

M.Sc.(Ag)Agronomy III Semester

Soil, Water, Plant Relationship, APS 527

Objectives:

- To gain basic knowledge about the problematic soils of India
- To provide knowledge about the different remedial measures
- To classify soil according to its physical and chemical properties
- To study about the crop management practices in problematic areas
- To deal with survey and mapping of problematic soils of India

Outcome:

After completion of the course, a student will be able to

COURSE OUTCOME (CO)	DESCRIPTION
CO1	To gain basic knowledge about the problematic soils of India
CO2	To provide knowledge about the different remedial measures
CO3	To classify soil according to its physical and chemical properties
CO4	To study about the crop management practices in problematic areas
CO5	To deal with survey and mapping of problematic soils of India

CO-PO MAPPING:

		CO											
		PO1 Basic Agriculture knowledge	PO2 Problem Solving	PO3 Field Experimentations	PO4 Modern implement usage	PO5 Modern Agriculture/Horticultural implements	PO6 Modernplant protection implements	PO7 Extension Programme	PO8 Environment and sustainability	PO9 Ethics	PO10 Individual and team work	PO11 Communication	PO12 Lifelong learning
CO1	To gain basic knowledge about the problematic soils of India	3	1	2	1	1	3	3	3		3	1	3
CO2	To provide knowledge about the different remedial measures	3	3	3	1		3	3	3		3	3	2
CO3	To classify soil according to its physical and chemical properties	3	2	1	1		2	3	3	1	1	2	3
CO4	To study about the crop management practices in problematic areas	3	2	2	2		3	3	3		2	3	3
CO5	To deal with survey and mapping of problematic soils of India	3	1	1	1	1	2	3	3		2	3	3
3: Strong contribution, 2: average contribution, 1: Low contribution													

COURSE: Agronomy of Major Field Crop (Kharif)
COURSE CODE: APA514

COURSE OBJECTIVES:

- Knowledge and concept of major field crops (including cereals, pulses, oilseeds and fiber crops)
- Basics of soil requirements for field crops including fertilizers, manures, Farm yard manures
- Knowledge of seed rates, morphology phenology, varietal improvement of crops
- Basic concepts of origin, history, distribution, adaptations of different crops according to the environment
- Study of sustainable agriculture and cropping and farming systems

COURSE OUTCOMES (CO):

After completion of the course, a student will be able to

COURSE OUTCOME (CO)	DESCRIPTION
CO1	Concept of major field crops (including cereals, pulses, oilseeds and fiber crops)
CO2	Knowledge of farm yard manures soil requirements for field crops including fertilizers, manures,
CO3	Basics if origin, history, distribution, adaptations of different crops according to the environment
CO4	In-depth knowledge of sustainable agriculture and cropping and farming systems
CO5	In-depth knowledge of production technology

CO-PO MAPPING:

CO		PO											
		PO 1. Basic Agronomy knowledge	PO 2. Research	PO 3. Field Experiments	PO 4. Modern implementation usage	PO 5. Modern concepts of crop production	PO 6. Modern farming system	PO 7. Soil-water-plant relationship	PO 8. Environment and sustainability	PO 9. Ethics	PO 10. Individual and team work	PO 11. Communication	PO 12. Life-long learning
C01	Concept of major field crops (including cereals, pulses, oilseeds and fiber crops)	2	2	3	3	3	3	3	3	3	2	2	2
C02	Knowledge of farm yard manures soil requirements for field crops including fertilizers, manures,	3	2	1	2	2	2	3	2	2	3	2	2
C03	Basics if origin,history,distribution,adaptations of different crops according to the environment	2	2	3	3	3	3	2	3	3	3	2	3
C04	In-depth knowledge of sustainable agriculture and cropping and farming systems	3	3	2	2	2	2	1	3	2	2	3	3
C05	In-depth knowledge of production technology	3	2	3	2	2	1	1	3	2	2	3	3
3: Strong contribution, 2: average contribution, 1: Low contribution													

COURSE: Toxicology of insecticides
COURSE CODE: AG506

COURSE OBJECTIVES:

- Basic concept of toxicology on insects including history and use of pesticides
- Knowledge of insecticides and their classification based on mode of entry, mode of action and chemical nature
- Principles of toxicology and evaluation of insecticidal toxicity
- Basic concepts of Insecticide residues, their significance and environmental implications
- Study of Insecticide metabolism; pest resistance to insecticides

COURSE OUTCOMES (CO):

After completion of the course, a student will be able to

COURSE OUTCOME (CO)	DESCRIPTION
CO1	Scope of insecticide toxicology, history of chemical control; pesticide use and pesticide industry in India
CO2	Classification of insecticides and acaricides based on mode of entry, mode of action and chemical nature.
CO3	Basic concept of principles of toxicology; evaluation of insecticide toxicity; joint action of insecticides- synergism, potentiation and antagonism
CO4	Insecticide resistance management and pest resurgence
CO5	Insecticide residues, their significance and environmental implications

CO-PO MAPPING:

	CO	PO 1. Basic Agronomy knowledge	PO 2. Research	PO 3. Field Experiments	PO 4. Modern implementation usage	PO 5. Modern concepts of crop production	PO 6. Modern farming system	PO 7. Soil-water-plant relationship	PO 8. Environment and sustainability	PO 9. Ethics	PO 10. Individual and team work	PO 11. Communication	PO 12. Life-long learning
C01	Scope of insecticide toxicology history of chemical control; pesticide use and pesticide industry in India	2	2	3	1	3	2	3	3	3	2	2	3
C02	Classification of insecticides and acaricides based on mode of entry, mode of action and chemical nature.	3	3	2	2	2	2	3	2	2	1	2	3
C03	Basic concept of principles of toxicology; evaluation of insecticide toxicity; joint action of insecticides- synergism, potentiation and antagonism	2	3	2	2	3	2	2	2	2	1	2	3
C04	Insecticide resistance management and pest resurgence	3	3	2	3	2	2	2	1	2	2	3	2
C05	Insecticide residues, their significance and environmental implications	2	2	3	2	2	2	2	3	3	2	2	1
3: Strong contribution, 2: average contribution, 1: Low contribution													

COURSE: Hormonal Regulation of Plant Growth and Development
COURSE CODE: AG507

COURSE OBJECTIVES:

- Basic concept of plant growth regulators
- Knowledge of Hormones, endogenous growth substances and synthetic chemicals
- Basic knowledge of biosynthetic pathways and metabolism
- Basic concepts of Auxins, Gibberlins, cytokinins, Absciscic acid and Ethylene Brassinosteroids
- Study of interaction of hormones in regulation of plant growth and development processes

COURSE OUTCOMES (CO):

After completion of the course, a student will be able to

COURSE OUTCOME (CO)	DESCRIPTION
CO1	Hormones, endogenous growth substances and synthetic chemicals, Endogenous growth regulating substances other than hormones
CO2	Students will have in-depth knowledge of Hormone mutants and transgenic plants
CO3	Knowledge of Signal perception.transduction, and effect at functional gene level of different hormones
CO4	Synthetic growth regulators- concept and knowledge
CO5	Basic concepts of Auxins, Gibberlins, cytokinins, Absciscic acid and Ethylene Brassinosteroids

CO-PO MAPPING:

	CO	PO 1. Basic Agronomy knowledge	PO 2. Research	PO 3. Field Experiments	PO 4. Modern implementation usage	PO 5. Modern concepts of crop production	PO 6. Modern farming system	PO 7. Soil-water-plant relationship	PO 8. Environment and sustainability	PO 9. Ethics	PO 10. Individual and team work	PO 11. Communication	PO 12. Life-long learning
C01	Hormones, endogenous growth substances and synthetic chemicals, Endogenous growth regulating substances other than hormones	2	2	3	2	3	1	2	3	1	2	2	1
C02	Students will have in-depth knowledge of Hormone mutants and transgenic plants	1	3	2	2	2	2	3	2	2	2	2	1
C03	Knowledge of Signal perception.transduction, and effect at functional gene level of different hormones	1	3	2	3	3	2	3	2	2	1	2	2
C04	Synthetic growth regulators- concept and knowledge	1	2	2	1	2	1	1	3	2	2	1	2
C05	Basic concepts of Auxins, Gibberlins, cytokinins, Abscisic acid and Ethylene Brassinosteroids	2	3	3	2	2	2	1	3	3	2	2	2
3: Strong contribution, 2: average contribution, 1: Low contribution													

COURSE: Diseases of Field Crops

COURSE CODE: AG508

COURSE OBJECTIVES:

- Basic concepts about economic importance of phytopathogens, their significance and environmental implications
- In depth study of plant pathology including history and diseases management practices of different type of crops
- Knowledge of insecticides/fungicides/bactericides/biofertilizers
- Study of epidemiology

COURSE OUTCOMES (CO):

After completion of the course, a student will be able to

COURSE OUTCOME (CO)	DESCRIPTION
CO1	Basic concept of principles of plant pathology
CO2	Scope of plant pathology and phytopathogens
CO3	Classification of fungal/bacterial/viral diseases
CO4	Disease cycle, epidemiology, disease management, disease management methods in India
CO5	Integrated plant disease management (IDM)

CO-PO MAPPING:

	CO	PO 1. Basic Agronomy knowledge	PO 2. Research	PO 3. Field Experiments	PO 4. Modern implementation usage	PO 5. Modern concepts of crop production	PO 6. Modern farming system	PO 7. Soil-water-plant relationship	PO 8. Environment and sustainability	PO 9. Ethics	PO 10. Individual and team work	PO 11. Communication	PO 12. Life-long learning
C01	Basic concept of principles of plant pathology	2	3	2	2	3	2	3	3	1	2	2	3
C02	Scope of plant pathology and phytopathogens	2	3	2	3	3	2	3	3	2	2	2	3
C03	Classification of fungal/bacterial/viral diseases	2	3	3	3	3	2	2	2	2	2	2	3
C04	Disease cycle, epidemiology, disease management, disease management methods in India	2	3	3	3	2	2	3	2	2	2	3	3
C05	Integrated plant disease management (IDM)	2	2	3	2	2	2	3	3	3	2	2	3
3: Strong contribution, 2: average contribution, 1: Low contribution													

Library and Information Services – PGS501

Objectives:

- To study about the role of library in education, research and technology
- Obtain idea of Intricacies of abstracting and indexing services
- To enlighten the students about the computerized library services
- To give the knowledge of e resources and search engines

Outcomes:

After completion of the course, a student will be able to

COURSE OUTCOME (CO)	DESCRIPTION
CO1	Students gain knowledge about the library importance in different sites.
CO2	They gain knowledge of Intricacies of abstracting and indexing services
CO3	They know about the computerized library services
CO4	To provide knowledge of e resources
CO5	To give basic information about search engines

CO-PO MAPPING:

CO		PO1 Basic Agriculture knowledge	PO2 Problem Solving	PO3 Field Experimentations	PO4 Modern implementation usage	PO5 Modern Agricultural/Horticultural implements	PO6 Modern plant protection implements	PO7 Extension Programme	PO8 Environment and sustainability	PO9 Ethics	PO10 Individual and team work	PO11 Communication	PO12 Lifelong learning
CO1	Students gain knowledge about the library importance in different sites.	3	3	1	1	1	3	3	3	2	3	1	3
CO2	They gain knowledge of Intricacies of abstracting and indexing services	3	3	1	3	3	3	1	3	2	3	3	2
CO3	They know about the computerized library services	3	2	1	3	3	2	1	3	2	1	2	3
CO4	To provide knowledge of e resources	3	2	1	3	3	3	1	3	2	2	3	3
CO5	To give basic information about search engines	3	1	1	3	3	3	1	3	2	2	3	3
3: Strong contribution, 2: average contribution, 1: Low contribution													