

STABLE AND BARN YARD MANURE.

This being, to a great number of agriculturists, the only form in which manures are applied to lands, any suggestions to increase its value cannot be overrated.

Stable and barn yard manure is composed of the excrements of cattle, mixed with that part of the produce of land which is unconsumed by them. It is nothing more than the former produce of the land, modified by its passage through the bodies of animals, or modified by the presence of those things which have, at one time served the purposes of food. It, therefore, contains *all* of the substances necessary to plants, as well those furnished by the air, as those which are obtained from the soil. I shall not go into any elaborate description of its several constituents, nor of their properties, but only give directions for preserving it in its greatest possible state of usefulness. In the decomposition or rotting of stable manure, a substance is formed, called ammonia, which is very volatile, that is, it will readily escape into the air at all times, but more especially when the weather is warm. There would seem to an uninstructed mind, no possible way of preventing the loss of this substance, but by making the receptacles of stable manure air-tight; but chemistry shows, by teaching the nature and properties of bodies, that this substance, one of especial value in stable manure, can be so changed by the addition of another substance of little cost, and of easy application, as not to escape at any degree of heat to which stable manure is ever subject; this change does not in the least affect the value of the manure. To effect this, nothing more is necessary than a small quantity of gypsum, (plaster of paris,) say from a half gallon to a peck, scattered over the yards or stables twice a week.

When manure is to be applied to sandy soils, in which the sand is white, sulphate of iron (copperas,) should be preferred. A few pounds beat very finely, are enough for each week.

In this way the value of the manure will be increased one-half, or at least one-third, and all disagreeable stench removed from the yards or stables. This stench is produced by innumerable fine particles of ammonia escaping into the air, and affects, sometimes seriously the health of animals subject to it. In the application thus recommended above, not only is the health of a farmer's stock, but the value of his manure greatly increased, either consideration being sufficient to pay one hundred times over, the cost of the application of gypsum or of copperas. Either of those substances when applied to privies or any place where animal and vegetable matter is undergoing decomposition, will at once arrest all offensive odors arising from them. So much for saving that part of the manure which escapes through the air.

As commonly taken care of, this kind of manure is subject to another great loss, which should likewise be zealously guarded against.

When any body becomes saturated with water, all of the soluble substances in it are at once dissolved, and if, when in this condi-