DEVELOPMENT OF DISEASE CONTROL STRATEGIES FOR ORGANICALLY GROWN FIELD VEGETABLES (DOVE)

(MAFF PROJECT OF0168)

Literature Review (December 2000)

by

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Abstract

The philosophy of disease control in organic systems is reviewed together with recent literature on diseases and disease control in organic field vegetables. A wider literature on disease control in conventional agriculture and horticulture has been considered to provide novel approaches for organic producers. There is very little quantitative information on diseases in organic vegetables and advisory literature often presents lists of diseases and how to control them with no information on their relative importance. Potato blight is probably considered the most important single problem by growers overall. Cultural control and rotations will remain the cornerstones of safe organic production, but recent developments in understanding interactions between soil micro-organisms, plants, pathogens and the environment offer the opportunity to manage specific disease problems should they occur. The use of composts and soil amendments or cover crops appear to offer good prospects for improving disease control. The use of covers and mulches should provide a range of benefits particularly if used for successive crops. Biological control agents either natural occurring or introduced may be advantageous against particularly damaging or persistent problems. Similarly, plant extracts require further evaluation for specific uses. Disease problems occur throughout the production cycle from seed to propagation to the growing crop and its harvest and storage. Approaches for disease control are considered at each stage. Organic growers will almost certainly require stringent standards for seed and propagation to ensure that diseases are not introduced into their systems. A long term commitment to strategic studies of organic systems will be needed to ensure that the planned expansion in production can meet the challenges it undoubtedly faces.

Diseases and Disease Control in Organic Vegetables – a literature review (DOVE Project OF0168)

Contents

Page