

DOES ARIZONA NEED FERTILIZER AND FEED LAWS?

By H. V. SMITH

A Little Resume—What Is Being Done in Arizona Today—What Will Be Necessary When the Time Comes—Solution Today

THE AGRICULTURAL EXPERIMENT STATION at the University of Arizona maintains a chemical laboratory where soils, irrigation waters, feeds, etc., received from farmers of the state are analyzed. Occasionally some cattleman who has purchased a large quantity of feed, paying for it on the basis of its protein content, submits samples for analysis to determine whether or not he has received the quality of feed he has paid for.

Often the feed contains less protein than the manufacturer guarantees. For example, one feed submitted said to contain 42 percent protein showed upon analysis only 37 percent. If the cost of the feed had been \$24.00 per ton on that basis it was worth only \$21.15 when valued on its true protein content. Other samples of feed have been found to fall in protein content from $\frac{1}{2}$ percent to 3 percent below the guarantee. It is for this reason that many states have found it advisable to enact laws regarding the sale and manufacture of feeds. Such laws specify among other things that a guaranteed analysis of the feed and the name of the manufacturer be printed on the sack in which it is sold. The laws are enforced by a special board, the members of which are privileged to travel throughout the state and take a representative sample of feed from any source where they may find it.

This sample is then sent to a state laboratory and a chemical analysis made upon it. If it does not live up to the guarantee another sample is taken and put through the same process. If this test also shows a misrepresentation steps are taken to remedy the situation by fining the manufacturer and by publishing the correct analysis of the feed together with that previously given by the manufacturer. Fear of a fine and exposure with the resulting loss of trade makes most manufacturers live up to their word.

Arizona has no such laws because very little finishing or fattening of cattle is done here as the majority of livestock in Arizona are found on the range.

At present there are so few cattlemen who feed cattle in the feedlot

on a large scale that it would not be justifiable to establish a board for the control of feeds because the benefits derived would not be proportional to the expense. The time may come if cattle feeding should become a major industry here when it will be necessary to enact laws to regulate the manufacture and sale of feeds in this state.

Inasmuch as the control of fertilizers is very similar to that of feeds the same board commonly assumes both responsibilities. At present there is little demand for fertilizer laws in Arizona because of the small quantities of commercial fertilizers used.

Arizona is young and her soils have not been farmed by white men for but a very few years so that the natural elements of fertility have not been drawn from the soil by cropping. Neither have the plant food elements been leached from the soil as they have been in regions of heavy annual rainfall. Of the seven essential plant food elements which come from the soil, nitrogen and phosphorous are the only two which are frequently limiting factors for plant growth in Arizona. Nitrogen is more often limiting than phosphorous. When purchased in the form of a commercial fertilizer it is very expensive and cannot be used economically for general farm crops. The most feasible and perhaps the most common method of applying nitrogen to the soil is to turn under leguminous green manure crops. Another valuable source of nitrogen is the irrigation water, some of which contains more than enough available nitrogen in the form of calcium nitrate to produce maximum crops when used for irrigating purposes. Its presence in the water is probably due to the abundance of leguminous desert vegetation growing in the region from which it came.

Although Arizona soils contain an abundance of phosphorous a considerable portion of it is insoluble and unavailable to plants. Recent investigations by the Agricultural Experiment Station have shown phosphorous to be a limiting element in certain Arizona soils. When this becomes generally known a demand not now existing may be developed.

Practically all Arizona soils contain the other plant food elements in such concentrations that the present generation of farmers will not have to give them a thought.

In consideration of the above it would seem that the small amount of feeding stuffs and fertilizers sold in this state will not warrant the establishing of control laws for some time to come, because of the heavy expense and the small number of people who would be benefited by such laws.

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MARKETING HAY

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The objection that the expense would be increased too much for the value derived is a common one. However, the cost of inspection averages around a dollar and a quarter per car, seldom more than ten cents per ton. The prevention of rejection on a few cars would pay for a lot of inspections. Reconsignment and resale with the loss involved can often be prevented by federal inspection at shipping points.

The general dissatisfaction among hay shippers, buyers and dealers, the lack of understanding concerning terms used and the large amount of trouble over hay shipments clearly shows that something is wrong with the present methods. If buying or selling margins are narrowed, then either the consumer will be getting his hay for less money or the grower will be getting more for his product. As a matter of fact, the direct shipments of hay from producer to consumer showed a marked increase during the past season. Individual dairymen and dairy associations in Wisconsin purchased approximately 2000 tons of alfalfa direct from producing areas in Nebraska under federal inspection certificate. At the present time, Salt River Valley hay growers are shipping hay direct to the United States army at Fort Bliss, Texas, and are selling it on United States grade.

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Be sure your alfalfa seed is free from weed seeds.

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Male birds from low-producing hens are inferior for breeding purposes.