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Van Alfen, N.K., Bruening, G., Dawson, W.O. (ed.): **Annual Review of Phytopathology. Vol. 44.** - Annual Reviews, Palo Alto 2006. 538 pp. Individual price USD 80.00. ISBN 0-8243-1344-5.

This is a new volume of the well known series that traditionally gives an overview of various fields of phytopathology. The introductory chapter written by S. Ouchi is devoted to retrospective of plant pathology. Burdon *et al.* in chapter "The Current and Future Dynamics of Disease in Plant Communities" discuss the role of pathogens in natural plant communities. In next two reviews Kamoun deals with the effectors of plant pathogenic oomycetes and Rao discusses our knowledge concerning genome packaging among spherical plant RNA viruses. The review "Quantification and Modelling of Crop Losses" considers the cascade of events that link injuries caused by plant pathogens on crop stands to possible (quantitative and qualitative) crop losses, and to the resulting economic losses. Next review is focus on nonsystemic bunt fungi - *Tilletia indica* and the morphologically similar but distantly related *T. horrida*, considering history, systematics, and biology. Van Loon *et al.* discuss significance of inducible defense-related proteins in infected plants. The review written by Fitt *et al.* considers factors affecting the coexistence of closely related pathogen species on arable crops, with particular reference to data available at Rothamsted for *Septoria tritici/Stagonospora nodorum* (*Mycosphaerella graminicola/Phaeosphaeria nodorum*) (septoria leaf blotch diseases on winter wheat), *Oculimacula yallundae/O. acuformis* (eyespot disease of winter cereals), and *Leptosphaeria maculans/L. biglobosa* (phoma stem canker on winter oilseed rape). The chapter "Virus-Vector Interactions Mediating Nonpersistent and Semipersistent Transmission of Plant Viruses" was written by Ng and Falk. The next review article discusses the improvements made in breeding of *Poa pratensis* for resistance to leaf spot (caused by *Drechslera poae*), stem rust (caused by *Puccinia graminis*), and stripe smut (caused by *Ustilago striiformis*); *Lolium perenne* for resistance to gray leaf spot (caused by *Pyricularia grisea*), stem rust and crown rust (caused by *Puccinia coronata*); *Festuca arundinacea* for resistance to brown patch (*Rhizoctonia solani*) and stem rust; *Agrostis*

stolonifera for resistance to dollar spot (caused by *Sclerotinia homoeocarpa*); and *Festuca* spp. for improved disease resistance. The review "Molecular Ecology and Emergence of Tropical Plant Viruses" reveals the role of molecular ecology in unravelling the factors responsible for the emergence of several of the economically most important tropical plant viruses: *Rice yellow mottle virus* (RYMV), *Cassava mosaic geminiviruses* (CMGs), *Maize streak virus* (MSV), and *Banana streak virus* (BSV). Mechanisms involved were recombination and synergism between virus species, new vector biotypes, genome integration of the virus, host adaptation, and long-distance dispersal.

The readers of *Biologia Plantarum* will be also interested in the reviews "Biology of Flower-Infecting Fungi", "A Model Plant Pathogen from the Kingdom Animalia: *Heterodera glycines*, the Soybean Cyst Nematode", "Comparative Genomics Reveals What Makes An Enterobacterial Plant Pathogen", "The Dawn of Fungal Pathogen Genomics" and "Fitness of Human Enteric Pathogens on Plants and Implications for Food Safety".

Other reviews covered in this volume are: "The Role of Ethylene in Host-Pathogen Interactions", "Phenazine Compounds in Fluorescent *Pseudomonas* spp. Biosynthesis and Regulation", "Long-Distance RNA-RNA Interactions in Plant Virus Gene Expression and Replication", "Evolution of Plant Pathogenicity in *Streptomyces*" and "Climate Change Effects on Plant Disease: Genomes to Ecosystems".

This book represents a valuable source of up to date information on diverse fields of phytopathology and mechanisms involved in plant-pathogen communication. The reviews are well documented with colour illustrations, figures, diagrams and photographs facilitating the understanding of the presented facts. "Annual Review of Phytopathology" is very useful for scientists and students interested in phytopathology and other fields of plant biology.

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