Soil Reaction Influence on Availability of Plant Nutrients

E. TRUOG

The influence of soil reaction on the availability of plant nutrients has been studied by many investigators, and an extensive literature pertaining thereto exists. No attempt will be made here to discuss this literature, but rather to summarize the findings to date and show the general trend of relation of soil reaction to the availability of plant nutrients by means of a chart. This subject is of tremendous importance in connection with liming, fertilizing, and soil management.

In 1935, Pettinger of the Virginia Experiment Station published a very useful chart showing the relation of soil reaction to the availability of seven plant nutrients. The chart which the writer is presenting (Fig. 1) shows this relation in connection with 11 nutrient elements, and is simpler in form but more complete in several respects than the Pettinger chart.

EXPLANATION OF CHART

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In this chart, reaction is expressed in terms of the pH scale. The reader is reminded that on this scale, a pH value of 7 (center vertical line in diagram) represents the neutral point, while values to the left and progressively less than 7 express increasing acidity, and values to the right and progressively greater than 7 express increasing alkalinity. Also, a change in pH of 1 unit expresses a 10-fold change in re-

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