

21AGRO201 CROP PRODUCTION TECHNOLOGY – I (CEREALS, MILLETS AND PULSES)

Hours Per Week :

L	T	P	C
2	-	2	3

Total Hours :

L	T	P
30	-	30



Source :

<https://images.app.goo.gl/8RpmZHjWYXbFp2j79>

COURSE DESCRIPTION AND OBJECTIVES:

The aim of this course is to provide knowledge in the production of cereals, millets, and pulses grown in *kharif* season and skills to implement them

COURSE OUTCOMES:

Upon completion of the course, the student will be able to achieve the following outcomes:

COs	Course Outcomes
1	Acquire required knowledge in crop production technologies of different cereal crops to empower the farmer with the latest production technologies
2	Able to practice and promote the production of different cereals, millets and pulse crops
3	Students will learn the soil and climatic requirements, varieties of <i>Kharif</i> crops

SKILLS:

- ✓ Practice weeding, fertilizer application, irrigation and pest management practices
- ✓ Calculate Cost Benefit Ratios (CBR) for different crops
- ✓ Record biometric observations and yield parameters of cereals, millets and pulses crops

ACTIVITIES:

- o *Morphological description of cereal and pulse crops*
- o *Experiment on effect of seed size on germination and seedling vigour of cereal and pulse crops*
- o *Demonstrate effect of sowing depth on germination of cereal and pulse crops*
- o *Calculate fertilizers requirement for cereal and pulse crops*

UNIT - 1

Introduction: Origin, geographical distribution, economic importance, area, production and productivity

UNIT - 2

Soil and Climatic Requirements: Soil and climatic requirements, climate resilience; Varieties, cultural practices and yield of cereal, millet and pulse crops

UNIT - 3

Crop Production of Cereals: Rice, wheat, barley, maize

UNIT - 4

Crop Production of Nutri cereals : Sorghum, pearl millet, finger millet, proso millet, little millet, kodo millet, foxtail millet, and barnyard millet

UNIT- 5

Crop Production of Pulses: Redgram (pigeonpea), greengram, blackgram, bengalgram, lentil, peas, horsegram and cowpea

LABORATORY EXPERIMENTS**LIST OF EXPERIMENTS**

1. Raising of rice nurseries including SRI nursery for mechanical transplanting
2. Methods of rice transplanting
3. Identification of seeds / crops and calculation of seed rate
4. Land preparation and layout of student plots
5. Sowing of crops in student plots, experimental plots of students from sowing to harvesting and study of agronomic characters / biometric observations and identification of different growth stages like tillering, panicle initiation
6. Efficiency of input utilization to produce one kg of out put
7. Study of the effect of seed size on germination and seedling vigor
8. Identification and management of weeds in cereals and pulses
9. Fertilizer application (top dressing and foliar feeding of nutrients)
10. Agronomic characters of cereal crop v arieties
11. Agronomic characters of millet and pulse crop varieties
12. Biometric observations in student plots
13. Study of growth stages / morphological description of different crops
14. Study of yield attributes, harvesting and recording of yield
15. Visit to research centers to study the related crops and visit to post harvest processin units

REFERENCES:

1. Rajendra Prasad. 2006. Text book of field crops production. ICAR, New Delhi
2. Reddy, S.R. and Reddi Ramu. 5th edition. 2016. Agronomy of field crops. Kalyani publishers, Ludhiana
3. Gururaj hunsigi and Krishna, K.R. 2007. Scientific field crop production. Oxford & IBH Publishing Co. Pvt. LTD
4. De Datta, S.K.1981. Principles and practices of rice Production. John Wiley and Sons, New York