

soil. Let not foreign manures of any sort, nor those *manufactured* in our midst, however pompously advertised or extravagantly puffed, be substituted for it.

Stable and barn-yard manures must be the main dependence of the great body of our farmers. Do not then let it be neglected. Treat it as I have shown above, and there will be less reason for our farmers to submit to the extortions of foreign or domestic manure dealers.

*Peruvian Guano* stands, as to composition and character, next to stable manure, particularly to that which is in an advanced state of putrefaction. It contains but a small quantity of humus, the whole of its organic part, amounting to 50 per cent., consists of nitrogenous compounds, capable of yielding, in the course of putrefaction, about one-third of their own weight of ammonia. The balance being about 40 per cent. of mineral matters, mostly phosphate of lime, and 10 per cent. of water. This composition shows at once the article to be a highly concentrated manure; it is, in fact, the most concentrated of all fertilizers of commerce; and practice has long since given abundant evidence in its favor. I have repeatedly spoken of Peruvian guano in my former reports, as to its composition and the particular substances on which its fertility depends; this I need not here repeat, as it is well known, and will only refer for information on this subject to my former reports. The collection of more numerous facts and the results of more experience, however, induce me to make some remarks as to its mode of application and the *quantity* which should be used.

This is the more necessary as some of the sources from which our farmers seek information are dealers in the article, and are therefore not disinterested, even if they were from practical experience or scientific knowledge competent advisors. This is not the case, and we therefore have ignorance and selfishness combined to mislead the farming community in the use of this article.

With regard to its application, it must be urgently recommended; first to use an article which is either originally in a state of fine comminution, or rendered so previous to its application, by sieving and subsequent pounding of the selected lumps, or by being ground in a proper mill; and, secondly, to sow it in a manner which will secure its distribution throughout those parts of the soil *where* the grain is sown; to effect this purpose, it on grain crops should always be sown with a drill. It is apparent that Peruvian guano, on account of it containing nitrogen not alone in the most concentrated state, but also in a form (that of the volatile ammo-