

REPORT.

In obedience to the law creating the office of State Agricultural Chemist, I respectfully submit the following Report to the House of Delegates of Maryland.

It is well known to you that in the communications which I make to your Honorable Body, that I have to call your attention and that of the people whom you represent, to such matters as in my judgment may best subserve the Agricultural interest. How that duty has hitherto been performed is answered by the testimony your predecessors have given, in ordering a much larger number of copies of my Reports each succeeding year, than was printed by the former General Assembly.

The Agricultural masses, the *people* of Maryland, require to know,—

First: the true principles of Agriculture both as to its theory and practice.

Secondly: the nature of the substances necessary to the fullest development and most economical growth of their staple crops.

Thirdly: the nature and composition of soils, and of manures, best adapted to them, and then to be shown in the last place whence to procure these manures, how to avoid imposition, and how to detect or have detected for them, the frauds which have consumed the substance earned by their honest labor.

Theory is but a knowledge of causes and effects reduced to a system, by wise and judicious codification, each effect being assigned to its proper cause, and each cause being made to show the extent of its legitimate influence, and having assigned to it the proper sphere of action to which it is entitled by its attributes.

To form a true theory then, we must first ascertain all the properties, all the adjuncts, and know the whole entire nature of the subjects which that theory treats of and determines. The subject which we discuss then, being known, we must ascertain what things have a bearing upon it, ascertain their nature both as to their mechanical and physical as well as to their vital and chemical properties; all these being known, then resort must be had to