DEPARTMENT OF AGRONOMY Faculty of Agricultural Sciences University of the Punjab, Lahore

MENT OF





Program	ne B. Sc. (Hons.) Agriculture (Agronomy)	Course Code	AGR-403	Credit Hours	3 (2-1)	
Course Ti	Course Title CONSERVATION AGRONOMY					
	Course	Introduction				
To devel	To develop the soil and water conservation concept and reclaim problem soils for sustaining productivity.					
Loorning Outcomes						
After studying this source, the students will be able to:						
1. Understand the soil and water conservation						
2.	design strategies to conserve the	soil and water				
3.	Learn about reclamation of prob	lem soils and fiel	d drainage			
4.	Recognize watershed management	nt and soil fertilit	y improveme	ent		
5.	familiarize with crop residue mar	nagement on a sur	stainable bas	is		
Course Co	ntent (Theory)		Ass	ignments/R	eadings	
	(110013)			Textbook	of	
Week 1	Week 1 1.1Introduction to soil and water conservation			A reaction of Agronomy. New Age International Publishers. New Delhi, India.		
Week 2 1.2 Concept of soil and water conservation			Huds and semi Scien India	son, N.W. 20 water conser -arid ntific Pu n.	004. Soil vation in areas. blishers,	
Week 3 1.3 Objectives of soil and water conservation			Huds and semi Scier India	son, N.W. 20 water conser -arid ntific Pu ı.	004. Soil vation in areas. blishers,	
Week 4 2.1 Agronomic practices for conservation-tillage			Hud and semi	son, N.W. 20 water conser -arid	004. Soil vation in areas.	

		Scientific Publishers,
		India.
		Hudson, N.W. 2004. Soil
	2.2 Agronomic practices for conservation-tillage:	and water conservation in
Week 5	Terracing	semi-arid areas.
		Scientific Publishers,
		India.
	2.3 Agronomic practices for conservation-tillage:	Sustainable Crop
Week 6		Production under stress
week o	Benching	Publishing Acadomy
		Publishing Academy,
		Sustainable Cron
		Production under stress
Week 7	2.4 Agronomic practices for conservation-tillage:	environments Agro-tech
vv cen v	Deep ploughing	Publishing Academy.
		Udaipur.
		A Textbook of
	2.1. Succionarian	Agronomy. New Age
Week 9		International
Week 8	5.1 Species selection	Publishers. New
		Delhi, India.
		Delhi, India.
Week 9	MID TERM EXAM	Delhi, India.
Week 9	MID TERM EXAM	Delhi, India. Nazir, M.S., E. Bashir
Week 9	MID TERM EXAM	Delhi, India. Nazir, M.S., E. Bashir and R. Bantel. (Eds.)
Week 9 Week 10	4.1 Crop rotations	Delhi, India. Nazir, M.S., E. Bashir and R. Bantel. (Eds.) 1994. Crop Production.
Week 9 Week 10	4.1 Crop rotations	Delhi, India. Nazir, M.S., E. Bashir and R. Bantel. (Eds.) 1994. Crop Production. National Book
Week 9 Week 10	4.1 Crop rotations	Delhi, India. Nazir, M.S., E. Bashir and R. Bantel. (Eds.) 1994. Crop Production. National Book Foundation, Islamabad
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Week 9 Week 10 Week 11	MID TERM EXAM 4.1 Crop rotations 5.1 Cover cropping	Delhi, India. Nazir, M.S., E. Bashir and R. Bantel. (Eds.) 1994. Crop Production. National Book Foundation, Islamabad Nazir, M.S., E. Bashir and R. Bantel. (Eds.) 1994. Crop Production.
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Week 9 Week 10 Week 11 Week 12	MID TERM EXAM 4.1 Crop rotations 5.1 Cover cropping 6.1 Strip cropping	Delhi, India. Nazir, M.S., E. Bashir and R. Bantel. (Eds.) 1994. Crop Production. National Book Foundation, Islamabad Nazir, M.S., E. Bashir and R. Bantel. (Eds.) 1994. Crop Production. National Book Foundation, Islamabad Nazir, M.S., E. Bashir and R. Bantel. (Eds.) 1994. Crop Production. National Book
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Week 9 Week 10 Week 11 Week 12	MID TERM EXAM 4.1 Crop rotations 5.1 Cover cropping 6.1 Strip cropping	Delhi, India. Nazir, M.S., E. Bashir and R. Bantel. (Eds.) 1994. Crop Production. National Book Foundation, Islamabad Nazir, M.S., E. Bashir and R. Bantel. (Eds.) 1994. Crop Production. National Book Foundation, Islamabad Nazir, M.S., E. Bashir and R. Bantel. (Eds.) 1994. Crop Production. National Book Foundation, Islamabad

		1994. Crop Production.		
		National Book		
		Foundation, Islamabad		
Week 14	8.1 Stubble and crop-residue management for resource conservation	Nazir, M.S., E. Bashir and R. Bantel. (Eds.) 1994. Crop Production. National Book Foundation, Islamabad		
Week 15	9.1 Field drainage	Water Use in Crop Production. Narosa Pub.lishing House Pvt. Ltd. New Dehli, India.		
Week 16	9.2 Field drainage	WaterUseinCropProduction.NarosaPub.lishingHousePvt.Ltd. New Dehli, India.		
Week 17	10.1 Watershed management under rainfed conditions	Water Use in Crop Production. Narosa Pub.lishing House Pvt. Ltd. New Dehli, India.		
Week 18	Week 18 FINAL TERM EXAM			
WEEK 10				
Course Co	ontents (Practical)	Assignments/Readings		
Course Co Week 1	ontents (Practical) 1.1 Visit to different soil conservation centers	Assignments/Readings		
Course Co Week 1 Week 2	ontents (Practical) 1.1 Visit to different soil conservation centers 1.2 Visit to different water conservation centers	Assignments/Readings		
Course Co Week 1 Week 2 Week 3	ontents (Practical) 1.1 Visit to different soil conservation centers 1.2 Visit to different water conservation centers 1.3 Visit to different soil and water conservation institutes	Assignments/Readings		
Course Co Week 1 Week 2 Week 3 Week 4	ontents (Practical) 1.1 Visit to different soil conservation centers 1.2 Visit to different water conservation centers 1.3 Visit to different soil and water conservation institutes 2.1Demonstration of soil conservation structures	Assignments/Readings		
Course Co Week 1 Week 2 Week 3 Week 4 Week 5	ontents (Practical) 1.1 Visit to different soil conservation centers 1.2 Visit to different water conservation centers 1.3 Visit to different soil and water conservation institutes 2.1Demonstration of soil conservation structures 3.1Demonstration of water conservation structures	Assignments/Readings		
Veck 10 Course Co Week 1 Week 2 Week 3 Week 4 Week 5 Week 6	Image: Contents (Practical) 1.1 Visit to different soil conservation centers 1.2 Visit to different water conservation centers 1.3 Visit to different soil and water conservation institutes 2.1Demonstration of soil conservation structures 3.1Demonstration of water conservation structures 4.1 Effect of different mulches on soil conservation	Assignments/Readings Assignments/Readings Hudson, N.W. 2004. Soil and water conservation in semi- arid areas.Scientific Publishers, India.		
Veek 10 Course Co Week 1 Week 2 Week 3 Week 4 Week 5 Week 6	Interference of different Interference of difference of diff	Assignments/Readings Assignments/Readings Hudson, N.W. 2004. Soil and water conservation in semi- arid areas.Scientific Publishers, India. Hudson, N.W. 2004. Soil and water conservation in semi- arid areas.Scientific Publishers, India.		

		conservation in semi-	
		arid areas.Scientific	
		Publishers, India.	
Week 9	MID TERM EXAM		
	5.1 Demonstration of tillage practices for soil	Hudson, N.W. 2004.	
	conservation	Soil and water	
Week 10		conservation in semi-	
		arid areas.Scientific	
		Publishers, India.	
	5.2 Demonstration of tillage practices for water	Hudson, N.W. 2004.	
	conservation	Soil and water	
Week 11		conservation in semi-	
		arid areas.Scientific	
		Publishers, India.	
	6.1 Measurement of runoff in soil conservation	Hudson, N.W. 2004.	
		Soil and water	
Week 12		conservation in semi-	
		arid areas.Scientific	
		Publishers, India.	
	6.2 Measurement of runoff in water conservation	Hudson, N.W. 2004.	
		Soil and water	
Week 13		conservation in semi-	
		arid areas.Scientific	
		Publishers, India.	
	6.3 Measurement of soil erosion in soil conservation	Hudson, N.W. 2004.	
		Soil and water	
Week 14		conservation in semi-	
		arid areas.Scientific	
		Publishers, India.	
	6.4 Measurement of soil erosion in water	Hudson, N.W. 2004.	
	conservation	Soil and water	
Week 15		conservation in semi-	
		arid areas.Scientific	
		Publishers, India.	
	6.5 Combined measurement of runoff and soil	Hudson, N.W. 2004.	
	erosion	Soil and water	
Week 16		conservation in semi-	
		arid areas.Scientific	
		Publishers, India.	
Week 17	Revision of Course		
Week 18	FINAL TERM EXAM		

Textbooks and Reading Material

Textbooks.

- 1. Hudson, N.W. 2004. Soil and water conservation in semi-arid areas. Scientific Publishers, India.
- 2. Kirkham, M.B. (Editor). 2004. Water Use in Crop Production. NarosaPub.lishing House Pvt. Ltd. New Dehli, India.
- 3. Maloo, S.R. 2002. Sustainable Crop Production under stress environments. Agro-tech Publishing Academy, Udaipur.
- 4. Chandrasekaran, B., K. Annadurai and E. Somasundaram. 2010. A Textbook of Agronomy. New Age International Publishers. New Delhi, India.
- 5. Nazir, M.S., E. Bashir and R. Bantel. (Eds.) 1994. Crop Production. National Book Foundation, Islamabad

Teaching Learning Strategies

- 1. Whiteboard and markers
- 2. Slide projector or multimedia
- 3. Overhead projector
- 4. Photocopy machine or photocopying facilities
- 5. Reference books
- 6. Journals
- 7. Internet (web cited literature)
- 8. Field Tours

Assignments: Types and Number with Calendar

- 1. Evaluation of Soil Conservation Techniques (Mid Term)
- 2. Integrated Watershed Management (Final Term)

Assessment				
Sr. No.	Elements	Weightage	Details	
1.	Midterm	35%	Written Assessment at the mid-point of the	
	Assessment		semester.	
2.	Formative	25%	Continuous assessment includes: Classroom	
	Assessment		participation, assignments, presentations, viva	
			voce, attitude and behavior, hands-on-activities,	
			short tests, projects, practical, reflections,	
			readings, quizzes etc.	

3.	Final	40%	Written Examination at the end of the semester.
	Assessment		It is mostly in the form of a test, but owing to the
			nature of the course the teacher may assess their
			students based on term paper, research proposal
			development, field work and report writing etc.