

1. Record Nr.	UNINA9911020027903321
Titolo	Disease control in crops : biological and environmentally-friendly approaches // edited by Dale Walters
Pubbl/distr/stampa	Oxford, UK ; ; Ames, Iowa, : Wiley-Blackwell, c2009
ISBN	9786612188954 9781282188952 128218895X 9781444312157 1444312154 9781444312140 1444312146
Descrizione fisica	1 online resource (282 p.)
Altri autori (Persone)	WaltersDale
Disciplina	632/.3
Soggetti	Phytopathogenic microorganisms - Biological control Phytopathogenic microorganisms - Control - Environmental aspects Plant diseases
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Disease Control in Crops; List of contributors; Preface; 1 Introduction; 1.1 The importance of plant disease; 1.2 Problems associated with controlling plant disease; 1.3 Conclusions; 1.4 Acknowledgements; 1.5 References; 2 Managing crop disease through cultural practices; 2.1 Introduction; 2.2 Reducing the amount of pathogen inoculum; 2.3 Reducing pathogen spread within the crop; 2.4 Soil amendments and mulching; 2.5 Suppressive soils; 2.6 Intercropping; 2.7 Conclusions; 2.8 Acknowledgements; 2.9 References; 3 Biological control agents in plant disease control; 3.1 Introduction 3.2 Modes of action3.3 Production, formulation and application; 3.4 Commercial products available and uses; 3.5 Factors affecting variable efficiency and constraints3.5 on commercial developments; 3.6 Factors affecting variable efficiency and constraints3.5 on commercial developments; 3.7 References; 4 Induced resistance for plant disease control; 4.1 Introduction; 4.2 Induced resistance in practice; 4.3 Costs

associated with induced resistance; 4.4 Trade-offs associated with induced resistance; 4.5 Future prospects; 4.6 Acknowledgements; 4.7 References

5 The use of composts and compost extracts in plant disease control5.1 Introduction; 5.2 Definitions of composts, composting, compost 5.2 extracts and compost teas; 5.3 Production of composts and compost extracts/teas; 5.4 History of the use of composts and compost5.4 extracts in crop production; 5.5 Current use of composts and compost extracts/5.5 teas in crop production; 5.6 Crop and soil health; 5.7 Effects of composts on plant disease; 5.8 Effects of compost extracts/teas on plant disease

5.9 Mechanisms involved in the suppression/control 5.9 of plant disease using composts and compostextracts/teas5.10 Conclusions and future work; 5.11 References; 6 The use of host plant resistance in disease control; 6.1 Introduction and benefits of resistance; 6.2 Types of resistance; 6.3 Sources of resistance; 6.4 Breeding methodology and selection strategies6.4 for inbreeding crops; 6.5 Deployment of resistance; 6.6 Conclusion; 6.7 References; 7 Crop tolerance of foliar pathogens: possible mechanisms and potential for exploitation; 7.1 Introduction

7.2 Concepts and definitions - a historical perspective7.3 Yield formation; 7.4 How can tolerance be quantified?; 7.5 Potential crop traits conferring tolerance; 7.6 Is there a physiological or ecological cost7.6 to tolerance?; 7.7 Role of modelling; 7.8 Strategy for improving tolerance; 7.9 Acknowledgements; 7.10 References; 8 Plant disease control through the use of variety mixtures; 8.1 Introduction; 8.2 Trial demonstrations of mixtures; 8.3 Mixtures used in practice; 8.4 Conclusion; 8.5 References; 9 Biofumigation for plant disease control - from the fundamentals to the farming system

9.1 Introduction

Sommario/riassunto

The control of diseases in crops is still largely dominated by the use of fungicides, but with the increasing incidence of fungicide resistance, plus mounting concern for the environment resulting from excessive agrochemical use, the search for alternative, reliable methods of disease control is gaining momentum. The purpose of this important book is to examine the development and exploitation (or potential for exploitation) of a range of non-chemical approaches to disease control, with a focus on the need for a greater understanding of crop ecology as the basis for effective disease control