

Fertilizer's Value Independent of Odor

Notwithstanding the odor of a fertilizer has little or nothing to do with its food value for the plant, there is still a large percentage of farmers and greenkeepers who regard it as an important factor to consider when buying fertilizers.

The National Fertilizer Association during the past summer conducted a survey in which over 48,000 farmers were personally and uniformly interviewed on the subject of fertilizers. These farmers were located in 34 states, including all those east of the Mississippi River, and Minnesota, Iowa, Missouri, Arkansas, Louisiana, Kansas, Oklahoma, and Texas. The results of this survey are reported in *The Fertilizer Review* of January, 1929.

It was found that 26 out of 100 farmers considered odor an important factor, 19 per cent considered size of bag important, and 14 per cent expressed a preference for color. To quote from the *Review*:

"It is pointed out by the Association that modern high-analysis fertilizer that has been shown by experiment stations to produce the most profit for farmers is very likely to be practically odorless. In fact, some of the new fertilizer materials, such as nitrogen that is fixed from the air, resemble sugar. Likewise, color has little to do with the effectiveness of commercial fertilizer in increasing the yield of a crop, hastening its maturity, improving its quality, or in making labor put on it more effective in growing a satisfactory crop.

"The Association also points out that those farmers who say they rely on their noses for determining quality got the habit when fertilizers were made largely of waste products. However, much of the fertilizer now on the market contains mostly straight chemical materials that have practically no odor. Therefore the farmer who trusts his nose in buying fertilizer is likely to find that his olfactory organ is not a capable judge of the most important factor, which is the ability of a complete fertilizer containing nitrogen, phosphoric acid and potash to feed a crop so as to increase the yield per acre and thereby lower the cost of production per unit to a minimum."

Fine Clay Particles Govern Fertilizer Needs of Soil

One of the reasons why even the wisest experts in the fertilizer field advise farmers and greenkeepers to make small-scale experiments on their own land, when this is possible, instead of launching into heavy purchases of untested fertilizers, is explained by Mr. P. L. Gile, of the United States Department of Agriculture.

"The soil," he says, "does more to fertilizer than was dreamed of in the old fertilizer philosophy. Soil is not to be regarded as a receptacle which merely holds fertilizer until it is needed by the crop. It seems that the soil as well as the plant has an 'appetite' or affinity for fertilizers. As soon as the fertilizers are applied, the soil starts changing the materials that have been prepared carefully by the fertilizer manufacturer, and what the crop gets is largely affected by the activities within the soil.

"Exact knowledge of the reactions between soils and fertilizer materials will help improve fertilizer practice. At the present time more is known of the net results than of the reactions themselves. It seems