

Schaad, N.W., Jones, J.B., Chun, W. (ed.): **Laboratory Guide for Identification of Plant Pathogenic Bacteria**. - APS Press, St. Paul 2001. xii + 373 pp. 68 colour photographs, 9 black and white illustrations. USD 55.00. ISBN 0-89054-263-5

This third edition of the laboratory guide is written to assist in the identification of plant pathogenic bacteria. By following this manual, mostly each pathogen isolated from a diseased plant is easily identified to the species or pathovar level by a few simple phenotypic tests. Because of the newer taxonomy, many changes in nomenclature have been made in the third edition. Several species have been re-classified into new genera. These changes have made identification of most plant pathogenic bacteria with a few simple phenotypic tests much easier. Each chapter briefly describes the nomenclature and taxonomy being followed. This decade has seen many advances in plant pathogenic bacteria identification, most notably polymerase chain reaction (PCR). This book features a list of available PCR primers in most chapters and an appendix on molecular techniques.

This guide is divided into seven parts. The first part "Initial Identification of Common Genera" provides overview of the isolation techniques, the diagnostic media and the tests to identify the predominant genera of plant pathogenic bacteria. The second part "Gram-

Negative Bacteria" gives detailed information about identification of Gram-negative bacteria such as *Agrobacterium*, *Erwinia amylovora* group, *Erwinia* Soft Rot Group, *Pantoea*, *Pseudomonas*, *Acidovorax* and *Xylophilus*, *Burkholderia*, *Ralstonia*, *Xanthomonas*, *Xylella fastidiosa*, and *Rhizomonas suberifaciens*. Identification of Gram-positive Bacteria (Coryneform Plant Pathogens, *Streptomyces*, *Bacillus* and *Clostridium*) is indicated in the third part of the guide. The fourth part is focused on the "Fastidious Phloem-Limited Bacteria", and the fifth part deals with the "Cell-Wall Free Bacteria". The Appendix involves Molecular Techniques, DNA Isolation Procedure, Serological Techniques and Automated Techniques. Each chapter is equipped with a list of references, the whole guide with index and colour photographs of biological and biochemical tests.

This guidebook will be a useful resource for teachers, students, researchers, extension personnel, diagnosticians or anyone involved in identifying plant bacterial diseases.

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