

improving condition in the *great interest* of Maryland. These will be found probably as follows :

1. An increasing desire for *correct* knowledge in reference to the art of culture, which has resulted in making the intelligent farmer better acquainted with the principles involved in the art or science of culture, and from this most of the other causes flow.

2. The extensive application of lime and marl, which developed those constituents of plants contained in the soil in an insoluble or inert condition, and rendered them fit to be taken up by the plants.

3. The use of guano, bones, ashes and other fertilizers which supply ammonia and phosphoric acid, which (not originally abundant) were taken out by the crops to such an extent as seriously to exhaust our soils in reference to these constituents.

4. The introduction of machines for raking, reaping and threshing, and other purposes, by which much more land can be tilled by a given amount of manual labor than formerly.

5. Another and very efficient cause is an increased interest in the closer personal superintendence of the daily routine of the farm or plantation.

6. The introduction and extensive use of clover.

It is by no means to be supposed that the march of improvement has ceased; on the contrary, the advancement already made only serves to stimulate to further progress. We know that 50 to 60 bus. of wheat have often been raised per acre in England, and we are told that even the rate of 90 bus. has been reached on small lots. It is therefore practicable to produce these large yields, and we must push on with our investigations until we become fully acquainted with all the circumstances relating to this interesting subject. It is only by carefully studying the art of culture in connection with its principles, as derived from other sciences, that we can ever hope to attain maximum results from the soil.

That the practice of agriculture is still too empirical, must be evident to those who examine into its present state.

One farmer, for instance, will insist that by the use of lime only his land will always continue fertile. His assigned reason is, that he knows it to be so, because he has learned the fact by his own practical experience. He might with as much propriety assert that if he had a quart of sand he could continue taking out a grain a minute forever.

Another, who, after using lime for a long period, finds it less effective than formerly and resorts to guano, and after two or three successive good results from Peruvian guano,