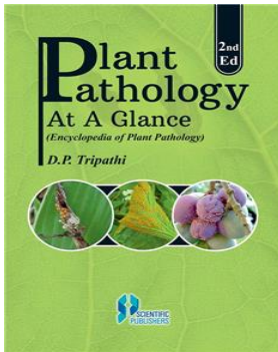


Plant Pathology at a Glance (Encyclopedia of Plant Pathology) 2nd Ed



D.P. Tripathi

ISBN	: 9789389412710	Book Format	: Book & eBook
E-ISBN	: 9789389412727	Binding	: Hard Bound
Language	: English	Edition	: 2
Imprint	: Scientific Publishers	© Year	: 2022
Pages	: 608	Trim Size	: 6.07 x 10 x 1.05
Weight	: 1166 Gms		
Book Type	: Text Book <input type="checkbox"/>		

Print Book : ₹3,500.00 ~~₹3,150.00~~ 10%Off

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.

Table of Contents

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

Definition and history, characterization of viruses, morphology and structure, economic importance, classification, viroids and their classification, isolation and purification, physical properties, pathogenicity test in viruses, detection of viruses,

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

Chapter 7. Viral Diseases of of Crops

Virus diseases of vegetables - tomato, egg plant, cabbage,radish, turnip and lily, cucumber, melon, water melon, bean, broad bean pea, cow pea, carrot, celery, parsnip, lettuce and spinach; industrial crop diseases- Virus diseases of sugarcane,

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

Chapter 8. Phyto-nematology – study of plant nematodes

Introduction and history, progress in the science of nematology,characteristics of nematodes, nature and distribution, kinds of nematodes, economic importance, morphology and life cycle,pathogenicity, classification and grouping, characteristics of different orders and families, detection of plant parasitic

nematodes

Chapter 9. Nematode diseases of Crops

Diseases of cereal crops, diseases of vegetables & spices, diseases of ornamentals, medicinal and narcotics, diseases of industrial crops and diseases of fruits and plantation crops.

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

Seed plant parasites, some examples, parts of the hosts attacked by such parasites, different kinds of seed plant parasites, Stem parasites, semi-stem parasite, holo stem parasite, Root semi root parasite and holo-root parasite, disease cycle of dodder,patho-genic behaviour of Giant mistletoe, important characteristics of Giant mistletoe, pathogenic effects of Giant mistletoe, Broomrape as holo root parasite, general characteristics of Broomrape, management of Broomrape, Witch weed (Striga species), general characteristics of Witch weed, management of witch weed (Striga species), dwarf mistletoes, disease cycle of dwarf mistletoe and management of dwarf mistletoes.

Chapter 13. Seed Pathology

Role of seed in plant pathology, association of pathogens with seeds, scientists who reviewed method of detection of seed borne pathogens, objectives of detection of seed borne microorganisms, information desirable for seed health testing,

common methods of detection of seed borne microorganisms,important characteristics recorded during examination of dry seeds, examination after softening and soaking of seeds,examination of seed washings, incubation method of seed testing, blotter method of

seed testing, Agar plate method of seed testing, rolled paper towel method of seed health testing, 2, 4-D method of seed health testing, some other methods of seed health testing, different kinds of seed borne pathogens,destruction of seed borne pathogens, use systemic fungicide, use insecticides that are compatible with the Thiram, protectant fungicides and seed certification?

Chapter 14. Management of Crop Diseases

Conditions for management of plant diseases, basic categories for disease management, prophylaxis, prophylactic measures, curative measures, important curative measures, important precautions for avoidance of pathogens, important curative measures, exclusion of inoculum, eradication of pathogen, protective measures, cultural control measures, different methods of obtaining resistance in hosts, classification of fungicides, different kinds of fungicides, important

characteristics of good fungicides, different methods of application of fungi-toxicants/ fungicides, biological control, biotechnology for disease resistance, tissue culture techniques, principles behind tissue culture and recombinant DNA

technology.

Glossary of terms

Some Important Publications

Appendix

APPENDIX

This is computer generated document and does not require signature

Scientific Publishers

Date :- Thu Mar 30 2023