

Programa Analítico de Disciplina

FIP 600 - Fitopatologia Geral

Departamento de Fitopatologia - Centro de Ciências Agrárias

Catálogo: 2024

Número de créditos: 2

Carga horária semestral: 30h

Carga horária semanal teórica: 2h

Carga horária semanal prática: 0h

Semestres: I e II

Ementa

Introdução.
Sintomatologia.
Etiologia.
Conceitos básicos de epidemiologia de doenças de plantas.
Controle de doenças de plantas.

Conteúdo

Unidade	T	P	To
1. Introdução. 1. História e desenvolvimento da fitopatologia como ciência. 2. Exemplos de epidemias destrutivas. 3. Nomes e fatos. 4. Conceitos básicos em fitopatologia.	6h	0h	6h
2. Sintomatologia. 1. Sintomas. 2. Sinais.	2h	0h	2h
3. Etiologia. 1. Características biológicas de patógenos de plantas. 2. Parasitismo e desenvolvimento de doenças. 3. Como os patógenos causam doenças nas plantas. 4. Genética da interação patógeno-hospedeiro. 5. Ciclo de vida de fitopatógenos.	6h	0h	6h
4. Conceitos básicos de epidemiologia de doenças de plantas. 1. Elementos de uma epidemia. 2. Como o meio ambiente afeta o desenvolvimento de doenças. 3. Dinâmica de epidemias de doenças de plantas no tempo e no espaço. 4. Quantificação da intensidade da doença em plantas.	4h	0h	4h
5. Controle de doenças de plantas. 1. Princípios de controle de doenças de plantas. 2. Controle cultural. 3. Controle físico. 4. Controle biológico.	12h	0h	12h

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5. Controle genético. 6. Controle químico.			
Total	30h	0h	30h

Teórica (T); Prática (P); Total (To);

FIP 600 - Fitopatologia Geral

Bibliografias básicas

Descrição	Exemplares
Agrios, G. N. Plant Pathology. 5 th Ed., Burlington, Elsevier Academic Press. 2005. 922 p.	0
Ciancio, A., Mukerji, K. G. General Concepts in Integrated Pest and Disease Management (Integrated Management of Plant Pests and Diseases Book 1). 1st Ed., Springer. 2007. 359 p.	0
Gisi, U., Chet, I., Gullino, M. L. Recent Developments in Management of Plant Diseases (Plant Pathology in the 21st Century Book 1). 1st Ed., Springer. 2009. 378 p.	0
Jiasui Zhan, J., Thrall, P. H., Papaix, J., Xie, L., Burdon, J. J. 2015. Playing on a pathogen's weakness: Using evolution to guide sustainable plant disease control strategies. Annual Review of Phytopathology 53:19-43.	0
Larkin, R. P. 2015. Soil health paradigms and implications for disease management. Annual Review of Phytopathology 53:199-221.	0
Lucas, J. A. Plant Pathology and Plant Pathogens. 4th Ed., Wiley-Blackwell. 2020. 384 p.	0
Oku, H. Plant Pathogenesis and Disease Control. 1st Ed., CRC Press. 2019. 208 p.	0
Parnell, S., van den Bosch, F., Gottwald, T., Gilligan, C. A. 2017. Surveillance to inform control of emerging plant diseases: An epidemiological perspective. Annual Review of Phytopathology 55:591-610.	0
Schumann, G. L., D'Arcy, C. J. Essential Plant Pathology. 2nd Ed., St. Paul, APS Press. 2009. 384 p.	0
van Bruggen, A. H. C., Finckh, M.R. 2016. Plant diseases and management approaches in organic farming systems. Annual Review of Phytopathology 54:25-54.	0

Bibliografias complementares

Não definidas

Syllabus

FIP 600 - General Plant Pathology

Departamento de Fitopatologia - Centro de Ciências Agrárias

Catalog: 2024

Number of credits: 2

Total hours: 30h

Weekly workload - Theoretical: 2h

Weekly workload - Practical: 0h

Period: I e II

Content

Introduction.
Symptomatology.
Etiology.
Basic concepts of plant disease epidemiology.
Control of plant diseases.

Course program

Unit	T	P	To
1. Introduction. 1. History and development of plant pathology as a science. 2. Examples of destructive epidemics. 3. Names and facts. 4. Basic concepts in plant pathology.	6h	0h	6h
2. Symptomatology. 1. Symptoms. 2. Signs.	2h	0h	2h
3. Etiology. 1. Biological characteristics of plant pathogens. 2. Parasitism and disease development. 3. How pathogens cause disease in plants. 4. Genetics of the host-pathogen interaction. 5. Life cycle of plant pathogens.	6h	0h	6h
4. Basic concepts of plant disease epidemiology. 1. The elements of an epidemic. 2. How the environment affects disease development. 3. Dynamics of plant disease epidemics in time and space. 4. Quantification of plant disease intensity.	4h	0h	4h
5. Control of plant diseases. 1. Principles of plant disease control. 2. Cultural control. 3. Physical control. 4. Biological control.	12h	0h	12h

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5. Genetic control. 6. Chemical control.			
Total	30h	0h	30h

Theoretical (T); Practical (P); Total (To);

FIP 600 - General Plant Pathology

Fundamental references	
Description	Copies
Agrios, G. N. Plant Pathology. 5 th Ed., Burlington, Elsevier Academic Press. 2005. 922 p.	0
Ciancio, A., Mukerji, K. G. General Concepts in Integrated Pest and Disease Management (Integrated Management of Plant Pests and Diseases Book 1). 1st Ed., Springer. 2007. 359 p.	0
Gisi, U., Chet, I., Gullino, M. L. Recent Developments in Management of Plant Diseases (Plant Pathology in the 21st Century Book 1). 1st Ed., Springer. 2009. 378 p.	0
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Larkin, R. P. 2015. Soil health paradigms and implications for disease management. Annual Review of Phytopathology 53:199-221.	0
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Schumann, G. L., D'Arcy, C. J. Essential Plant Pathology. 2nd Ed., St. Paul, APS Press. 2009. 384 p.	0
van Bruggen, A. H. C., Finckh, M.R. 2016. Plant diseases and management approaches in organic farming systems. Annual Review of Phytopathology 54:25-54.	0
Complementary references	
Not defined	