



RAFFLES
UNIVERSITY

TEACHING PLAN: Weed Management

SCHOOL: (SOAS) SCHOOL OF AGRICULTUR AL SCIENCES		ACADEMIC SESSION: 2023 – 2024		FOR STUDENTS’ BATCH: VI th Semester		
1	Course No.	AAG-T-306				
2	Course Title	Weed Management				
3	Credits	3 (2+1)				
4	Learning Hours		Contact Hours	72		
			Assessment	9		
			Guided Study	9		
			Total hours	90		
5	Course Objective	1. To familiarize the students about the weeds, herbicides and methods of weed control.				
6	Course Outcomes	1. Student can able to identify different species of weeds and able to understand weed characteristics and their harmful & beneficial effects in agriculture 2. Students will be acquainted about different approaches of weed management. 3. Students will be acquainted about allelopathy and its application for weed management 4. Students will be acquainted about herbicides and adjuvants and their utility in agriculture 5. Students will be acquainted about why and how to undertake environmental weed control.				
7	Outline syllabus:					
7.01	Paper Code	Unit	Introduction		Page Numbers ¹	Lectures
7.02	AAG-T-306	Unit I	1. Introduction to weeds, characteristics of weeds their harmful and beneficial effects on ecosystem. 2. Classification, reproduction and dissemination of weeds.		23-80	4
		Unit II	1. Herbicide classification 2. Concept of adjuvant, surfactant, herbicide formulation and their use. 3. Introduction to mode of action of herbicides and selectivity. 4. Allelopathy and its application for weed management.		313-323 485-519 407-430 177-191	5
		Unit III	1. Bio-herbicides and their application in agriculture. 2. Concept of herbicide mixture and utility in agriculture. 3. Herbicide compatibility with agro-chemicals and their application.		244-265 520-535	4
		Unit IV	1. Integration of herbicides with non-chemical methods of weed management. 2. Herbicide Resistance and its management.		266-284 582-615	3
8	Course Evaluation					
8.1	CA: 10%					
8.11	Attendance	25%				
8.12	Homework	2 Assignments-50%				
8.13	Quizzes	2 Quizzes-25%				
8.14	Projects	-				
8.15	Presentation	-				
8.16	Any other	Practical examination-30%				
8.2	MTE	10%				
8.3	End-term examination: 50%					
9	Text Books & References					
9.1	Text book					

9.2	References	1. Weed Science, Basics and Applications by Das TK Jain brothers 2016 2. Weed management, Principles and Practices by Gupta OP 3. Principles of Agronomy by Reddy SR Kalyani Publications 2021
9.3	Video References	1. https://www.youtube.com/watch?v=IwoVC0e6nHo&t=36s 2. https://www.youtube.com/watch?v=QC9oqot_XR8 3. https://www.youtube.com/watch?v=QvnwhgDCwho 4. https://www.youtube.com/watch?v=vUyoyoLIXYg 5. https://www.youtube.com/watch?v=-1Vy4_yODw8 6. https://www.youtube.com/watch?v=-1Vy4_yODw8 7. https://www.youtube.com/watch?v=QtC14bq42aw 8. https://www.youtube.com/watch?v=_OMcALg9t-Y 9. https://www.youtube.com/watch?v=9clmjyGWebg 10. https://www.youtube.com/watch?v=bXFrQJCy_Bg 11. https://www.youtube.com/watch?v=oaEERcaJfzw 12. https://www.youtube.com/watch?v=iZxOSKZnwZk 13. https://www.youtube.com/watch?v=2OjuI_Tmrdw 14. https://www.youtube.com/watch?v=lH6c2cGUjss 15. https://www.youtube.com/watch?v=8lyhtXH75k8 16. https://www.youtube.com/watch?v=OlAq8bGp1kE 17. https://www.youtube.com/watch?v=tFHZ0OB_4og 18. https://www.youtube.com/watch?v=v5QYl3Zr9g4&list=PL4mlRretUNCCeCkYSwN-AsAysyBvSk6qr&index=9 19. https://www.youtube.com/watch?v=iqOcJHPAU3k&list=PL4mlRretUNCCeCkYSwN-AsAysyBvSk6qr&index=10 20. https://www.youtube.com/watch?v=9AsCfRqsUfE&list=PL4mlRretUNCCeCkYSwN-AsAysyBvSk6qr&index=7 21. https://www.youtube.com/watch?v=x8ZilhPlwNA&list=PL4mlRretUNCCeCkYSwN-AsAysyBvSk6qr&index=15 22. https://www.youtube.com/watch?v=bXFrQJCy_Bg&list=PL4mlRretUNCCeCkYSwN-AsAysyBvSk6qr&index=5 23. https://www.youtube.com/watch?v=uXsfzaO5ZwU&list=PL4mlRretUNCCeCkYSwN-AsAysyBvSk6qr&index=18 24. https://www.youtube.com/watch?v=pl4L7qDE74c&list=PL4mlRretUNCCeCkYSwN-AsAysyBvSk6qr&index=22 25. https://www.youtube.com/watch?v=dRMWIRMSMP0&list=PL4mlRretUNCCeCkYSwN-AsAysyBvSk6qr&index=26 26. https://www.youtube.com/watch?v=VmzUedpj3p4&list=PL4mlRretUNCCeCkYSwN-AsAysyBvSk6qr&index=29

Mapping of Outcomes v. Topics

Outcome no. → Syllabus topic↓	1	2	3	4	5
Paper Code. Unit I (1)	✓				✓
Paper Code. Unit I (2)	✓				✓
Paper Code. Unit II (1)				✓	✓
Paper Code. Unit II (2)				✓	✓
Paper Code. Unit II (3)				✓	✓
Paper Code. Unit II (4)			✓		✓
Paper Code. Unit III (1)				✓	✓
Paper Code. Unit III (2)				✓	✓
Paper Code. Unit III (3)				✓	✓
Paper Code. Unit IV (1)		✓			✓
Paper Code. Unit IV (2)				✓	✓

LEADING CASES:

QUESTION BANK

1. Write some harmful and beneficial effects of weeds.
2. Classify weeds based on morphology, association and nature of stem
3. What are the major weeds found in rice field? What is IWM and write the IWM for rice.
4. What are the advantages and disadvantages of herbicide usage in agriculture?
5. Briefly explain the cultural methods of weed control.

6. Briefly explain crop weed competition.
 7. Translocation of herbicides in plants.
 8. Briefly explain the biological methods of weed control.
 9. Briefly explain about herbicide formulations.
 10. Define allelopathy. Explain allelopathic effects of weeds on crops, crops on weeds, crops on crops and weeds on weeds with appropriate examples.
 11. Write short notes on bio-herbicides.
 12. Classify herbicides based on selectivity, mode of application and time of application.
 13. Write short notes on residual effect of herbicides on plant and environment.
 14. Fate of herbicides in soil.
 15. Briefly explain propagation and dissemination of weeds.
 16. Explain bio-herbicides and their application in agriculture
 17. Write the characteristics of weeds
 18. Write the harmful effects of weeds on ecosystem?
 19. Write the beneficial effects of weeds on ecosystem?
 20. Write short notes on herbicide resistance and its management
 21. Define adjuvant and its advantages?
 22. Write the herbicide mixture and its utility in agriculture?
 23. Write the allelopathy and its application for weed management?
 24. Define objectional weeds with example?
 25. Classify herbicides based on time of application?
 26. How weeds are affect human health?
 27. Write about crop bound weeds?
 28. Define satellite weeds with examples?
 29. Classify herbicides based on their mode of action?
 30. Define relative weeds relative weeds ?
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PROJECTS (To be given to group of students)