stances, serves to fix both, and thus increases the depth of the soil. This effect is very different from the deepening of a soil by letting the plough run into the barren subsoil. If by this mechanical process, a soil only three inches is increased to five, as much as it gains in depth, it loses in richness. But when a marled soil is deepened gradually; its dark color and apparent richness is increased, as well as its depth. Formerly," says Mr Ruffin, "single horse ploughs were used to break all my acid soils, and even they would often turn up subsoils. The average depth of the soil on old land did not exceed three inches, nor two of the newly cleared. Even before marling was commenced, my ploughing had generally sunk into the subsoil—and since 1825 most of this originally thin soil, has required three mules, or two good horses to a plough, to break the necessary depth. The soil is now from five to seven inches deep generally, from the joint operation of marling and deepening the ploughing a little in the beginning of every course of crops."

From the preceding statements in regard to the effects of marl we gather the following directions as to its application, which may be thus resumed:—If the marl is rich in calcareous particles, and the soil to which it is to be applied already under a good course of cultivation, from three to five hundred bushels may be used safely and profitably. It is always hazardous to go beyond this quantity, especially on corn lands; although it has been found that the succeeding wheat crop is improved, and that the land recovers in a few years from such an overdosage. Marl of the same quality being used, on new lands naturally well constituted and containing much vegetable matter, there can be no danger in using the full quantity, namely five hundred bushels, and even more. On a light sandy soil, using that kind of marl which we have called *clay marl*, that is, having a notable proportion of *aluminous* particles—three hundred bushels will be sufficient. A stiff clay-soil on the other hand will require the same quantity of a *sandy-marl.*

An essential element in calculating the value of the application of marl, is the *cost* of that species of improvement. For this we have unfortunately but very little data,