

THE MATTER OF MANURES.

Soil Enrichment by Means of Coarse Manures or Slow Processes.

There is considerable loss in manure in summer, due to heating, and it is essential to the absorbent materials be fine. Dry dirt is one of the best substances to use with manure, and if the weather is very dry cold water may be applied to manure heaps if the heating of the materials is too great. Attention is called to this matter because there is a great loss of ammonia from all manure heaps that are neglected, and this loss occurs more rapidly during periods of drought and heat, than in winter. Rains serve to prevent loss because water absorbs ammonia, but when the heap is densely packed and the rains run off not enough moisture enters the heap to prevent heating. When the heap is forked over and additional absorbent material added it is not only loosened and cooled, but more air and moisture also enters, and the disintegration of the materials occurs more perfectly and more slowly. It is an advantage to have all the matter composing the heap to decompose, but this process should be controlled, if possible, so as to avoid "fire-fanging."

When coarse manure is spread on the soil the benefits are not received until the next season, as it is necessary for the substances composing the manure to thoroughly decompose before they can become available; therefore the manure heap of this year is really the preparing of the plant food for next season. When fresh manure, however, is spread on the land, and then worked into the soil with a cultivator, it may be ready for use before the crop manures, and thus assist in filling out the grain, but any coarse material in the manure will remain in the ground until next year. The soil absorbs and holds ammonia, thus preventing loss, and especially if the manure is intimately incorporated with the soil. The amount of rainfall and warmth will also affect the decomposition of manure in the soil, while lime also assists in hastening its conversion into plant food. It is necessary when using manure to keep in view the fact that it must be in proper condition to immediately supply the plants with available materials for growth.

Fertilizers can be used in connection with manure to advantage, as they are easily applied and supply soluble plant food to crops with every rain, which forces growth from the start and enables the roots to more completely utilize the manure later on in the season. Farmers who have large amounts of manure have contented themselves with the use of the stable refuse alone, but if they will use both manure and fertilizers they will secure better results than from the use of either alone. Where a farmer has been careful to preserve his manure and prevented loss of ammonia, from overheating or the leaching of rains, he will have avail-

able plant food, but the majority apply it in a coarse and crude condition, the process of decomposition occurring in the soil instead of in the heap, and in such cases fertilizers will always pay, as they force the plants ahead from the start and fortify them to withstand droughts and other drawbacks.



Vesuvius, the famous Italian volcano, is 3,932 feet high.

Women teach us repose, civility and dignity.—Voltaire.

"Lead pencils" are a misnomer. There is no lead in their composition.

It is said that ants will not touch saccharin, or anything sweetened with it.

Sunflower cake has been found, especially in Russia, one of the best auxiliary cattle foods.

A New York paper contains an advertisement offering to exchange a cemetery lot for a good bicycle.

Boston has more Scotch than live in any city of Scotland, save the four largest.

The total membership of the Boys' Brigade for the United Kingdom is 35,000 lads, with 2,800 officers.

The people of Ceylon have a saying that the robin will flourish only within sound of the human voice.

Italy has two kinds of naturalization—the one under the law and the other conferred by royal decree.

The late Richard A. Proctor stated that our earth receives only the one two-billionth part of the heat of the sun.

An English society lady is being sued for damages by a guest, a man who got hurt in the elevator shaft in her house.

Do not, when heated, pour down a quantity of cold water to get cool. Pour it on your wrists, and then drink sparingly.

The fact that White Sulphur Springs, Mont., is a splendid antidote for the tobacco habit is attracting the attention of slaves of the weed.

The balloon sent up from Paris recently attained the height of 15,000 metres, or nine and a half miles, before it came down near Cambrai.

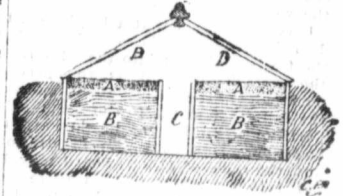
"De man dat likes 'is own conversation too well," said Uncle Eben, "generally gits er chance soonah or later ter m'nopolize de listenin'!"—Washington.

IMPROVED HOTBED.

Description of a Very Simple But Effective Forcing Pit.

One great objection to the ordinary style of hotbed is that a person is compelled to withhold examination for days in cold, stormy weather, whereas, with the forcing pit bright weather or stormy one can care for and examine the plants when they require attention.

AA. are seed beds, which are six inches deep, 4 3-4 feet wide. BB are manure pits, 4 3-4 feet, wide, three feet two inches deep. C is the aisle, which is 1 1-2 feet wide. DD are



IMPROVED HOTBED.

ashes three by six feet. The height from bottom of aisle to apex of roof is 6 1-2 feet.

First the pit is dug the length required, according to the number of sashes used, 11 feet wide and three feet eight inches deep; then the boards that separate the aisle from the pit are put in; they are to be cut 3 1-2 feet long, then boards six inches wide are set on their edge lengthwise of the pit for the bottom rest of the aisles; then the ends are put on and the top scantling or top rests for the sashes. The manure is then put in and the sashes put on (three feet by six feet sashes are used), and fitted as tight as possible. Then at the end that is selected as the entrance a door is built; such as used in the ordinary double cellar door. The seed beds are next to go in, and are ready to plant as soon as the temperature has subsided to the right degree.

Such a pit can be used for growing radishes, onions, lettuce and other vegetables, and for starting seeds of cabbage, cauliflower, egg plants, tomato, pepper, sweet corn, melons cucumbers.

For such seed as corn, cucumbers and melons, which are difficult to transplant, seed may be sown in pieces of sod two inches square, on the root side, and when it is time to transplant the sod is lifted out and put in the desired place; they are better than the small flower pots, as they retain moisture longer.—Daniel P. Mahony, in Western Rural.

ton Star.

A bright girl in a London bus the other day said to her companion, who was making the usual female search for her purse, "Let us divide this Ethel; you fumble, and I'll pay."