

manure alone is very great. Another mode for the application of bone dust is in the liquid form. I strongly recommended this mode of application in my last report to your honorable body. (Page 37, House copy.) The reasons which I then gave remain in full force, and the experiments there detailed still have my entire confidence, and I strongly urge this mode of application as cheap and certain, and one that in its results will amply remunerate for the labor expended on it. For details of the mode to be employed and the experiments given, I respectfully refer those interested to that report. I have been thus particular in giving precise directions as to the mode of preparation of bones by this process, because I am certain that in a few years they will come into very general use. In many of our soils the elements of bones are very deficient, and their use will be greatly extended. I advise every planter and farmer to collect and preserve them, even if they be now skeptical as to their value, for in a few years they will see their efficacy and will then regret not having followed the advice I have given them. Farmers should take every occasion to manufacture their own manures, as they have had no certainty of the purity of the articles bought, and therefore have incurred great loss. I shall show, when speaking of guano, how this has been the case in relation to this article; and if so in this, how much more likely is it to be the case in a manufactured article, where no check exists to prevent the adulteration or impurity and which few have the ability to detect? The value of dissolved bones depends on their phosphate of lime being converted into biphosphate of lime; and to show how important this is, it is enough to recollect that whilst the former is not worth more than  $1\frac{1}{2}$  cents, the latter is worth from 8 to 9 cents per pound. The loss likely to be sustained by purchasers of an inferior article is sufficiently manifest, when it is considered that that inferiority may result from the ignorance as well as the dishonesty of the manufacturer. By manufacturing for themselves, the consumers will escape loss from either cause. The points here in reference to which I wish to call particular attention of the agriculturists, are:

1. That bones should be used in their most soluble form—that is, dissolved in sulphuric acid, as before directed.

2. In preparing the mixture the bones should be as fine as possible.

3. That the quality of the sulphuric acid employed should be well ascertained and paid for accordingly.

4. That lime, or substances containing much of this, should not be used to dry the mixture.

5. That dissolved bones may be very profitably united with stable manure.

6. That they may be employed with benefit either at the time