

face, consequently lessens the discharge of heat from its surface, and thereby benefits vegetation.

The third point to be referred to, is the injury sustained by plants whenever mineral substances, entering into combination with water stagnant in the soil, rise to the surface, and become injurious to vegetation. This more especially takes place upon soils highly charged with peroxide of iron, which most soils in a greater or less degree contain, especially those wherever the subsoil is of a red colour. To such an extent does this frequently exist, as to tinge the water passing through it with this red colour, and its deposit.

Application of Manures.

The various modes of applying manures excite continual inquiry as to the best, the most profitable. Farmers are often induced to change their opinions and their practices after trying new modes which have been recommended or tried by their neighbors.¹

The inquiry among practical farmers is a very broad one, since there is such a diversity of soil and of crops as well as of the nature of the manure to be applied.

Still there are general principles, applicable to all lands in all latitudes and longitudes. These principles are made up from the actual trials and practices of farmers who have acquired their knowledge in the open fields, and actually reaped what they themselves had sown.

Such farmers often hearken to new theories on the strength of the recommendation of others. Sometimes they are gainers, sometimes losers, by a change of system. Still they never lose sight of the main chance.—They are never so absurd as to place their manures on bean poles, or to bury

them in pits out of the reach of the influence of the atmosphere.

It is not pretty generally agreed among practical farmers that manures of all kinds may be buried too deep in the furrow—so deep with a deep plough as to entirely destroy their efficacy for a number of seasons, if not for ever. The reason why this is so is not very satisfactorily explained—for it is proved that manures never work down to any great depth, else the sub-soil would be valuable after many years of deep manuring.

One great point with farmers should be to prevent loss of their barn manures by checking great fermentation. Strong manures heaped up, soon ferment and burn unless much extra matter is mixed in the pile.—Some heaps heat so much as to turn white. They are “fire-fanged” as the old gardeners used to express it, and they are almost worthless when this excessive heating has been permitted. We incline to think that more of the essence of our manures is wasted by this fermentation—this heating process—than in all other modes of waste.

It is certain that excellent crops of corn are grown where the manure from the barn yard was buried no deeper than a common harrow would bury it when spread on the surface. This we often see on dry ground and in dry summers and with only a moderate dressing of manure.

So we find that all kinds of manure spread in October and November on grass land or meadow land, work well and increase the crop abundantly though exposed through the winter to all kinds of weather.

The truth seems to be that not much of the essence of barn manures is lost by evaporation when they are spread out where no fermentation takes place.

Still if we would secure all the essence of barn manures we must mix