

Preface

For the past twenty years I have worked as an applied plant virologist, attempting to identify and control virus diseases in field crops. During the last ten years it has been my privilege to present short courses in plant virology to final-year students studying plant pathology, microbiology and general botany. Throughout the period I have been lecturing, it has been possible to recommend several excellent 'library' books for further reading in plant virology, but there has been no publication covering applied plant virology that a student might consider purchasing. With teaching requirements in mind this book has been written to provide a concise introduction to applied plant virology based on the experiences I have gained working on virus diseases, both in an applied laboratory and in the field.

The text concentrates on introducing the reader to aspects of plant virology that would be encountered every day by an applied virologist trying to identify viruses and develop control measures for virus diseases of crop plants. Although a brief introduction to virus structure and its terminology is given in the opening chapter of the book, no attempt is made to cover in detail the more fundamental aspects of virus structure, biochemistry and replication. Similarly, the symptoms caused by individual viruses are not described, although the various types of symptoms that plant viruses cause and which might be encountered by a student or research worker are described.

Each chapter contains key references that have been selected to illustrate the information cited in the text, and a number of selected references for further reading are given at the end of each chapter. These reviews and general articles or books, will allow the reader immediate access to more comprehensive treatments of specific subjects.

In the final chapter, detailed information is given of practical methods that are likely to be required by an applied virologist, together

with a number of practical class exercises which could be undertaken by undergraduate students. Also included in this chapter, is an up-to-date list of plant viruses that have been described in the Commonwealth Mycological Institute/Association of Applied Biologists' publication *Descriptions of Plant Viruses*. This set of descriptions is essential to the work of any applied plant virus laboratory.

This book should be of value to the undergraduate in plant virology, plant pathology, microbiology and general botany, and to post-graduate students in applied plant virology or plant pathology during the initial stages of their research experience.

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