

## Book Review

**N.W. Schaad, J.B. Jones, W. Chun (eds.) 2000. Laboratory Guide for Identification of Plant Pathogenic Bacteria. Third Edition. APS Press, The American Phytopathological Society, St. Paul, Minnesota. ISBN 0-89054-263-5. Price: 55 dollars.**

All persons working with plant pathogenic bacteria will find this third edition of the well known laboratory guide as a great assistance in the accurate identification of plant pathogenic bacteria. Most common bacteria can be identified very quickly whereas the fastidious ones take considerably longer. To most chapters a section on molecular, serological and automated commercial techniques for rapid, presumptive identification, has been added.

Each bacteria or genus is treated according to uniform scheme: 1. Introduction, 2. Isolation techniques using differential and semiselective media, 3. Differentiation of commonly isolated species, 4. Diagnostic media and tests, 5. Pathogenicity tests, 6. Molecular, serological, and commercial automated techniques, 7. Culture preservation, 8. Literature cited, 9. Chemicals list.

The book consists seven parts.

Part I – Initial identification of common genera (p. 1-16) provides in a tabulated manner basic characters to differentiate genera. In table 1 those that grown on standard media: *Acidovorax*, *Agrobacterium*, *Bacillus*, *Burkholderia*, *Clavibacter*, *Clostridium*, *Erwinia*, *Pantoea*, *Ralstonia*, *Streptomyces*, *Xanthomonas*, *Xylophilus*, and in table 2 – fastidious and non-culturable, to which belong phloem-limited, phytoplasma-like, *Rhizomonas*, *Spiroplasma*, *Xylella fastidiosa*.

Part II – Gram-negative bacteria (p. 17-217) includes chapters: A. *Agrobacterium*; B. *Erwinia* and *Pantoea* (*Erwinia amylovora*, *Erwinia* soft group, *Pantoea*); C. *Pseudomonas*; D. *Acidovorax* and *Xylophilus*; E. *Burkholderia*; F. *Ralstonia*; G. *Xanthomonas*; H. *Xylella fastidiosa*; I. *Rhizomania suberifaciens*.

Part III – Gram-positive bacteria (p. 218-274) includes four chapters: A. *Coryneform* plant pathogens; B. *Streptomyces*; C. *Bacillus*; D. *Clostridium*.

Part IV – Fastidious phloem-limited bacteria (p. 275-282) provides advice on identification of bacteria which have not been grown in axenic culture. A list of plant hosts, symptoms and common name of diseases are given.

Part V – Cell-wall free bacteria (p. 283-320) provides a list of 36 diseases caused by spiroplasma and phytoplasma. Procedures for primary isolation of spiroplasmas and phytoplasmas and diagnostic tests are described in details.

Of special help for users of this guide will be three appendixes which contain lists of diagnostic companies.

Appendix A. "Molecular techniques" describes procedures and methods of extraction and isolation of DNA including media, PCR-based methods and RFP-PCR genomic fingerprint analysis to characterize and identify *Phytobacteria*.

Appendix B. "Serological techniques" contains useful information on immunodiagnostic methods, diagnostic companies and diagnostic resources.

Appendix C. "Automated techniques" contains information on physiological, biochemical and molecular methods for gene sequencing and ribotyping and their use for bacterial identification.

It may be concluded that this book provides a great volume of extremely useful information and should be used in every laboratory working with plant pathogenic bacteria.