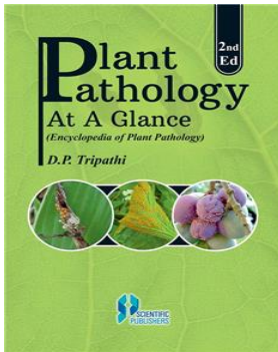


Plant Pathology at a Glance (Encyclopedia of Plant Pathology) 2nd Ed



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Blurb

The book entitled "**Plant Pathology at a Glance**" has been written exclusively not only for under graduate and post graduate students of Plant Pathology but also for those aspirants appearing in different competitive examinations. It covers the core courses prescribed by most of the Universities and Institutions. The book has been divided into fifteen chapters dealing with different sub disciplines of Plant Pathology like Mycology, Mushroom Science, Plant Bacteriology, Plant Virology and Plant Nematology. Plant diseases incited by different biotic and abiotic pathogens have also been described in brief, making the book all in one. In the last of the book, glossary of technical terms, list of some important journals/books and appendix have also been included in the text to make the book more comprehensive and informative.

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Chapter 1. Introduction and History

Introduction, importance, sub-divisions, some common terminology, plant pathogens, causes of plant diseases, classification of diseases, disease epidemiology, disease, symptomatology, pathogenicity and pathogenesis, plant disease, clinic and requirements for plant disease clinic.

Chapter 2. Mycology – study of fungi

Introduction and history, culture collection, fungi and their morphology, classification of fungi, rhizomorphs and mycorrhiza, lichenology, variations in fungi, physiology of fungi, nutritional requirements in fungi, enzymes and their

importance, growth and growth factors, mushroom and their cultivation, mycotoxins and their types, reproduction in fungi, mycological laboratory organization and mycological laboratory techniques.

Chapter 3. Fungal Diseases of Crops

Cereal diseases - diseases of wheat, barley, paddy, sorghum and other cereals; diseases of pulse crops- chick pea, cowpea, soybean, lentil, pigeon pea, black gram and pea; diseases of oil seeds – groundnut, linseed, mustard, rapeseed, sunflower,

safflower and sesame; Industrial crop diseases- sugar beet, sugarcane, potato, cassava, cotton and jute; diseases of vegetables- cole crops, cauliflower, cabbage, turnip and other crucifers, radish, cucurbits, water melon, elephant foot yam,

beans, lablab beans, lima beans, colocassia, egg plant, tomato, beet, spinach, onion, okra, garlic; diseases of fruits - Almond, apple, citrus, banana, cashew nut, grape, guava, jack fruit, mango, loquat, Jamun, water melon, musk melon, papaya, pine

apple, plum, pomegranate, peach, cherry and walnut; diseases of arecanut, cocoa, coconut, coffee, tea and rubber; diseases of spices- ginger, coriander, turmeric and chilli.

Chapter 4. Plant Bacteriology – study of bacteria

Definition and history, prokaryotes and their kinds, plant bacteriology, pioneers in the field of bacteriology, economic importance, morphology and structure, bacteriophages and their classification, growth and physiology, common

terminology, cultivation of bacteria, infection and pathogenicity, bacteria and enzymes, synchronous and continuous cultures, prokaryotic metabolism, bacterial

genetics, mutation in bacteria, auxotrophs and prototrophs, analysis of structure of DNA, plasmids and their importance, recombinant DNA technology, bacteriological laboratory techniques, plant pathogenic bacteria.

Chapter 5. Bacterial Diseases of Plants

Diseases of cereals – wheat, barley, maize, oat, rice and sorghum; diseases of pulses - cowpea, pea, pigeon pea and soybean; diseases of oil seed crops - castor, sunflower, safflower and sesamum; industrial crop diseases - sugarcane, betel vine,

cotton, tobacco, jute and poppy; plantation diseases – coffee and tea; diseases of grasses-sudan grass, lucern, Indian clover and alfalfa; diseases of tuber crops; diseases of fruit crops;diseases of vegetables.

Chapter 6. Plant Virology – study of viruses

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different methods of transmission, symptomatology, inclusion bodies and phytotoxaemia, common terminology, serology and serological reactions.

Chapter 7. Viral Diseases of of Crops

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sunflower soybean sugar beet, potato, tobacco, hop, peanut;diseases of fruit crops.

Chapter 8. Phyto-nematology – study of plant nematodes

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Chapter 9. Nematode diseases of Crops

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Chapter 10. Abiotic Plant Pathogens

Physiological diseases, different causes of abiotic discusses,environmental constraints, important symptoms due to nutritional imbalances, symptoms of nutritional toxicities.

Chapter 11. Abiotic Plant Diseases

Keys to diseases and symptoms of nutritional imbalances, Nutrients deficiency diseases in different crops.

Chapter 12. Phanerogamic Plant Parasites

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Chapter 13. Seed Pathology

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technology.

Glossary of terms

Some Important Publications

Appendix

APPENDIX

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