

MANURING THE SOIL.

What is a manure?—Any thing that furnishes food to plants may be called a manure.

How many principal kinds of manure are there?—There are three principal kinds,—vegetable manures, animal manures, and mineral manures.

What do you mean by vegetable manures?—By vegetable manures, I mean those parts of plants which are usually buried in the soil for the purpose of making it more productive.

Name the most important of the vegetable manures.—Grass, clover, straw, hay, potato-tops, rape-dust, &c.

Is green grass ever used for manuring the soil?—Yes. The soil is manured with green grass when grass land is ploughed.

Would you bury the sods deep, if you were ploughing up grass lands?—No. I would keep the sods so near the surface that the roots of the young corn could feed upon the decaying grass.

Are any other plants ploughed in green for the purpose of manuring the soil?—Yes. Clover, buck-wheat, white mustard, rape-rye, and in some places even young turnips are ploughed in green to enrich the soil.

Into what kind of soils would you plough in a green crop?—Into light and sandy soils, and into such as contain very little vegetable matter.

Is not sea-weed or sea-ware a very valuable manure?—Yes. Wherever sea-weed can be obtained in large quantity, it is found to enrich the soil very much.

How is it employed?—It is either spread over the land and allowed to rot and sink in, or it is made into a compost, or it is put into the potato drills in the fresh state,—care being taken to prevent the potato sets from touching the sea-weed, by putting a little earth between them.

Note.—When the potato sets are allowed to touch the sea-weed they are often observed to rot.

When used in this last way does it give large crops of potatoes?—Yes, on the east and west coasts of Scotland it is said to give large crops of potatoes, but of inferior quality.

How would you prefer to make a compost of sea-weed?—I would mix the sea-weed with earth and with shell-sand or marl if they were to be had, and I would turn over the mixture once or twice before using it.

Are there any common green vegetables that are ploughed in with advantage?—Yes. Potato-tops dug in, or turnip-tops, when the roots are lifted, make the next year's corn better.

How can you get the largest quantity of green manure in the form of potato-tops?—By pulling off the blossoms the tops are kept in a green state till the potatoes are dug up, and thus give much green manure.

In what form is hay usually employed as a manure?—Hay is usually given to the horses, and afterwards put upon the land in the shape of their dung.

In what form is straw used as a manure?—Straw in some places is used in feeding the cattle—in other places it is partly given to the cattle and partly trodden among the cattle—while in places again, where few cattle are kept, it is sometimes rotted with water and a little cow's dung, and put on the land in a half-fermented state.

In what state of fermentation would you prefer putting your straw into the land?—That would depend upon the kind of land.

Suppose you had to manure light land for a green-crop.—Then I would like to have my straw pretty well fermented and mixed with the droppings of a good many cattle.

But suppose you were manuring heavy clay land during the naked fallow before a crop of wheat.—I would then rather have my straw more loose and un-fermented. It would help to keep my land open?

What are rape-cake and rape-dust?—Rape-cake is the refuse that remains when rape-seed is crushed in the mill to squeeze out the oil. When the cake is crushed it is called rape-dust.

How is rape-dust applied as a manure?—It is applied to turnips or potatoes either in place of the whole or of a part only of the common farm-yard dung—and it is in many parts of the country applied with great profit as a top-dressing to the young wheat in spring.

What are the most important animal manures?—The blood, flesh, bones, hair, wool, and the dung and urine of animals, and the refuse of fish.

In what form is blood usually employed as a manure?—In this country it is usually mixed up with other refuse in the dunghills of the butchers. In other countries it is dried, and is then applied as a top-dressing, or is drilled in with the seed. It is one of the most powerful manures.

How is flesh employed as a manure?—The flesh of dead horses, cows, and dogs buried in soil or saw dust, with a little marl, makes a most enriching compost.

In what form are bones usually employed as a manure?—Bones are crushed in mills, and then sifted into the various sizes of inch bones, half-inch bones, and dust.

In which of these forms do they act most quickly?—They act most quickly in the form of dust, but they do not act for so long a time.

To what crops are they most usefully applied?—Bones are most profitably employed on light or on well-drained lands, instead of the whole or of a part of the farm-yard manure. When employed without farm-yard manure, they are often mixed with wood ashes, and drilled in with the turnip seed.

Would you raise all your turnip crops with bones alone?—No. If I raised one crop of turnips from bones alone, I would raise the next crop on the same field with farm-yard manure alone—if I could get it.

Are bones ever applied to grass lands?—Yes. To grass lands that have long been pastured for