

brought to my notice, I have examined and published their constituents, conceiving it my duty alike to show the constituents of a good article, and to expose that which is bad or sold at a price not warranted by the quantity of its constituents.

I will state here that those compound manures are not of necessity the cheaper, unless applied to soils deficient in *all* of the constituents of plants, which is very rarely the case.

### FISH MANURE.

By this name is known the manure from the offal of sound fish, and those which are spoilt in the packing on our fishing shores in the tide water counties, particularly on the Potomac river. It has long been used, and though ephemeral in its effects, yet is a very quick and powerful manure. The composition of fish approaches very near to that of wheat, and we should reasonably expect for every sixty pounds applied, a bushel of wheat would be produced. This manure is nothing but guano without digestion. Experience has so fully demonstrated its value, that I need not urge its use. As hitherto used, however, nearly all of the most valuable part of this manure has been lost by being scattered broadcast on the fields, exposed to a hot sun, undergoing decomposition very rapidly with the formation of ammonia, which, having nothing to fix it, is lost in the atmosphere.

This manure contains elements capable of forming about two and a half per cent. of ammonia, and there should be mixed with it not less than fifteen pounds of gypsum to the hundred weight of the manure. The gypsum should be scattered regularly over this manure as it is put into heaps, or be immediately scattered over it when applied in its fresh state. Were this practice adopted, the value of the manure would be more than doubled.

### SEA GRASS.

This too is a highly valuable manure, and one that can be extensively obtained in many places in our tide water counties. No means should be left untried to secure as much of it as possible, as it contributes a much larger quantity of valuable mineral constituents to the soil than any other kind of grass. The numerous small insects and shell fish in it, by their decomposition afford much ammonia. So highly is this manure prized in some parts of Scotland, that the right of way to the beach where it may be collected enhances the value of land from four to six dollars per acre.

Prof. Johnston, most reliable authority in agricultural chemistry, says :

“It is applied either immediately as a top-dressing, especially to grass lands—or it is previously made into a compost with earth, with lime, or with shell-sand. Thus mixed with lime, it has been