

#### SEC. IV. General Remarks on the Agricultural condition of Montgomery county and the means of improving it.

It will have been gathered from the preceding account that the agricultural condition of Montgomery county is far from being flourishing. At a few points only have attempts been so far made to improve it, and yet wherever these attempts have been made they have been signally successful. The valley of Hawlings' River, and the vicinity of Brookeville have already been instanced, and there are several farms in other directions, which by the use of clover and plaster with sometimes the combined agency of lime, have been entirely reclaimed from a very impoverished condition to one of considerable fertility. That similar results may be obtained on nearly the whole of the waste lands of the county I entertain no doubt.

A close examination into the actual condition of much the greater proportion of soils in the county has led me to two important conclusions: 1st. That the superficial portions of these soils alone are in an unfit condition for a healthy vegetation, and: 2nd. That they are generally very acid and readily improved by lime. The former condition suggests the propriety of adopting the system of deep ploughing; and this is confirmed by the experience of some farmers, together with the observation of one fact made in several places, that wherever it has occurred to the proprietors to apply to the soil the loose sub-soil formed by the decomposition of the subjacent rock which is obtained in digging wells, a marked degree of fertility is always found to have been imparted. On the other hand the acidity of the soil can in no way be more effectually cured than by the addition of lime. Lime, however, besides acting as a corrector of that disposition which some soils have to throw up an acid growth, as pines, sorrel, briars, &c., that interfere and sometimes entirely prevent a more useful vegetation, will amend the soil in other ways. It will improve it mechanically, by giving body to a loose soil, and loosening a stiff one; and it is conceived that it will act *chemically*, converting the putrescible manures applied along with it into soluble compounds, from which the crops may derive a nourishment. It is, moreover, now generally admitted, that no soil can be relied upon to produce good grain crops, especially wheat, that is deficient in calcareous matter. Accordingly many opportunities have presented themselves of verifying the fact, that the decomposition of those rocks containing lime as one of their constituents always yields a soil naturally favorable to the growth of wheat.

If these views be correct, it follows that the system to be adopted by the farmers of Montgomery county is to plough deeply, and to lime freely. As to the latter operation, it needs but few simple directions for carrying it on. Supposing a waste field to be under process of improvement, and that it be deemed advisable to plough deeply, it would seem proper to complete that operation first, and when the land is prepared to add the lime, in the proportion of fifty bushels to