

22BEAS104 PRINCIPLES OF AGRONOMY

Hours Per Week :

L	T	P	C
2	0	2	3

PREREQUISITE KNOWLEDGE: Basics of cropping system, cultivation practices for various crops.

COURSE DESCRIPTION AND OBJECTIVES:

To train and equip the students with necessary theoretical and practical knowledge on basic principles of cropping systems and acquaints them with the cultivation practice of various crops in Indian agriculture.

MODULE-1

UNIT-1

8L+0T+0P=8 Hours

INTRODUCTION AND SCOPE OF AGRONOMY:

Classification of crops, effect of different weather parameters on crop growth and development, Principles of tillage, tilth and its characteristics.

UNIT-2

8L+0T+16P=24 Hours

CROP SEASONS:

Methods, time and depth of sowing of major field crops, methods and time of application of manures and fertilizers.

PRACTICES:

- Identification of crops and their varieties.
- Practice on primary tillage implements.
- Practice of secondary tillage implements.
- List out various manure for food crops.
- Identification of various seeds for food crops and pulses.
- Practice of sowing in field for various crops.
- Study on different fertilizer Application methods.
- Study on various fertilizers.

MODULE-2

UNIT-1

8L+0T+0P=8 Hours

SOIL WATER PLANT RELATIONSHIP:

Crop coefficients, water requirement of crops and critical stages for irrigation, weeds and their control.

UNIT-2

8L+0T+16P=24 Hours

ORGANIC FARMING AND CROP ROTATION:

Sustainable agriculture, cropping systems, relay cropping and mixed cropping..



source: <https://krishijagan.com/blog/agronomy-and-its-relation-to-other-sciences/>

SKILLS:

- ✓ Practice of ploughing in field.
- ✓ Practice of puddling in paddy field.
- ✓ Practice of sowing in field for various crops.

PRACTICES:

- Study of Weed identification.
- Different weed control methods and practices in agriculture.
- Practice of ploughing in field.
- Practice of puddling in paddy field.
- Practice on organic farming methods.
- Practice on intra and intro cultivation.
- Practice of mixed cropping.
- Practice of weed management practices.

COURSE OUTCOMES:

Upon successful completion of this course, students will have the ability to:

CO No.	Course Outcomes	Blooms Level	Module No.	Mapping with POs
1	Apply their knowledge and acquired principles on cereals, pulses, oilseeds and commercial crops in agriculture for increasing yields and reducing cost of cultivation.	Apply	1	1, 2, 3, 9
2	Apply and develop new package of practices for various crops in agriculture, horticulture and sericulture.	Apply	1	1, 2, 9, 12
3	Analyze the problems faced by the farmers in agriculture in view of increasing yields and reducing cost of cultivation.	Analyze	2	1, 2, 9, 12
4	Evaluate the trend and current scenario of investments and returns on local and global agriculture.	Evaluate	2	1, 2, 9, 12

TEXT BOOKS:

1. Reddy G.H. Shankara Reddy T. Allamanda Reddy, by "A text book on Principles of Agronomy" 2018.
2. V C Srivastava, by "A text book on Modern Principles of Agronomy" 2015.

REFERENCE BOOKS:

1. Gupta O P. 1984, "Scientific Weed Management" in the Tropics and Sub- Tropics. Today and Tomorrow's Printers and Publishers. New Delhi.
2. Rao V S. 1992, "Principles of Weed Science". Oxford and IBH Publishing Co. Ltd. New Delhi.
3. Reddy Yellamanda T and Shankar Reddy G H. 1995, "Principles of Agronomy". Kalyani Publishers Ludhiana.