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THE INDUSTRIAL AND EDUCATIONAL INTERESTS OF OUR PEOPLE PARAMOUNT TO ALL OTHER CONSIDERATIONS OF STATE POLICY.

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AGRICULTURE

HARRY FARMER'S TALKS.

CXII.

Editor of The Progressive Farmer:

We were glad to have Professor Massey discuss the interest problem. His plan would be an improvement on present conditions, but if all the farmers in the cotton belt were to go into raising beef, would not the price go down so low that it would not leave any profit? It is true, as he says, that cattle could be raised at a small cost if our farmers would diversify and sow oats, cow peas and feed the cattle on the farm, then return the manure to the land, and thus ent down the cotton acreage about one-half but raise just as much cotton.

We agree with him about having something to sell at all seasons of the year. As we stated once before from our own farm there is scarcely a day but that we get dimes, and some days dollars, for eggs, meat, potatoes, beef, hay, cotton, grapes, melons, collards, turnips, peanuts, lard, molasses and other things. But every farmer is not so situated as we are to have a market for every thing, although there are thousands who could build up a market and thus have a steady stream of money coming in all the time, if it is small. Professor Massey has done a good work and the farmers of North Carolina and the South owe him a debt of gratitude for teaching them the importance of rotating and changing from the all cotton farming, but his followers are fewer than they should be notwithstanding they are much more successful than the average farmer.

What we want is to stop this buying on time at high prices. It will surely bring disaster on all who engage in it. Farmers who pay cash for what they buy save an enormous amount in a few years and the only remedy that we know of is to borrow money. If we can borrow it and pay 8 to 10 per cent there will be a big amount saved. When men are suffering with pain it does no good to tell them that there is a good medieine in a certain city that will relieve them; what they want is something that will help them now. If the farmer could borrow money instead of buying on time at the usual time prices, it would make a difference so great that he would become prosperous in a few years.

Every writer, including the Editor of The Progressive Farmer, agrees that cash buying would be best.

Now many of the readers of The Progressive Farmer seem to be puzzled to know our reason for using a nom de plume in signing the articles we write. Well, when we were a boy it was a great thing in our eyes to use a Big I when appearing in public, but later in life our ambition to show self began to wane, and now we want to do as much good as we can without appearing in public at all. If these Talks can help the farming interest and cause more of our young men to do more thinking and help build up the run-down farms of the State, we shall be satisfied. We are glad that we sprang this discussion; it has done good, and while we may not have anything more to say, we want every one who disagrees or agrees with us to express his opinion.

Let us have more of the letters like that of Mr. Blake Johnson. The Bible tells us not to hide our lights but let them shine.

HARRY FARMER. Columbus Co., N. C.

Can Farmers Mix Their Own Fertilizers Economically?

Many of the experiment stations have for several years past been studying this question in connection with their work in the official inspection of fertilizers. The unanimous conclusion reached by the stations which have given the closest attention to the subject is that it is entirely practicable and economical under certain conditions for farmers to buy the different fertilizing materials in the crude stock and to mix them on the farm, and they have made every effort to encourage and assist them in the practice.

It has been clearly shown that when farmers combine together and purchase their supplies in large quantities for cash and make their own mixtures, they secure their fertilizers at a greatly reduced cost. An examination by the New Jersey Station in 1895 of home mixtures made by farmers in different parts of the State, representing in the aggregate a purchase of over 1,000 tons, showed that these mixtures cost on an average \$28.62 per ton, while the fertilizing ingredients which they contained, at the station valuations, were worth \$31.68. In the average factory-mixed fertilizer the same ingredients would have cost \$43.12. "At

the rate here indicated there was a saving of \$14,500, certainly a good return for cash payments instead of credit, for selecting materials highgrade and suited to the needs of the soil or plant instead of by hit or miss. and for using the regular labor of the farm in mixing instead of paying others who do the work no better." In 1896 the home mixtures examined by the station cost on the average \$26.18 per ton, while their average valuation was \$28.34, "indicating a saving on the part of the consumer not only of the difference, \$2.16, but also of the additional expenses involved which would have been paid if the average commercial mixture had been purchased."

As stated above, however, this saving can only be secured by cooperation on the part of farmers, so that the fertilizing materials can be purchased in bulk for cash. The market prices of the fertilizing materials bought in small quantities are frequently so high as to render home mixing impracticable. The individual farmer rarely uses fertilizers in sufficient quantity to enable him to secure the advantage of wholesale quotations on unmixed fertilizing materials, but farmers' clubs, granges, etc., may buy the crude stock in carload lots and thus secure the full advantage of reduced price for purchase in bulk.

It has repeatedly been urged that it is not practicable for farmers to mix their own fertilizers, because mixing can not be satisfactorily done with the ordinary facilities of the farm; but reports of a large number of practical and successful farmers in Connecticut, New Jersey, Rhode Island, and other States have shown beyond question that fertilizer mixtures uniform in quality, fine, dry, and equal in all respects to the best factory-made fertilizers, can be and are annually made on the farm without the aid of milling machinery.

A tight barn floor, platform scales, screen, shovel, and hoe are the only utensils needed. The materials being weighed, screened, and lumps pulverized, the most bulky stock is spread in an oblong pile from 6 to 12 inches deep; upon its leveled top the next material is placed, and so on until all have been added like layers on a layer cake. Commencing at one end, the pile is shoveled over, reaching clear to the bottom every time. The pile is then leveled up and the operation repeated three times. The mixture may then be screened again if desired.

In this system a farmer has a definite knowledge of the kinds of plant food that he purchases. Each ingredient can be examined separately and its nature and quality determined. "Leather, shoddy, wool waste, or other inferior materials can not be palmed off as readily as when disguised by other materials in mixed goods."

A further advantage is the ability of the farmer to vary the proportions of the different fertilizing ingredients to suit the varying requirements of soil and crop. It has been urged in objection to this that the farmer as a rule does not possess the information necessary to enable him to mix his fertilizing ingredients in the proper proportions to meet most economically the varying requirements of his soils and crops.

If the farmer does not know the requirements of his own soil, who is to tell him? No two soils have exactly the same needs and no two crops the same requirements. It is idle to hope that some "special" fertilizers can be compounded which will be perfectly adapted to a given crop on all soils and under all conditions. This is a species of agricultural quackery which fortunately is rapidly passing away. It is becoming more and more evident every day that in the use of fertilizers, as in other agricultural operations, every farm is an experiment and that every farmer must be an alert experimenter. Each farm has its problems distinct from those of every other farm, and they can only be solved by patient study and experiment on the part of the farmer himself. No outsider can tell him just what to do and just what fertilizer to use in each particular case.

The farmer can no longer afford to use fertilizers blindly and solely on the statement of some one else. He must study the principles underlying the use of fertilizers and determine by experiment the kinds and amounts best suited to his own peculiar needs. The experiment stations organized in every State and Territory have always stood ready to direct and assist the farmer in this important work, and in doing this have performed one of their most useful functions.

To summarize briefly, it is believed that the investigations of the stations and the experience of practical farmers show that the main conditions which must be observed by intelligent and progressive farmers in order to make the system of home mixing of fertilizers entirely feasible and thoroughly economical are "(1) that the supplies should be purchased in considerable quantities. (2) that they should be purchased early and prepared before the beginning of the busy season on the farm, and (3) that contracts should be on a cash basis." —Experiment Station Record, United

States Department of Agriculture.