*New Zealand Journal of Crop and Horticultural Science, 2000, Vol. 28*: 233
0014–0671/00/2803–0233 $7.00  

# Book review

**Diseases of banana, abaca and enset.** Edited by D. R. Jones. Published in 1999 by CABI Publishing, CAB International, Wallingford, Oxon OX10 8DE, United Kingdom. 544 p., hardback. ISBN: 0-85199-355-9. Price: £85.00 (US$160.00) (email:orders@cabi.org).

Edited by David Jones and with contributions from more than 30 experts from around the world, this is essentially a replacement for the 1972 book "Banana, plantain and abaca diseases" by R. H. Stover, with the coverage expanded to include the genus Ensete. The contents include information on diseases caused by bacteria, fungi, viruses, and nematodes, and also non-infectious disorders caused by factors such as climate, nutrient deficiencies, chemical injury, and genetic abnormalities. Although the format is based on Stover's 1972 book the content has been completely updated resulting in an increase from 316 to 544 pages. The most immediately obvious improvement is the much more extensive use of colour illustrations. These are of high quality and provide a valuable resource for preliminary disease diagnosis. A minor criticism is the absence of a list of abbreviations for virus names, organisations, etc. Although these are defined when first used it can be difficult to find the definitions when reading sections of chapters in isolation.

Although all the chapters have been extensively rewritten there are inevitably some areas where, in the last 30 years, progress and the accumulation of new knowledge have been more rapid than in others. The chapter on virus diseases has almost doubled in size (from 23–42 p.), reflecting the significant advances in our knowledge of banana viruses since 1972. Some of these viruses, such as banana bunchy and bract mosaic, have only been properly characterised in recent years with much of this work being carried out in Australia. Similarly, Stover's brief chapter on restricting disease spread has been replaced with a more substantial chapter on quarantine and the safe movement of germplasm, which includes information on the use pathogen tested *in vitro* cultures and the role of the International Network for the Improvement of Banana and Plantain (INIBAP) in facilitating the safe international transfer of banana germplasm. In addition, there are two totally new chapters on disease resistance. The first, by Jones et al., looks at the progress and problems of conventional breeding, providing an historical perspective on banana breeding and a review more recent advances such as *in vitro* culture techniques and the use of somaclonal variation to obtain disease resistant clones. The second, by L. Sagi, examines the potential for using genetic engineering to produce bananas resistant to fungi, bacteria, viruses, and nematodes. As the author points out, this is of particular relevance to the Cavendish and plantain subgroups as these are not amenable to conventional breeding. The chapter reviews the possible sources of resistance, of both plant and pathogen origin, and the plant transformation procedures available.

David Jones and his co-authors are to be congratulated on producing an excellent book that is an essential reference source for anyone working on bananas.

MIKE PEARSON
School of Biological Sciences
The University of Auckland
Private Bag 92 019
Auckland, New Zealand