

References

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Book review

B.C. Clifford & E. Lester (Eds), 1988. Control of plant diseases: costs and benefits. Blackwell Scientific Publications, Oxford, London, Edinburgh, Boston, Palo Alto, Melbourne. XIV + 263 pp. ISBN 0-632-01453-9. Price £ 49.50.

This multi-author book stems from a meeting of the British Society for Plant Pathology in 1984. The book is very British and the title ought to have the words 'in Britain'. However that omission is corrected by the picture on the cover of five-pound notes issued by the Bank of England. The book deals with a theme which is internationally indicated by the incorrect but widely used term 'crop loss'. The publication of this book (with a four-year delay) is nevertheless timely, as a renewed interest in costs and benefits of plant disease control is world-wide, for a variety of reasons.

The book consists of five sections on pesticides, varietal resistance, sanitation, costs of providing disease control, and future developments. Professionals discuss these subjects for the profession of plant pathology. This design is the strength and weakness of the book, which provides good and easy reading to the plant pathologist but leaves the policy maker in the dark because social and environmental costs and benefits are largely ignored. A general framework by an economist to set the various bits and pieces of information in context would have enhanced the value of this publication for the profession as well as for policy makers. Nevertheless, the quality and extent of this book warrant a warm recommendation.

Section 1 discusses the contribution and value of pesticides to disease control for various groups of crops. Depth and comprehensiveness of the four chapters reflect the 'state of the art', which can be characterized as qualitative at best for fruit crops, indicative for combinable break crops, illustrative for vegetables, and quantitative for cereals. Since World War II, cereal crops received special coverage in Britain, leading to a set of comprehensive data.

Section 2 deals with the contribution and value of resistant cultivars to disease control. Again, comprehensiveness and depth of analysis are greatest for cereals. The discussion for oilseed rape and for fruit is indicative at best, whereas the discussion on vegetables is mainly qualitative. The interest in resistance as a means of disease control is clearly growing in vegetables, but seems to be waning in potatoes where quality is becoming a dominant market requirement.

Section 3, on the contribution and value of sanitation, is most interesting because it attempts to compare approaches, not crops. The benefit/cost ratio of seed-potato grading is calculated to be 74 to 1. That value seems exceptionally high but is well documented. Health testing and quarantine of seed-potatoes are two subjects treated in a semiquantitative and exemplary way. A chapter on cropping practices demonstrates the great difficulties in estimating their benefit/cost effects. A thorough and extensive treatise discusses the merits of eradication as a measure for control of viruses but unfortunately it does not give the reader much insight into benefit/costs relations.

Section 4 takes a wider view, discussing the costs of 'providing' disease control. The views of the chemical industry providing new fungicides, the plant breeder providing new and resistant varieties, and government providing sanitation and forecasting are presented with quantitative information decreasing in the indicated order. The chapter on forecasting contains an interesting and quite subtle discussion on arguments for and against forecasting. It touches upon the psychological, social and environmental implications of disease control, and it is the only chapter to discuss risk as an item apart from costs and benefits.

Section 5 on prospects in fungicide production and resistance breeding is bleak but brief. The book is completed with a subject index. Whereas some chapters have long and useful lists of references, others have none, especially towards the end of the book. This fact, though perhaps regrettable, again reflects the state of the art within the theme 'crop loss'. The growing volume of international literature on this theme has been largely ignored in accordance with the limited objectives of the book. Concise chapter summaries would have been helpful to the hasty reader. The book is well printed and it is soberly but adequately illustrated.

The book gives a fair picture of the state of the art for benefit/cost relations of disease control in a country with a tradition of high-quality and innovative research on crop protection. This book complies with that tradition. It will be of interest to students of agricultural economics, extension workers, teachers of plant protection, members of research councils and boards of research institutions, policy makers at the national level, and – specifically – to 'providers' of means for disease control.

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