

county, and who has largely used both that and lime on his lands, stated that he had fairly tried them side by side. The results he finds most *decidedly in favor of the marl*.

Whilst investigating this branch of the subject, I inquired of several gentlemen as to the effects of phosphatic guanoes on land to which marl had been applied. The answer in each case was that "no benefit whatever could be observed." Now, this is precisely the result that should have been expected, because an ordinary dressing even of those marls poorest in shells, contains more phosphoric acid than the usual quantity of phosphatic guano applied, and will supply all of this constituent required by crops for many years.

It was represented to me, however, by some parties that in such cases the yield of wheat was much increased by the use of bones and Peruvian or other guanoes containing much ammonia. The cause of this admits of easy explanation, and will be noticed in Chapter X upon guanoes.

An important question to be determined is, "How frequently should marl be applied to land in cultivation?" The testimony upon this subject is so conflicting that I have not yet been able to form a satisfactory conclusion, and must therefore refer to a future report for an investigation into this matter.

It is in my opinion more than probable that of those marls containing 35 to 40 per cent. of shells readily crumbling to powder, a much less quantity than 300 bushels per acre will be more economical, provided due care be taken to spread it uniformly. The richer the marl in shells or carbonate of lime, the less will be required. It has been found, however, that larger doses may be applied to soils abounding in vegetable or organic matters, but if these be very deficient, a heavy application of marl sometimes produces an injurious effect for a year or two.

The credit of being the first in Maryland who used marl as a manure belongs to the late John Singleton, Esq, of Talbot county, not the Rev. J. Singleton, as Mr. Ruffin calls him in his Essay on Calcareous Manures. Mr. Singleton noticed marine shells in a bank from which he was digging earth for making a causeway. His first application was made in 1805 with 80 bushels to a small area of land, and the increased production was such as induced him to persevere. Others soon followed his example to such an extent as greatly to increase the products of his own and other counties.

There is no doubt that the importance of these marl deposits will be more fully estimated hereafter, and that Mr. Singleton will be remembered as one of the benefactors of the State.

Shell marl, as before stated, exists in several counties on the Western Shore. It is very abundant in Calvert, St.