WHITE OAK OR PIPE CLAY SOIL,

Forming a large proportion of the soil of the Eastern Shore, must be of great interest, whether viewed as to its barrenness, when unimproved, or its fertility, when correctly manured. I have examined its properties, determined its constituents, and studied the best means of remedying the defects of each, with the most careful attention. To the knowledge of the first two, obtained by my own investigations, I am able to add, for the correction of the last, a knowledge derived from the accumulated experience of many of the best farmers on the Shore. This variety of soil is readily distinguished from all others by ITS WHITE COLOR, FIRM COMPACT TEXTURE, ITS LEVEL SURFACE, ITS GREAT RETENTIVENESS OF MOISTURE, by its softness and plasticity when wet, and by its firm and unyielding nature when dry. It is almost always in its original state, covered with white oak *timber*, from which it derives its name. Sometimes, however, pine grows abundantly on it, mixed with the white oak. The water which runs off from its surface is of a dirty white color, and even when it collects in pools, takes a long time to become clear; in other words, a long time must elapse before all the earthy matter, from its extreme fineness, subsides to the bottom. The *sub-soil* is most usually a *true* white clay, (silicate of alumina and protoxide of iron,) unless on the points of land running into the rivers and ocean where red clay predominates. Occasionally, we find the sub-soil of a "mottled, marbled" character, being a mixture of the red and white clay in various proportions. Its chemical constituents are no less constant and marked than its physical appearance. It is distinguished by the large proportion of sand, by the small proportion of iron and clay, by the presence of magnesia in sufficient quantities, by a great deficiency of lime, which *is constant*, and by a tolerable supply of the alkalies, phosphates and sulphates. The sand in these soils is always in a finely comminuted state, feeling but slightly gritty under the fingers, and receiving minute impressions when placed in contact with any uneven surface. It is from the extreme firmness of the sand, that this soil derives its compact texture and its power of retaining moisture. It is this which makes up for what would otherwise be a deficiency in the clay and iron. These two latter substances are particularly important in soils from their power of absorbing and retaining moisture. From the atmosphere they also absorb ammonia, a powerful fertilizing agent, and retain it with great force, forming combinations, "true salts," with it until the plant requires it for support. In a soil deficient in clay and iron, then, and whose sand is course, you will have to supply artificially, some manure containing this latter indispensable substance, or a good crop can never be obtained. There are examples of this kind in the loose, light, sandy soils in some parts of all of the counties. These soils owe their barrenness alike to their texture, and to their composition.