

Discussion

**on Fastidious Prokaryotes
as Plant Pathogens**

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Introduction

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Just 15 years ago, the course of research on a large number of plant diseases was dramatically altered. An important discovery had revealed that many plant diseases long presumed to be caused by viruses may in reality be induced by fastidious prokaryotes not previously known to exist in plants. That discovery of "mycoplasma-like" organisms has been followed by the discovery in diseased plants of spiroplasmas, and of xylem-limited and phloem-limited walled bacteria. These newly recognized plant-inhabiting prokaryotes have presented both new challenges and new promises in plant pathology. Challenges lie in elucidating the physiology, genetics, interrelatedness, ecology, and mechanisms of

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pathogenicity of these disease agents. Promises embrace the expectation that studies of these prokaryotes will reveal the causes of certain previously unsolved destructive plant diseases, and provide opportunities for development of new and effective disease control measures.

Research aimed at meeting these challenges and fulfilling these promises has expanded rapidly, especially during the past two to three years. Amid sometimes confusing, controversial, or even opposing interpretations of experimental findings, important progress has been made. To provide a forum for discussions of highlights in this progress, a Discussion Session was sponsored by the APS Bacteriology Committee of the American Phytopathological Society at the 1981 annual meetings in New Orleans. The papers that follow are a product of this Discussion Session. Each is a presentation of the "state of the art" in the subject covered, the formats and styles differing somewhat to afford appropriate coverages of the topics treated.