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SOIL MICROBIOLOGY AS A FIELD OF SCIENCE^{1,2}

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THE question is frequently raised concerning the position occupied by soil microbiology in the field of knowledge, especially its relation to other biological sciences, on the one hand, and to agricultural sciences, notably soil science and crop science, on the other. In order to elaborate upon this relatively new branch of science, which is frequently only vaguely understood and often little appreciated, it is sufficient to

¹ Journal Series Paper, New Jersey Agricultural Experiment Station, Rutgers University, Department of Microbiology.

² The writer has been called upon recently to define "soil microbiology" and to list a number of outstanding workers in this field of science. He has also been requested to differentiate the work of a microbiologist in relation to related sciences. If an excuse is needed to define a field of science, with which one has been concerned for more than three decades, this excuse is presented here.

define first the student of the subject, namely, the soil microbiologist.

WHAT IS A SOIL MICROBIOLOGIST?

A soil microbiologist, as the name implies, is a microbiologist who is concerned with soil microorganisms. His objective is to determine the nature of the microorganisms inhabiting the soil. He is concerned with the activities of these organisms and their characteristics of growth. He analyzes the interrelationships of the various elements of the microbial population of the soil, the reactions with which they are concerned, the influence of soil conditions on the microorganisms comprising the soil population, and the effects of the activities of the population on the soil and on the plants which develop in it. Finally,

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