
 REVIEW

Annual Review of Phytopathology. Vol. 18. (Annual Reviews Inc., 4139 Caminoway, Palo Alto, California 94306 USA). 1980. Pp. 527. Price: \$ 20.00 (U.S.A.) and \$ 21.00 (Elsewhere).

The 18th volume, under review, starts with a prefatory chapter, followed by three papers on Historical Perspectives, five papers on pathogens including viruses, nematodes, bacteria and phanerogamic parasites, three papers on biological and cultural control, two papers each on physiology of host pathogen interaction, epidemiology and influence of environment and breeding for disease resistance one each on morphology and anatomy, genetics of host pathogen interaction and action of toxicants and chemical control. Two papers are devoted to special topics, *viz.*, germplasm resources of plants, and an appraisal of effectiveness of quarantines. There are also the author and subject indices for this volume and cumulative title and author indices of Vols. 9-18.

In the prefatory chapter, Dr. Posnette, a Genetical Plant Pathologist based on his personal experiences concludes like many others that speedy progress in research can be achieved only by teamwork with international collaboration and development of newer techniques. The historical personal accounts of the outstanding researches of Prof. James G. Dickson, Prof. Herbert Hice Whetzel, and Dr. John Hubert Craigie are informative, instructive and above all inspiring to all young plant pathologists.

Drew and Lynch provide valuable information on the mechanisms of injury to plants on anaerobic media as well as plant adaptations to meet these conditions. Krantz and Bau have attempted to explain systems analysis and its use in a better understanding of epidemiology. G. Malys and Elizabeth A. Baker present a brief outline of the history and principles of plant quarantine measures currently practised, and critically analyse their limitations. Dr. Sprague presents a lucid account of the international effort devoted to germplasm collection and preservation.

The paper on "Toxins in Pathogenesis" by Yoder highlights our current knowledge on the mode of actions of toxins and emphasises the problems encountered with the usual criteria for the evaluation of toxins. The review by Dr. Fulton on "Multi-component viruses" presents a critical appraisal of these viruses and speculates why these viruses exist as multi-component systems. Prof. Ou focusses attention to the problem of variability in the rice blast fungus as well as host-parasite relationship which establishes a type of stable resistance.

The paper "New-Concepts in Breeding for Resistance" by Robinson is stimulating and lays emphasis not on genetic theory but on the influence of epidemiology and its influence on plant breeding. Dr. Heath elaborates some relatively little known morphological and physiological changes in non-susceptible host plants due to fungal infection. Leonard and Czochor focus attention to the types of resistance described by vander Plank (1978) with special emphasis on gene-for-gene systems. Vance *et al.* present a lucid picture on the lignin formation as a mechanism of disease resistance.

Zitter and Simons provide some valuable suggestions on management of viruses and emphasize controlling virus inoculum sources, altering vector efficiencies, forecasting and integrated control. The paper "Non-target effects of pesticides on soil borne pathogens and disease" emphasizes the need to develop fungicides/lematicides which can be used in combination to offset specific undesirable effects. The paper "Cytogenetics and morphology in relation to evolution and speciation of plant parasitic nematodes" aims at a better understanding of phyletic relationships of various groups and the biological status of some agronomically important plant parasitic nematodes.

The paper "Soft rot causing *Erwinia* sp." by Perombelon and Kelman provides extensive and valuable information on various aspects such as taxonomy, serology, distribution and host range, etiology, environmental factors affecting disease expression, epidemiology etc. Two papers, *viz.*, "Biological control of soil-borne fungal propagules and Biological control of nematode pests by natural enemies" emphasize an area of plant disease control which has been receiving greater attention than in the past because of the hazards posed by the use of chemicals. The paper "Effect of fungal viruses on their hosts" is an attempt to gain somewhat better understanding of fungus virus interactions.

The review paper Biology of Striga Orobanche and other root parasitic weeds provides up-to-date information on these parasites and discusses the future line of action to effectively control them.

The volume of "Annual Review of Phytopathology" is undoubtedly of great value to all Post-Graduate students and researchers in the field of Plant Pathology. This valuable review will be an asset to the libraries and to research workers in the field of Phytopathology.

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