

gehalte van het zaad van een aantal opeenvolgende trossen (Fig. 4 en 5). Vooral het zaad van planten, die lange tijd na de inoculatie met MII-16 symptomeloos waren gebleven, bevatte betrekkelijk weinig of geen TMV. Het uit dergelijk zaad geïsoleerde virus behoort tot de tomatestam van het TMV, die als verontreiniging in het inoculum van MII-16 voorkomt en uiteindelijk mozaïeksymptomen veroorzaakt.

Een droge warmtebehandeling gedurende drie dagen bij 76°C bleek het TMV in zaad met een matig tot hoog TMV-gehalte niet geheel te inactiveren (Fig. 6). De handeling zou echter gebruikt kunnen worden als aanvulling op het gebruik van MII-16 voor een opzettelijke kiemplantbesmetting ter verkrijging van virusvrij zaad.

## References

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## Book review

P. R. Scott and A. Bainbridge (Eds), 1978. *Plant disease epidemiology*. 305 pp. of text, including tables and illustrations, references at the end of each contribution, and 23 pp. of subject index; bound. Blackwell Scientific Publications, Oxford, London, Edinburgh, Melbourne. Price £ 9.

After World War II two field-oriented subdisciplines of plant pathology flourished: chemical control and epidemiology. Nowadays there is general concern about the bio-hazards and high costs of chemical control, especially as it often gives only temporary relief. There is an obvious need for control of chemical control. Fortunately, epidemiology also prospered, at least for fungal diseases, and achievements in this area are now being applied to limit the use of chemicals in two ways. Firstly, by providing the knowledge necessary for forecasting epidemics and thus enabling growers to tailor their control measures and, secondly, by giving a theoretical basis for a wise use of the available sources of genetic resistance in plants. This very practical goal of plant disease epidemiology and many other aspects of this branch can be found in the present book, which is a collection of selected papers presented at the conference on Plant Disease Epidemiology and Dispersal of Plant Parasites, organized by the Federation of British Plant Pathologists in London, December 1977.

The book contains a variety of review articles, case studies of various diseases, and descriptions of specific techniques. The 33 regular papers are arranged in five sections, each section beginning with an additional comment from the chairman.

The first section is an introduction: a heterogeneous one, containing a paper on retrospect and prospect of plant disease epidemiology, a review on the dispersal of micro-organisms, a survey of air-sampling techniques and a description of the current epidemic of Dutch elm disease.

In section 2 dispersal, monitoring and modelling are treated. This section includes reviews on the dispersal of plant viruses and of fungal spores within crops, papers on monitoring vegetable and cereal diseases and environmental factors; and papers on the development of mathematical models, e.g. of epidemics in variety mixtures.

In section 3 forecasting and control are dealt with. Problems of forecasting cereal diseases and fireblight are reviewed. Control of seed-borne fungal diseases and of onion white rot, and the significance of ecological factors and of heterogeneity of host populations for control are discussed.

Sections 4 and 5 deal with epidemiology of aphid-borne and nematode-borne viruses, respectively. In view of the amount of effort devoted to fungal and viral epidemiology, viruses seem somewhat overrepresented in this book, but this extra attention marks the start of the recently formed Virology Group of the Federation of British Plant Pathologists and reflects a view put into words by Thresh (p. 90), who states that 'there is an urgent need to redress the present imbalance between field and laboratory studies' in plant virology. This need is obvious from the contributions in these two sections, which show that the application of epidemiological concepts on virus diseases is still in its infancy. Work in this area is so far mainly restricted to determining vector spread and disease occurrence. Section 4 contains, among others, papers on plum pox and potato leafroll viruses. In section 5, general aspects of distribution and chemical control of nematode vectors, and of variation and frequency of transmission of nematode-borne viruses are reviewed. More specific articles deal with grapevine and hop viruses.

The book does not give a comprehensive and well-balanced treatise of plant disease epidemiology. However, its review articles cover a broad range of subjects and the specific papers are a lucky selection from available knowledge. In almost all contributions examples are taken, quite understandably, from the situation in the United Kingdom. However, the contents of this book have sufficient general significance to provide useful reading for all those who want to have an overall picture of present-day plant disease epidemiology. The book is well produced. There are only few photographs but, more significantly, the subject index is extensive.

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