

nia) which renders it extremely volatile, is more liable to loss than any other of the manures commonly used; and that, therefore, our particular attention should be directed to the ways and means by which its full effect may be secured.

There is, in fact, but one substance which, if properly mixed with this guano, will in every respect answer the purpose in question, and this substance is soil itself. It has already been remarked that water which has been saturated with ammoniacal salts, if suffered to filter through soil, runs off clear without the ammonia formerly contained in it, and that this power of soils, of retaining the ammonia, has to be attributed to the presence of portions of double silicates in them. This power of soil comes here into action, and it is plain in itself that its effect on the guano will be the more thorough and full the more uniformly the guano has been distributed throughout its mass. In order to attain this object, it may be advisable to mix the guano, previous to its application, with a suitable quantity of soil, (about double its weight,) especially in the case when the quantity of Peruvian guano to be used is too small to allow its uniform distribution over the surface of the acre to be manured. The soil best adapted for this purpose should be a loose, loamy one, and rich in humus, so as to secure to it a specific gravity, not exceeding that of the guano to be mixed with it; a perfect mixture of two substances being possible only when they are of equal gravity, and only in this case they will not separate from each other when being sown.

The second point to which I shall direct the attention of farmers, is to the quantity of guano which should be applied per acre. *My own practical observation, as well as that of many others who followed my advice, has decided that it should never go beyond two hundred pounds, but may for many soils, according to their degree of stiffness, fall short of one hundred pounds, and this should always be applied with a drill.*

There is further advice which I must give in relation to the use of Peruvian Guano as to the crops to which it should be applied; as a general rule it should be applied to the narrow leaf plants, such as wheat, oats and rye, in the largest quantities. Plants absorb much of their ammonia from the air, the smaller the leafy surface, the greater need is there consequently for a larger supply of ammoniacal manures to plants of this class, than to those which have a broad leafy surface, such as tobacco, cabbage, corn, &c.

It has ever been my endeavor to diffuse amongst farmers the true philosophy of farming, and to make them understand that crops cannot profitably be increased by enormous