

the first few years excellently, inasmuch as it decomposes clay and humus, by which process alkalies, &c., previously retained by them, will be liberated, and a greater activity in general will be produced; for the future, however, not at all satisfactory; inasmuch as the soil became exhausted, the humus decomposed, and therefore no substance, which preserves nourishment is present, without which a proper texture of a soil cannot be possible. The soil is in such cases over-limed. It is on this class of soils in England that arose the proverb, "lime enriches the fathers, but impoverishes the sons."

For these soils, in general, we have to apply stable manure, or in want of it, we have, from time to time, to turn under a lay of green clover. By means of this treatment we produce soon a considerable quantity of humus, which is now deficient, and give at the same time the means for the rise of a great mechanical force in the body of the soil, viz: by the carbonic acid gas which is constantly going off from the Humus and which favors the crumbling of these fragments of rocks, inasmuch as the Humus became intimately mixed with them.

Finally, as to the soils of the Eastern Shore and the southern counties of our State, it has already been stated that they are of alluvial origin and composed principally of fine river sand, which by means of washing, it is very easy to separate from the rest. On account of the fine grain of the sand, however, and of some clayey cement always accompanying it, the soil possesses cohesion and water-reserving power to remain fresh and plastic inside, whilst the outer crust has already become dry. Soils of this same kind, which are composed of coarse sand instead of fine sand, are much less fertile than the former; we do not, however, meet them very frequently in these localities. Those of red color (peroxyd of iron) are generally more productive than the gray. The principal object in improving the mechanical texture of these kinds of soil must be directed to the increasing of the quantity of clayey cement, besides a proper quantity of carbonate of lime, by which means the binding power of the earth is increased without doing any injury to its porosity. The application of a marl of more clayey than sandy or calcareous constitution, will perfectly answer in this case.

THE DIRECTLY NOURISHING PROPERTIES OF SOIL.

We have considered in the foregoing part the fundamental ingredients of soil and described the highly important influence which they have on vegetable life, inasmuch as the mechanical texture of the soil depends on their various proportions, as well as on the