



Department of Plant Protection

College of Agricultural Engineering Sciences

University of Salahaddin

Subject: Plant Nematology

Course Book – (Year 3)

Hasan Hussein Ali (Asst. Prof.)

Kamalaldeen M. Fatah (Lecturer)

Academic Year: 2020/2021

Course Book

1. Course name	Plant Nematology
2. Lecturer in charge	Hasan Hussein Ali (Asst. Prof.) Kamalaldeen M. Fatah (Lecturer)
3. Department/ College	Plant Protection/ Agriculture
4. Contact	e-mail: hasanhusein292@yahoo.com M:obile: 0750 339 7130 kamalaldeen.fatah@su.edu.krd Mobile : 07507540631
5. Time (in hours) per week	Theory: 2 Practical: 3
6. Office hours	Saturday to Thursday
7. Course code	
8. Teacher's academic profile	Hasan Hussein Ali is an asst. Prof. of Plant Pathology at the College of Agriculture, Salahaddin University, in the majority of his 40-year professional career. He graduated with first Class Honours in Plant Protection/Collage of Agriculture and Forestry from university of Mosul in 1983, ranking second in a class of around 57 graduates. In 1988 he was awarded a master degree in Plant Pathology/ Collage of Agriculture and Forestry from university of Mosul, he was started teaching as an Asst. lecturer from 1983-1990. And in 1990 he was promotion to Lecturer, as well as he is an Asst. Prof. since 1996. He got many awarded by Minster of Agriculture in Iraq and Chancellor and President of Mosul Uni. He published around 27 technical papers in journals, two of them were represented as first recorded in Iraq. He has been teaching some different subjects to Undergrad such as Mycology, Nematology, Plant Pathology, Field Crop Diseases, Orchard & Veg. Diseases, Horticulture Diseases and post Harvest Diseases, and for Postgrad Seed Pathology, Root Diseases, Advanced Mycology, Advanced Nematology and Advanced Plant Pathology, He also delivered around 8 keynote seminars and presentations at local conferences. He

	<p>supervised to so many Students in the final year of Undergrad; he also supervised to successful completion of 5 Master students at the University of Salahaddin. He organized, participated and contributed to a number of higher education conferences in Iraq and Kurdistan Reign. In addition to his academic posts.</p> <p>Kamalaldeen M. Fatah.</p> <p>A lecturer in the department of plant protection/ Collage of Agricultural Engineering sciences/ Salahaddin University with 35 year career. Graduated from Collage of Science/ Department of Biology/ Mosul. In 2007 awarded a master degree in Microbiology from the Collage of Medicine/ University of Al- Mustansreya. From 1992–2007 worked at Reference Laboratory/ General Directorate of Public Health / Ministry of Health/ Baghdad. From 2007– till now working as a lecturer at the collage of Agricultural Engineering Sciences. From 2019– till Now is doing my PhD research.</p>
<p>9. Keywords</p>	<p>Nematode , structure of it , plant diseases</p>
<p>10. Course overview:</p> <p>Considering the prevalence of various kinds of nematodes that affect plants at Kurdistan reign, caused by nematodes it is necessary to find ways to control these diseases through recognize and diagnosis them and then provide particular facilities to control them via cooperate with many companies around the word to find nematicides needed to control.</p> <p>It comes through the identification of these problems and diagnoses them to reach the goal which is how to increase the products in both quality and quantity.</p>	
<p>11. Course objective:</p> <p>After successfully completing this course, you should be able to:</p> <ul style="list-style-type: none"> • Introduction on the history of plant hematologic and effects on the economics . • Study of the nematode structures, systems as digestive system nervous system reproductive system. • Describe a range of pathological problems that affect plants with nematodes. . • Describe symptoms of a range of diseases that affect plants. • Describe disease life cycles and explain how this knowledge can be applied in 	

disease control. <ul style="list-style-type: none">• Explain the methods used to control diseases
12. Student's obligation Weekly quizzes, 1 exam
13. Forms of teaching Data show, Handouts, Power Point, Whiteboard
14. Assessment scheme Students are evaluated during the semester by: <ul style="list-style-type: none">• Short exams (quizzes) 5%• 1 exam 20%• Subtotal total 25%• Final exams 50%• Total for the theoretical part 50%• The practical part is given 35 marks in total including exams and final exams
15. Student learning outcome: Students are expected to learn the significant of the most common diseases that effects and attack plants caused by nematodes and identify that causes these diseases throughout the life cycle, classification and its control. Finally the students will learn how to protect plants from the diseases and how to treat control them and to indentify on the most nematecides that used to control of diseases.
16. Course Reading List and References: Suggested References 1- Agrios, G. N. (2005). Principles of Plant Pathology 5th. / Elsevier Academic Press. New York, 922pp. 2- Bird, A. F. (1971). The structure of nematodes. Academic Press. New York,317 pp. 3- Dropkin. V. H. (1980). Introduction to plant nematology. A wiley insterscience publication. John Wiley and sons, New York, 293pp. 4- Luc, M; R. A. Sikora and J. Bridge (2005). Plant parasitic nematodes in subtropical and tropical agriculture, 2nd. Edition. CABI Publishing, 871pp. 5- Siddiqi, M. R. (2000). Tylenchiad parasites of, CABI Publishing, 833pp.ematode control. University press. 6- Whitehead, A. G. (1998). Plant CAB International, 483pp.

17. The Topics: (Subjects Covered)	Week
Introduction	1st
Morphology and Anatomy of Nematodes	2nd
Anatomy: Inner Body Tube	3rd
Anatomy: Oesophageal glands	4th
Male Reproductive System	5th
Biology of Plant Parasitic Nematodes	6th
Taxonomy of Plant Parasitic Nematodes	7th
Ecological classification of plant parasitic nematodes	8th
Identification of economically important plant nematodes	9th
Symptoms Caused by Nematodes	10th
Interaction of Nematodes with Micro-Organisms	11th
Different methods of Nematode Control	12th
General methods of nematode	13th
Biological Control	14th
18. Practical Topics (If there is any)	
<ul style="list-style-type: none"> • Identify of nematodes cause plant diseases • Identify of Symptoms and Signs of the diseases. • Identify of the Pathogens which cause the diseases. • Methods of how to control the diseases 	3 Hours labs
19. Examinations:	
1- Define the following: 2- Mention the main characters of plant parasitic nematodes. 3- Write four of the symptoms which may appear on the roots of a plant infected with nematode. 4- Compare between disease caused by and disease caused by 5- Enumerate (write) the function of 6- Choose the correct answer from the following. 7- Full in the blanks with correct (sutable word/s). 8- Re-assort the following according to the sequence of their use. 9- Explain	
Extra notes	
21. Peer review	