

# Letters . . .

## Elements vs. Oxides

DEAR SIR:

Progress is being made slowly toward eliminating the terminology confusion for plant nutrient concentrations in soils, plants, and fertilizers. The confusion arose because various groups have expressed nitrogen, phosphorus, and potassium concentrations

optionally on either the elemental or the oxide basis. For example, in fertilizer guarantees the nitrogen has been expressed on the elemental basis, percent nitrogen (N), whereas the phosphorus and potassium are guaranteed as oxides— $P_2O_5$  and  $K_2O$ . The concentration of these nutrients in plants and soils is expressed on the oxide as well as the elemental basis. The terms

phosphate, phosphoric acid, and phosphorus, and likewise potash and potassium are often used interchangeably. This adds confusion to confusion.

## Change Would Be Required in Many State Laws

A great majority of the people concerned with the problem are interested in eliminating the present chaos. Progress is being made. It is, however, a lengthy process, because in many states changes in state fertilizer control laws are required. These changes are being undertaken in several states.

Many soil testing laboratories are now expressing phosphorus and potassium concentrations on an elemental basis. Some fertilizer companies are already changing their labeling to include the elemental guarantee which in a few years may completely replace the oxide elemental concentrations.

## MWCA Approves Change To Elemental Guarantees

The Middle West College Agronomists have encouraged elemental guarantees for all nutrients. At their recent meeting in Chicago they unanimously authorized sending this letter to the editors of farm magazines, journals, papers, agronomic and fertilizer trade journals, and college editors urging them in their publications to express nutrient concentrations in plants and soils on an elemental basis, and in fertilizer as soon as legislation permits. Also, it is urged that the terms of nitrogen, phosphorus, and potassium be used exclusively in designating these guarantees.

Your help in this program which has been under development for more than 10 years will add much to providing a better understanding of soil-plant-fertilizer relationships. Enclosed are reprints of articles which present more completely the story on elemental guarantees.

We thank you for your participation and invite reports on your progress.

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[EDITOR'S NOTE. Enclosures were: an article from *Hoard's Dairyman*, Jan. 25, 1959, by S. R. Aldrich; and another by M. B. Russell, University of Illinois.]

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