

When 143 lb. of nitrate of soda replaced 112 lbs. of sulphate of ammonia, the yield was a little less, except where potash and phosphate were used with it, as well as farm manure, and in that case the yield was the same. The advantage of using potash, phosphate, and nitrogen in artificials with the half dressing of farm manure is clearly shown in the table, the yield being only 3 cwt. less than where 20 tons of farm manure were applied, whereas when anyone of these fertilisers was omitted, the yield fell off considerably. The experiment was admirably arranged.

We see that where no manure of any kind was applied the yield was $4\frac{1}{2}$ tons, equal to 180 bushels an acre, about twice the average yield of the States.

WHERE MANURE WILL DO MOST GOOD.

In some plants the farmer wants a large root, large stem and large leaf; and in others he wants only the seeds,—the other parts being an unimportant and secondary consideration. An abundance of plant food, an excess of it if you will, early in the life of the plant, makes for the growth of roots and stems and leaves; and then after the plant is about full size, some difficulty in getting more of it, makes for the growth of seeds. If a man wants large turnips let him pile on the manure. You never saw too much manure on a turnip field, for the size of the turnips. That is quite unlike the bunch of oats on the dung-hill. Then you never saw a hay field overmanured, so far as the growth was concerned. In the hay you want the stem and leaf; and in the turnip and mangel and carrot you want the root; therefore, manuring is the right thing for them. Besides their period of growth and accumulations extends many weeks after the period of collection by ripening cereals has ended; and that at a time when the farmyard manure applied that season is most readily available; and when nitrification in the soil is most active.

There is a fundamental principle to guide in making a rotation of crops,—apply manure only for green crops and hay; and follow these by cereals sown in soil having a very fine tilth, since for them there is only a short growing season. That the first part of it should be favorable is most important for the yield of grain.

Application of farmyard manure directly for grain crop is almost always a wasteful practice,

but put on for root or other green crops it puts and leaves the soil in the best condition for grain to follow. I do not contend for sowing grain on poor land, but for putting manure on for green crops and for grass and for hay, which take all the nourishment they require, and leave enough, and that in the best condition, for the growth of the succeeding crop of grain.—*Prof. Robertson before Agricultural Committee, House of Commons.*

WHAT IS COW MANURE WORTH!

If all the liquid and solid excrement of a cow is saved, it will make, with enough straw to absorb it, about a two-horse load per month—such as farmers usually draw from stables and barnyards to the fields. This manure is already on the farm, and it ought, therefore, to be worth more than in a city or village stable, where it has to be drawn several miles before it can be applied to the land. On the other hand, the farmer who draws manure from a city, fixes up a wagon box that will hold fully twice as much as any load of produce that he takes from the farm to the market. A dollar a load is the usual price paid for these large loads, when contracted for by the year. In the summer, when manure piles in the city are a nuisance, manure from cow stables will be sold much less than this. We have known it offered at fifty cents a load, and in extreme cases have seen it given, free of cost, to whoever will take it away.

Market gardeners, who buy most of the manure from city stables, say that these large loads are necessary, for the manure is unfermented. By the time it is rotted down and ready to apply to the land, its bulk is reduced fully one half. They do not like manure from cow stables, so well as that from horses. It is slower to heat, and contains less phosphate and nitrogen than the average manure from horses. This is partly, perhaps, because oats are the common grain food of horses, but are less frequently fed to cows. Besides, when a cow is giving milk she puts more of the nitrogen into the milk pail than the horses use. But when cows are fed clover hay, while the horse has timothy, and the cow has, besides, a ration of wheat bran daily, her excrement will be nearly, or quite as good as that from a horse. The whole question about the value of different kinds of manure, depends more on the feed than on the stock. A first-rate cow, with a good digestion,