

mechanical texture, and afford abundant nutriment for crops. On these soils, where there has been a long and exhausting system of cultivation and but little application of stable manure, some substance, such as bone-dust, Mexican or Columbian guano, should be used. The soils here, which are shallow, poor, and composed of a large per centage of coarse fragments of rocks, need none of the above substances, as they uniformly contain a large, sometimes a very large proportion of phosphoric acid, and therefore need not the application of substances whose value depends on this constituent.

I have said that all of these soils, with the exceptions to be hereinafter named, contain magnesian compounds in sufficient abundance. The exceptions are, a narrow ridge of land called Sandy Ridge, which is characterized by the presence of large masses of sandstone rocks, and by a loose, "gritty" sandy soil. Here magnesian lime must be employed, as those soils are very deficient in it, and also on other belts of land in this section of the county which are characterized by the presence of a hard sandstone, of a yellowish, olive, or greenish color; these soils are similar to those on the slopes of the Catoctin Mountain, and should be manured with magnesian lime. Plaster and salt should be used on all of these soils in the quantity and mode pointed out when I spoke of these articles.

I have not given the various analyses nor a statement of the various facts on which the above recommendations rest. They, however, are founded on a large number of analyses, and results deduced from all the facts which could be gathered either from practical men or from my own observation. They can be depended on, and should any one require any explanation of what I have said, or fuller instruction as to these soils, limestones or manures, than that which I have above given, he can command my services by addressing me.

I now come to the limestones of Frederick county, of which it contains a sufficient abundance and sufficient variety to meet all the wants of this and the adjacent counties. The analyses given have been all sent to their respective owners, but for the sake of general information, I here publish them. There are many various soils in this county, as to their respective quantities of lime and magnesia, many various limestones containing nearly one-half of magnesia, and many contain none at all. Many thousands of bushels of limestone are burnt and sold to the farmers of this county, and it is vastly important for them to know which soils are magnesian and which not, which limestones are magnesian and which not, that the latter may be properly adapted to the former. Common sense will show the propriety of the above suggestions, and common practice will vindicate the utility