

## Book review

J.A. de Bokx & J.P.H. van der Want (Eds), 1987. *Viruses of potatoes and seed-potato production*. 2nd edition, revised. Centre for Agricultural Publishing and Documentation, Wageningen, the Netherlands. 259 pages; 16 pages with water-colour illustrations; 44 figures; 19 tables; 3 appendices, glossary, references, subject index. ISBN 90 220 0859 2, hardbound. Price Dfl. 125.

The first edition of this book was published in 1972. Thereafter, according to the editors, it was reprinted several times and translations have been made into other languages.

The present edition is completely revised. As stated by the editors, such a thorough revision was necessary because of the advance in knowledge and experience since the 1970s. Hence viroids, ELISA and immunoelectron microscopy have been included along with recent information on the role of aphids in disseminating virus, and on breeding potato cultivars for resistance.

In the new edition, less emphasis is laid on potato growing in the Netherlands and more on that in other parts of the world. The whole book breathes the spirit of modern virology and the editors deserve a compliment for the metamorphosis they achieved.

The book contains 14 chapters. The end-work includes a procedure for preparing antibody-sensitized latex; preparation of  $\gamma$ -globulin for ELISA; a key to identify aphids colonizing potato; a glossary; references; a subject index. The chapters, after a general introduction on plant virology and potato viruses, are grouped into the following parts: 1. Characterization and identification of potato viruses and viroids; 2. Viruses, viroids, mycoplasmas and diseases with a virus-like aetiology; 3. Viruses and potatoes; 4. Production of seed potatoes.

Although Part 3 makes good reading, it might have been preferable to alter the title as well as the sequence of the chapters. The present title, 'Viruses and potatoes', is rather meaningless; 'Factors involved in the incidence of virus infection of potato crops' would have been more to the point. Furthermore, it would be better to deal with 'Spread of viruses in potato crops' before 'Control of virus spread'.

An improvement over the first edition is that electron microscopy, no longer a separate chapter, is now integrated in 'Physical and chemical properties', along with other physical aspects like sedimentation and buoyancy.

The merging of former chapters on 'Transmission' and 'Test plants' into one chapter on 'Biological properties' also makes easier reading. One may only wonder whether the beautiful water-colour pictures of potato leaves with symptoms have a real scientific value or merely an artistic one, as they constitute only a very small selection of the tremendous variation in symptoms on potatoes. On page 62, the definition of dilution end-point (DEP): "the degree to which the sap of an infected plant must be diluted so that it becomes non-infectious" is unusual. Generally DEP is defined as the highest dilution which is still infectious.

The conclusion on page 202 that the reason why seed-potato production is well developed in the industrial countries in the temperate zone, and less so in the tropics and subtropics is "...partly because of differences in level of organizing ability", seems presumptuous. The author ignores the crucial fact that consumption of potatoes is much lower in most of the tropical and subtropical countries than in the western countries of the temperate zone where potatoes are a staple starch food. Hence potato growing in tropical and subtropical countries does not have a high priority.

In contrast to Chapter 17 'Inspection and quality grading of seed potatoes' in the first edition, Chapter 14 on this subject in the present edition is rather general and diffuse, probably because the aim, now, is to depict the situation in countries other than the Netherlands. This drawback could have been corrected if the present chapter had been supplemented with the contents of the old Chapter 17, as an example of a certification programme in a particular country.

The book is very well prepared. It is highly recommended, not only for those concerned with the growing of healthy potatoes, but even for virologists working on other crops, as quite a lot of technical information and approaches are also applicable to the study of virus diseases in general.

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