuric acid ..	32 " 43
Crystallized water ..	38 " 24
	100 100

Its dissolution in water, owing to the presence of a large proportion of sulphuric