

# Fungal Diseases and their Management in Horticultural Crops



*P. Parvatha Reddy*



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# **Fungal Diseases and their Management in Horticultural Crops**

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*Affectionately dedicated to  
My brothers*

Y.S. Parwath Reddy

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## PREFACE

Horticulture in India is fast emerging as a major commercial venture, because of higher remuneration per unit area and the realization that consumption of fruits and vegetables is essential for health and nutrition. In the last one decade, export potential of horticultural crops has significantly increased attracting even multinationals into floriculture, processing and value added products.

During 2005-06 coverage of area under various horticultural crops in the country was 19.237 million hectares (which is about 13.08% of the total cultivated area) with production of 185.207 million MT. The horticulture sector contributed around 28% of GDP in agriculture. India is the largest producer in the world of cashew nuts, coconuts, tea, ginger, turmeric and black pepper. India is the second largest producer of fruits and vegetables (after China) with a production of 58.74 and 109.05 million MT and contributes 10.9 and 11.9% share in global fruit and vegetable production, respectively. India is the second largest producer of flowers after China. About 126,000 hectare of area is under floriculture, producing 694,000 million tonnes of loose flowers annually (2005-2006). The production of cut flowers has increased to 2,762 million numbers. India is still a marginal player in the world floriculture trade indicating strong potential that can be exploited in this sector. India is the third largest producer of coconut, fourth largest producer and consumer of rubber and sixth largest producer of coffee in the world.

Productivity of horticultural crops in India is relatively low compared to other countries. Of the several factors responsible for lower productivity of horticultural crops, fungal diseases are considered as important limiting factors. Some disease problems are of national importance which causes significant losses to horticultural crops. Diseases of horticultural crops continue to cause losses of about 10% of the crop yields worth more than Rs. 15,000 crores annually. More than 9,600 MT of technical grade fungicides are used annually to manage the diseases in India.

The information on fungal diseases of horticultural crops (fruits, vegetables, plantation, spice, tuber, ornamental, medicinal and aromatic crops) is very much scattered. There is no book at present which comprehensively and exclusively deals with the above aspects on horticultural crops. The present book deals with integrated disease management in horticultural crops in detail using regulatory, physical, cultural, chemical, biological, host plant resistance and integrated methods. The book is extensively illustrated with excellent quality photographs enhancing the quality of publication. The book is written in lucid style, easy to understand language along with adoptable recommendations involving eco-friendly components of IDM.

In view of greater emphasis being given by the Government of India to horticulture by establishing horticulture mission and exclusive State Horticultural Universities, there is an urgent need for good text books to teach courses on different disciplines of horticulture. In this context the present book is of immense help to all those concerned with diseases of horticultural crops.

This book is a practical guide to practicing farmers of horticultural crops. Further, it is a useful reference to policy makers, research and extension workers and students. The material can also be used for teaching undergraduate and post-graduate courses. Suggestions to improve the contents of the book are most welcome (E-mail: [reddy\\_parvatha@yahoo.com](mailto:reddy_parvatha@yahoo.com)).

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Bangalore  
August, 15th, 2009

**P. Parvatha Reddy**



# CONTENTS

<b>1. Horticultural Crops</b>	<b>1</b>	2.22. Amla	92
1.1. Importance of Horticultural Crops	1	2.23. Fig	95
1.2. Export of Horticultural Produce	2	2.24. Jamun	96
		2.25. Tamarind	97
<b>2. Fruit Crops</b>	<b>5</b>	<b>3. Vegetable Crops</b>	<b>103</b>
2.1. Banana	8	3.1. Potato	106
2.2. Citrus	15	3.2. Tomato	118
2.3. Sapota	28	3.3. Brinjal	126
2.4. Papaya	31	3.4. Chilli and Bell Pepper	130
2.5. Pineapple	38	3.5. Onion and Garlic	137
2.6. Jackfruit	42	3.6. Okra	143
2.7. Strawberry	42	3.7. Cabbage and Cauliflower	146
2.8. Mulberry	43	3.8. Pea	152
2.9. Karonda	43	3.9. French Bean	156
2.10. Avocado	44	3.10. Cowpea	158
2.11. Mango	44	3.11. Pigeon Pea	158
2.12. Grapevine	54	3.12. Cluster Bean	159
2.13. Gauva	63	3.13. Amaranthus	159
2.14. Loquat	69	3.14. Curry Leaf	161
2.15. Apple	70	3.15. Pumpkin	161
2.16. Peach and Plum	81	3.16. Cucumber	164
2.17. Pear	83	3.17. Watermelon	165
2.18. Pomegranate	84	3.18. Muskmelon	166
2.19. Ber	87	3.19. Radish	167
2.20. Custard Apple	91	3.20. Beet Root	168
2.21. Phalsa	92		

3.21. Carrot	168	5.16. Ambrette	232
3.22. Mushrooms	170	5.17. Rosemary	233
<b>4. Ornamental Crops</b>	<b>182</b>	5.18. Kalmegh	233
4.1. Rose	183	<b>6. Aromatic Crops</b>	<b>235</b>
4.2. Carnation	192	6.1. Jasmine	235
4.3. Gerbera	194	6.2. Mint	236
4.4. Chrysanthemum	196	6.3. Basil	240
4.5. Gladiolus	199	6.4. Lemon Grass	242
4.6. Tuberose	202	6.5. Patchouli	244
4.7. Crossandra	202	6.6. Scented Geranium	244
4.8. China Aster	202	6.7. Citronella	248
4.9. Marigold	204	6.8. Palmarosa	249
4.10. Narcissus	205	6.9. Vetiver	250
4.11. Orchid	207	<b>7. Tuber Crops</b>	<b>254</b>
4.12. Anthurium	212	7.1. Yam	255
<b>5. Medicinal Plants</b>	<b>215</b>	7.2. Sweet Potato	258
5.1. Solanum	216	7.3. Cassava (Tapioca)	261
5.2. Periwinkle	216	7.4. Colocasia	265
5.3. Isabgol	219	7.5. Elephant Foot Yam	268
5.4. Aswagandha	221	<b>8. Plantation Crops</b>	<b>270</b>
5.5. Opium Poppy	222	8.1. Coffee	272
5.6. Sarpagandha	225	8.2. Tea	276
5.7. Dioscorea	226	8.3. Coconut	280
5.8. Pyrethrum	226	8.4. Arecanut	285
5.9. Senna	227	8.5. Betelvine	290
5.10. Liquorice	228	8.6. Oil Palm	292
5.11. Cinchona	229	8.7. Cacao	293
5.12. Belladonna	230	8.8. Rubber	296
5.13. Gloriosa	230	8.9. Cashewnut	303
5.14. Long Pepper	231		
5.15. Aloe vera	231		

<b>9. Spice Crops</b>	<b>312</b>	9.8. Coriander	333
9.1. Black Pepper	313	9.9. Fenugreek	334
9.2. Cardamom	316	9.10 Cumin	335
9.3. Ginger	320	9.11. Clove	336
9.4. Turmeric	325	9.12. Fennel	337
9.5. Cinnamon	328	<b>References</b>	<b>339</b>
9.6. Vanilla	330	<b>Subject Index</b>	<b>348</b>
9.7. Nutmeg	332		