of unvarying composition, but as it is found, a mixture of several substances, in various proportions, each one having particular uses and particular adaptations. First, of guano having a large quantity of ammonia: *this should be applied to all soils not having the mechanical texture to absorb ammonia from the atmosphere, to all soils which bring poor crops, whether clayey, sandy, or gravelly.* To all crops on poor land, from whatever cause that land be poor, except from deficient drainage. No manure will pay for itself on land which is too wet: both money and labor are thrown away on it. Good Peruvian guano in the above instances will pay well. Especially should it be applied to the wheat crop, taking care to sow the wheat on land which from its texture is adapted to its growth. Always it should be applied to those crops which have the greatest money value.

Custom has generally assigned two hundred pounds as the proper quantity per acre, but I cannot say whether this be the best quantity or not; some have obtained equal results with one hundred pounds. From the varied composition of this manure, reliable data could not be obtained as to the best quantity, as it is plain that 150 pounds of some specimens are as good as 200 pounds of other specimens. Experience heretofore has been but of little use, because the consumer did not know what he was experimenting with. His No. 1, of one cargo or of one season, might be, in many instances, a very different thing from the No. 1, of another. The certainty of agricultural experience, therefore, also demands an inspection to show the quantity of the different valuable constituents in this article.

On lands which will produce from eight to ten bushels of wheat, I would not advise the application of this guano. I do not believe that the increased crop which it will produce on land of this capacity will remunerate for its expense. Other manures of the kind to be determined by analyses should be applied. The advice which I have given is founded on the knowledge of the produce of a very large number of applications of this substance which were made in different years, to different soils, in different parts of the State. After the soil has been put in fine order, it then may be sown broadcast, harrowed, or ploughed in with a light plough. I would not advise its being ploughed in deeply; with corn it has been used in the hill; in this manner it should always be mixed with a little woods earth, or something of that sort. Public attention has lately been directed to the question whether plaster of Paris (gypsum) should be mixed with guano or not. The combinations alleged to take place between the sulphuric acid of the gypsum and the ammonia in the guano have been denied. It will be remembered that sulphate of lime, gypsum, (plaster of Paris,) was recommended to be applied not only to guano, but to stable manure, and all other manures, which by their decomposition pro-