And again, they may consist principally of materials of little or no use, except to add to the weight and to the profit of the dishonest maker. It is as easy for the latter to publish flourishing certificates as for his more honest rival in the trade. Some of the makers have complained of the injury to their trade, and have expressed a desire that effective measures should be adopted to put them upon a better footing.

The mode by which I propose to effect this purpose will be stated presently, and will be applicable to manures whose properties are not apparent by simple inspection. I have already referred to the investigations which have been made of bones and guanos for farmers, and there are others in the hands of my assistant which I hope will be completed in time to be placed in the appendix.

An article has been advertised in the "Country Gentleman" paper, in praise of what is termed the "National Fertilizer," in which it is stated that "its basis is the green sand marl of New Jersey, combined with fish and pure animal bones."

As to the bones, I would think it better that the farmer should buy them pure and ground, and manipulate them in the manner I have before suggested. And if he has access to fish or flesh cheap enough for manure, he can easily compost them with earth and plaster, and the Jersey marl could be delivered to us for three dollars per ton, if we should want that article. It is apparent, where one article is very cheap, while others cost 8 or 10 times as much, that the proportions of each becomes very important, and the temptation to increase the cheaper is very strong.

I again avail myself of the results of Prof. Johnson's labors, in his recently published work, in reference to fertilizers.

It is known to many farmers that the money value of manures is fixed by that of their useful contents, a practice instituted in England a few years since. Prof. Johnson considers ammonia to be worth . . . . . 14 cts. per lb.

Soluble phosphoric acid, . . . 12½ " "

Insoluble " " . . . 4½ " "

An equivalent amount of bone phosphate would be worth about 2.2 cts. or 2 1-5 cts. For the present we may make use of the standards of value given above, although I am satisfied that soluble phosphoric acid is rated too high. Further investigation will be required, however, to fix its real value to the Maryland farmer, which I have not had time to make.

Assuming these values for the present, we can readily determine the value of any fertilizer whose composition is known, by multiplying the percentage of each constituent by the price; and these added together will give the value of one hundred pounds, which, multiplied by the number of pounds in a ton, will give the value of one ton of the fertilizer.