AVAILABILITY OF THE PHOSPHORUS OF FLOATS AS INFLUENCED BY INCORPORATION OF FARM MANURE IN THE SOIL

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It has frequently been stated that the decomposition of organic matter in contact with raw rock phosphate increases the solubility of this material and makes its phosphorus more readily available to growing plants. Experiments in which the degree of availability was measured by chemical means, when phosphate rock was applied to soil, have not usually indicated that increased solubility resulted from the application of organic matter. When availability has been measured by crop growth, the returns have been more favorable to the theory that decomposing organic matter increases the availability floats. The literature of the subject has been so comprehensively reviewed by Waggaman, Wagner, and Gardiner (1) that it is unnecessary to discuss here the results of preceding investigations.

We ventured to add another experiment to the very considerable number dealing with this subject because more evidence appeared to be needed and in the hope that it might be possible to supply some that would be relatively low in experimental error. With the latter purpose in view, careful attention was given to the technique and the final data were all subjected to mathematical tests of their significance.

1 Contribution from the Department of Agronomy, Cornell University, Ithaca, N. Y. Received for publication December 15, 1923.
2 Professor of Soil Technology.
3 Reference by number is to "Literature Cited," p. 103.

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