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HOME MIXING OF FERTILIZERS

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A study of the fertilizer which we use is a new phase of farming which is of comparatively recent origin. The idea formerly prevailed, and does to a great extent yet, that all which was needed in he fertilization of a crop was the applying of an 8-2-2 grade or something of like nature and value, unregardful of what kind of land such guano was applied to or what kind of crop was to be grown. In other words, if a ton of "guano" was bought and used by a farmer, he considered that he had done his part towards the fertilization of his crop.

In the first part of this article, I will show why "Home Mixing" should be more general than it is at present.

1. For the reason that when you buy commercial fertilizer of any analysis—say an 8-3-3 (8% phosphoric acid, 3% ammonia, 3% potash) you are, very probably paying money for a mixture which is highly deficient in nitrogen available. When you put fertilizer under your cotton or corn, you expect that fertilizer to feed the cotton and corn plants to the full extent of the plant food denoted as in it by the analysis of said fertilizer. And when such fertilizer does feed plants to the full extent, the ingredients in that fertilizer are *available plant food.*

Now let us get back to the statement that in an 8-3-3 guano, you are probably paying for nitrogen which you do not get. The laws of our State concerning the fertilizer manufactured and sold, compels companies manufacturing fertilizer to guarantee the analysis of each brand placed on the market. Thus when an 8-3-3 fertilizer is placed on sale, the company manufacturing such fertilizer guarantees that it contains 8% phosphoric acid, 3% ammonia and 3% potash, but here is the point: Our laws do not require the fertilizer manufacturer to disclose *how much of each ingredient is available.* In the phosphoric acid and the potash elements, we know that they are available because you might get these ingredients from any known scource and practically the same degree of availability exists in each source, but with ammonia, the case is much different. The sources for obtaining nitrogen (ammonia) are quite varied. Some of the sources are nitrate of soda, sulphate of soda, tankage, leather scrap and hair. The same per cent of ammonia or nitrogen in leather scrap, hair or peat, etc., *is worth* only from one-fifth to one-tenth as much as is the nitrogen in cotton seed meal, nitrate of soda, etc.

This is true because the nitrogen in leather scrap and peat is not quickly available. It takes from two to ten years to become available and will be of little value to you in your present crop needs. Hence, it is a very important matter that you know from what source the ammonia in your fertilizer is taken. The fertilizer manufacturer can meet the requirements of the law and yet place and foist a fertilizer on you which is almost worthless so far as the ammonia element is concerned, but which costs you as much as if all the ammonia was available. Here then is the first reason why you should do your own mixing of fertilizer.

In "home mixed" goods you have knowledge of how much plant food is available. In factory mixed goods you have no knowledge of the availability of your guano. Furthermore, your loss is not confined to the loss of cost of the available ammonia but to the consequent diminishing of the crop return—the *amount* of *cotton* or corn which *available nitrogen* would *have produced* and the amount which unavailable nitrogen produced.

2. Home mixing should be practiced because each man knows, or should know, the needs of his land better than a fertilizer manufacturer, living several hundred miles away and knowing absolutely nothing about your land and very little about farming in general. Soils lying within a half mile of each other, very often, differ greatly in their composition and thereby necessarily in their needs, when it comes to the question of applying fertilizer. One farm may have an excess of nitrogen, another an excess of potash, etc.

For example, you might take the farm of Mr. C. M. Faires, four miles South of Gastonia, which, after being tested, was found to contain enough potash to make one hundred crops. After this test, Mr. Faires has found it would be bad business and a useless waste of money to buy commercial fertilizer ready-mixed, because in such ready-mixed goods, he would necessarily have to buy a certain per cent of potash.

Then again, suppose you had had peas or some other nitrogenous plants on part of your farm the previous year. It would certainly be a bad business policy for you to buy a ready-mixed fertilizer because in buying such goods, you would necessarily have to purchase nitrogen at a high price which would be in excess of the amount needed as there would be plenty of nitrogen in the ground which the peas had put there.

Furthermore, by home mixing you can prepare your analysis to suit specific crops. In bying ready-mixed fertilizer for clover or peas, you are simply "throwing to the birds" that part which you are paying for the nitrogen because clover and peas do not take up nitrogen from the ground (neither that which is naturally in the ground or that which is applied), but gathers nitrogen from the air.

3. You should do your own mixing because it is not only an indirect saving, but a direct saving. When you buy ready-mixed fertilizer you pay the manufacturer for "mixing, bagging, shipping, agents commission, profit and long credit" (at 10%).

Furthermore you buy sand (filler) of which you have an abundance on your farm. You not only buy but haul it several miles from town to your farm besides paying freight on it from the factory to your town, all of which could be eliminated, provided you bought the chemicals and did your own mixing, in which case you would pay freight on plant food only and not on a lot of worthless sand.

The "Home Mixing" of fertilizer has been discredited to a great extent by writers who dwelt upon the benefits to be derived from home-mixing, but who neglected to show *how* to mix properly and fro mwhat sources the ingredients should be taken. On account of lack of knowledge of the foregoing, many have tried the home-mixing with very unsatisfactory results.

Many people think that it doesn't make any difference from what source nitrogen is obtained to mix with phosphoric acid and potash from any source, but such is not the case.

(Continued on page five)