

There is a decided progressive improvement in the agriculture of Maryland; owing to the spread of information among the people, and the good example of many intelligent farmers distributed throughout the State. It is evident that a rational and more efficient system of culture has taken root amongst them.

I regret however to find that too many continue to practice what I must call *pernicious* systems of rotation of crops, which cannot but tend sooner or later to render the soil less productive. That such results have been produced, we have abundant melancholy evidences in many counties.

Our soils, as has been already stated, when originally cleared of their forests contained stores of the inorganic elements of plants, which had been accumulating during thousands of years. We have, to a great extent, diminished these stores of wealth by too frequently repeating the culture of exhausting crops. When lime and marl began to be applied, the good effects were so manifest that many appeared to think the same improvident system of rotation might be continued if lime be supplied. But many have learned to their cost that although the yield of crops is increased for a time, yet it does not take a lifetime to exhaust the soil again, when lime alone is used. They will find further that in this case it rarely happens after land which has been repeatedly limed becomes seriously exhausted, it can be restored except by expensive manuring or a *long rest*. The cause of this may be understood by a reference to what was said of the action of lime upon soils on page 68 of the first report. It has been proven that lime promotes the further disintegration of the grains and small lumps in the soil, and quickens the solubility of the inorganic elements of plants contained therein. And further, that lime tends to make available also the vegetable matters.

If these effects be rapidly produced by hard cropping, without adding copious supplies of proper kinds of manure from the barn-yard or from some other source, the fertility of the soil is reduced by the amount of matter removed from it by the agency of the lime.

The most judicious system would seem to be one that would sustain the fertility of the soil in any event.

That this is practicable has been fully demonstrated in portions of Europe, as well as in some few districts of the United States, and this, too, with a highly remunerative husbandry.

To effect this in Maryland would require more changes in our present systems of culture and farm management than we can hope to witness in a lifetime, but we are progressing in agricultural knowledge. Improvements will continue to be made, and if we cannot expect perfect systems, we may at