

89 lbs. of potatoes. On another acre, 15 tons of farm-yard manure produced but 111 lbs. more, while another acre, manured with 4 cwt. superphosphate and 4 cwt. salt, produced the first year 6 tons 16 cwt., and the next year but 4 tons 7 cwt., with the same manure and no potash. The writer says: "I have tried the effect of potash manure upon grains and grasses, and cannot advise their application to the grains as a profitable investment. Upon a clover crop the effect of potash is very marked, and when applied in moderate quantity, say under 20s. cost per acre, will generally prove profitable, if *quality* is wanted; but where a great weight of rye grass is wanted, the addition of potash to the manure is not profitable, though the quality is improved. It has also shown profitable results when applied to the turnips."

He also says:—"As the practical results of very numerous experiments, I recommend for potatoes, per acre, superphosphate of lime, 6½ cwt.; muriate of potash, 3 cwt.; sulphate of ammonia, 2½ cwt. This will be found for potatoes much better and safer, as regards disease, than farm-yard manure; and if the latter is valued at 8s. per ton on the field, the above mixture will be found also cheaper, even taking into consideration the after-effect of farm yard manure."—*Boston Weekly Spectator*.

Fints to Root Growers.

Work your root land as early as possible.

If you intend to use manure in the spring on root land, draw out as early as possible, spread and plough in so that the weed seeds will start.

You will thus be able to fallow your land before June and July.

The great secrets of successful root growing are—thorough pulverization of the soil, and perpetual warfare upon all noxious plants.

Have the land *clean* before planting time, and it will be a very slight matter to raise a good crop of roots.

Joseph Harris says a field he top-drained last winter, kept green during the whole summer, while other grass land was completely burned up. It produces more grass, at the time most needed, than double the number of acres of any of his other pastures.

CORN IN DROUGHT.—A correspondent of an Australian newspaper makes the following suggestions in regard to raising corn in times of drought. At times the weather is so parching at the period the corn is coming into flower, that the pollen of the tassel is not in condition to fulfil its office, and many stalks are left barren. I am certain that barren corn results from scarcity of pollen, and it can be easily observed if the weather is dry when the corn comes into flower. To prevent mishaps of that kind, I would make every third row about a foot wider than usual, or about five feet wide, and when the corn is about a foot high, and has been hoed a second or third time, I would plant seed in this wide row; plant it close, and if the pollen fails in the first planted corn, the second may come to the rescue, and make a crop, when otherwise there might be none.

Stock Department.

Cost of Feeding Stock, &c

"Enquirer" sends us several questions, which we shall endeavour to answer by our experience.

With regard to those questions which refer to the feeding of stock, it must be borne in mind that much depends upon regularity of feeding, warmth, cleanliness, and good ventilation. Indeed if these points be not most carefully attended to, amounts of food will vary very greatly in their effects upon all live stock. Moreover, the various qualities of stock differ greatly in their tendency to put on fat.

1st. Does it pay to drain thoroughly land worth only \$20 or \$25 per acre?

This question is too comprehensive to answer generally. We must know certain conditions with respect to such land before we can give any definite opinion. Like the Scotch peasant, we must answer this question by a few queries of our own. Is the land stumpy or well cleared? level or hilly? What is the nature of the soil and sub-soil? What drainage materials are at hand? Upon the general statement that the land is worth so much an acre, we could not commit ourselves to an answer.

2. How many bushels of turnips does it take under fair circumstances to put on 100 lbs. of beef or mutton? Does it need as much in proportion as the animal advances in weight?

We must again take exception to the general term "under fair circumstances." If the animal be young, and has been put into the stall in good condition, it is generally assumed that about 1,600 lbs. of clover hay will put on 100 lbs. of beef and fat. Animals, however, thrive better on a mixture of food, and therefore we generally reduce the hay and replace it by Swede turnips and some grain.

In feeding hay not less than 10 lbs a day should be given; this quantity at least is absolutely necessary to correct the laxative effect of roots upon the bowels.

Now for fattening purposes—

6 lbs. Swedes is equivalent to	1 lb of sound hay
20 lbs. Chopped peas or barley is equivalent to	1 " "
150 lbs. Straw is equivalent to	1 " "
Therefore if we feed—	
90 lbs. or 1½ bus. Swedes, per day, we equal	15 lbs of hay.
7 lbs. Chopped peas or barley will equal	35 " "
30 lbs. Hay will equal	30 " "
	80

To feed 1,600 lbs of hay its equivalent will then take 1,600 ÷ 80, or 20 days.

To put on 100 lbs. of beef will therefore require—

630 lbs. hay, (by Toronto markets for 1870), worth \$5 per ton at barn..	\$1 50
31 bushels turnips at 6 cents at barn	1 86
147 lbs. chopped grain at \$1 per cwt..	1 47

Total

After the first 100 cwt. of beef has been put on, we may assume that the next two hundred will cost say \$1 and \$3 50 respectively.

Now suppose we buy a steer in the fall which on the scale weighs 800 lbs., the animal might be bought for about \$25. Then put him up to fatten on food as above, and put an increase of 300 lbs. of beef on him, which would be equivalent to about 433 lbs. live weight. The animal now dips the scales to 1,233 lbs., but he is now ready for the slaughter; two-thirds of him is beef, or, in other words, he shows 822 lbs. of beef.

This at \$6 is worth	\$49 32
Or an increase of	24 32
Now we have shown that it costs to put on 300 lbs. of beef.....	12 33

We have then a clear profit.....

The hide will have increased in value about	54
The tallow will have increased in value about	2 51

So far total profit we may reckon ...

Now for the value of the manure—

Analytical chemists show us that 1 ton of clover hay fed makes manure to the value of 12s. sterling or.....

1 Ton of Swedes fed makes manure to the value of 4s. sterling or.....

1 Ton of chopped peas fed makes manure to the value of £1 16s....

Our steer has consumed—

1,890 lbs. of clover hay, which makes manure to the value of.....

5,580 lbs. or 93 bushels Swedes, which makes manure to the value of.....

441 lbs. chopped peas, which makes manure to the value of

We would thus sum up—

Cash profit	\$15 00
Manure profit.....	7 48

Total profit from fat beast.....

And we think that we have charged the food at such a figure, and given the animal such a full complement to make him fat, that practical experience, where cleanliness, regularity of feeding, and warmth are in vogue, will show a much larger profit than that which we have committed to paper.

Let the reader bear in mind that we have not assumed the methods either of cutting the hay, pulping the roots, boiling or steaming. The economy of food arising from these several processes we propose to make the subject of a future article.

4. Does it pay to cook turnips for any animals?

Whatever may be the generally acknowledged result of the many tests upon cooking all sorts of food for stock, which are daily appearing in agricultural journals, it has been shown for many years that cooking turnips, especially by steaming, makes them far more digestible to the fattening animal; and