

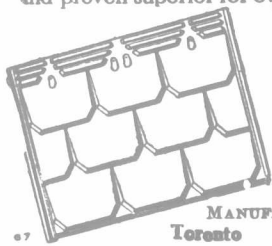
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## Fillers in Fertilizers.

EDITOR "THE FARMER'S ADVOCATE":

The term "filler," as applied to commercial fertilizers, generally gives rise to suspicion in the mind of the average farmer. Yet it has a legitimate place in this connection, although it must be admitted that its use is sometimes abused. For this reason the farmer is well advised if he keeps his eyes open and throws out an occasional interrogation when purchasing his supply. In discussing the question of fillers with the superintendent of a large fertilizer factory, I received some information that might be of general interest.

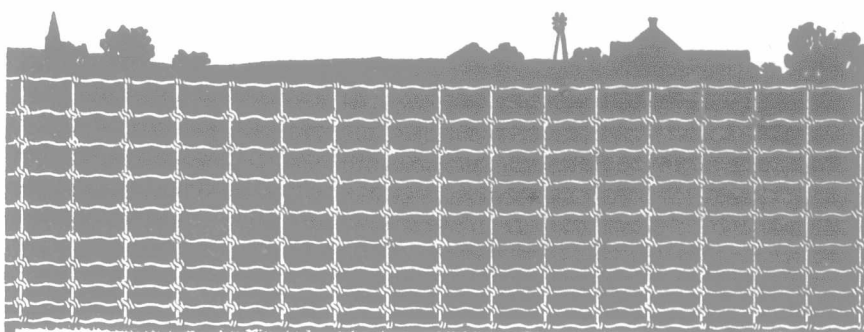
In the compounding of mixed fertilizers it frequently becomes necessary to use certain staple materials that naturally take up moisture from the air, which causes them to become moist and sticky. During damp weather this condition becomes worse, and on the other hand when an attempt is made at drying they will cake into solid masses. Hence the impossibility of securing an even distribution by means of a fertilizer drill, or for that matter, in any other way. To obviate this difficulty the manufacturer incorporates in the mixture certain dry, pulverulent materials which take up the excess moisture, and thus keep the fertilizer in good mechanical condition.

There are three classes of materials that will serve this purpose. The first group consists of tankage, steamed bone, etc. These are not only as dry and pulverulent as to keep both themselves and the other materials of the mixture from becoming sticky or caked, but are also high-grade plant foods. If employed in a sufficiently large proportion for their fertilizing properties no additional drier is required. Sometimes, however, a cheap, inert material is added as a diluent in order to cheapen the fertilizer.

The second group of materials that may serve to keep the mixture in a proper mechanical condition are garbage tankage, dried manure, dried peat, etc. The plant food derived from these is comparatively low in availability and agricultural value. It is not so certain, however, that the price will be lowered in proportion. This state of affairs works a hardship on the consumer as well as on the manufacturer who uses only high grade sources of plant food. For example, a unit of nitrogen good enough to pass inspection requiring a guarantee, only of total nitrogen content can be purchased for about half the cost of a unit of nitrogen in high-grade materials. Thus two brands of fertilizer may contain exactly the same amounts of nitrogen, yet one of them may cost the manufacturer twice as much as the other. This has a tendency to drive the high-grade goods off the market. Such differences in the availability of nitrogen may be detected in a fairly satisfactory manner by means of chemical methods, and fertilizer laws should cover this point not only as a protection to the consumer, but as a matter of justice to the manufacturer who is trying to put out first-class goods.

The third group of materials that are utilized for keeping a mixture mechanically right is composed of the various cheap, inert fillers which contain practically no plant food at all. When it is feasible to employ one of the groups already mentioned, the using of materials belonging to this class is an economic waste. But this, however, is not always possible. Most of these materials used as a drier also contain nitrogen. This dual character is not desirable when a fertilizer of sticky materials is wanted and containing no nitrogen—such as is required for certain crops like corn—like acid phosphate and muriate of potash. In such cases the use of inert material is perfectly legitimate and defensible. There is a limit, however. When used only in sufficient quantity to insure a good mechanical condition, there are no grounds for criticism. When used in larger amounts for the purpose of cheapening the fertilizer the consumer has a lot of useless material dumped on to his land that he must pay good money for.

There is no question but that many of the brands of mixed fertilizers contain more low-grade or inert material



## Well, Sir, that's some fence

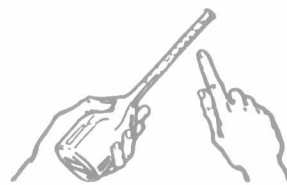
Because of its simplicity and amazing strength, "Ideal" Fence excites the admiration of every practical mind. "Some fence" is right. Take a look at it—

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