

## Reviews and publications received

D. Noordam: Identification of plant viruses. Methods and experiments. Wageningen, Centre for Agricultural Publishing and Documentation, 1973. pp. 207, 101 figures, 4 colour plates. Price Dfl. 35.

Although books containing specialized reviews of methods used in the study of plant viruses have appeared in recent years, little has been published in English that would form the basis of an introductory practical course. Dr Noordam's book does just this for, despite its title, it is not a manual of virus identification. It describes a series of experiments and shows how they can be fitted into a 4-week course that emphasizes the plant pathological aspects of plant virology.

The book includes experiments to obtain and record symptoms of infection, to determine some of the physical properties of virus particles, to purify them, and both to assay virus content and to transmit viruses from plant to plant in a variety of ways. Other sections deal with the interactions between viruses in plants, the separation of viruses or virus variants from mixed cultures, and methods of storing cultures.

Most of the experiments are clearly described and there are many valuable practical hints, based on the author's experience. In some sections there seems too little information on the basis of the methods for a student to grasp fully the principles that underlie what he is doing, but references to detailed treatments are given. There is a particularly useful section (complete with protractors) on correcting ultraviolet absorbance readings for light scatter, and a description of a new variant of the microprecipitin serological test.

In general the presentation is well balanced but there are some flaws, and some omissions of exercises that to me seem particularly instructive. For instance, several of the sizes and molecular weights of virus particles given in Table 3 are out of date, and clover phyllody (p. 159) is thought to be caused by a mycoplasma-like agent, not a virus. Also, in a second edition, I would like to see experiments included on the preparation of nucleic acid and protein from virus particles, the effects of environmental conditions on symptoms, and some ways of studying virus ecology. Finally, the English is somewhat broken in places, although the author's meaning is unclear in only a few, in some of these perhaps because of the sprinkling of printer's errors.

To sum up, this well illustrated book is likely to be of great use to learners, especially those who wish either to organize or to take an introductory course on the general biological properties of plant viruses.

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