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# AGRON-222 Crop Production Technology-II (Rabi crops) 2(1+1)

### Theory

Origin, geographical distribution, economic importance, soil and climatic requirements, varieties, cultural practices and yield of *Rabi* crops; cereals –wheat and barley ;oilseeds-rapeseed, mustard and sunflower; pulses-chickpea, lentil, peas, sugar crops-sugarcane; Forage crops- lucerne and oat; package of practices of berseem ,safflower sugarbeet, opium poppy taramira, linseed; medicinal and aromatic crops-mentha, lemon grass and citronella,.

### Practical

Sowing of rabi crops and their identification, identification of weeds in *rabi* season crops, study of morphological characteristics of *rabi* crops, study of yield contributing characters of *rabi* season crops, yield and juice quality analysis of sugarcane, study of important agronomic experiments of *rabi* crops at experimental farms. Study of *rabi* forage experiments, oil extraction of medicinal crops, visit to research stations of related crops.

S.N.	Торіс	No. of lectures
1.	Wheat- Origin, geographical distribution, economic importance, soil and climatic requirements	1
2.	Wheat- varieties, cultural practices and yield	1
3.	Barley- Origin, geographical distribution, economic importance, soil and climatic requirements, varieties, cultural practices and yield	1
4.	Rapeseed and mustard- Origin, geographical distribution, economic importance, soil and climatic requirements, varieties, cultural practices and yield	1
5.	Sunflower- Origin, geographical distribution, economic importance, soil and climatic requirements, varieties, cultural practices and yield	
6.	Chickpea-Origin, geographical distribution, economic importance, soil and climatic requirements, varieties, cultural practices and yield	1
7.	Lentil- Origin, geographical distribution, economic importance, soil and climatic requirements, varieties, cultural practices and yield	1

#### **Lecture schedule: Theory**

8.	Peas- Origin, geographical distribution, economic importance, soil and	1
	climatic requirements, varieties, cultural practices and yield	
9.	Sugarcane- Origin, geographical distribution, economic importance, soil	1
	and climatic requirements	
10.	Sugarcane- varieties, cultural practices and yield	1
11.	Lucerne - Origin, geographical distribution, economic importance, soil and	1
	climatic requirements, varieties, cultural practices and yield	
12.	Oat - Origin, geographical distribution, economic importance, soil and	1
	climatic requirements, varieties, cultural practices and yield	
13.	Berseem ,Safflower,- package of practices	
14.	Sugarbeet, Opium poppy- package of practices	1
15.	Taramira, Linseed package of practices	1
16.	Medicinal and aromatic crops-mentha, lemon grass and citronella	1

## **Lecture schedule: Practical**

S.N.	Торіс	No. of lectures
1.	Identification of seeds, crops and other inputs of rabi season	1
2.	Identification of weeds in <i>rabi</i> season crops	1
3.	Seed rate and related numerical	1
4.	Sowing of wheat and planting of sugarcane.	1
5.	Application of herbicides and related numericals.	1
6.	Judging physiological maturity of various crops	1
7.	Fertilizer application in crops and related numerical	1
8.	Morphological difference in wheat, barley and oat, rapeseed and mustard,	1
	berseem and lucerne.	
9.	Judging sugarcane maturity based on brix ratio and related calculation	1
10.	Yield attributing characters, Theoretical yield and related numerical	1
11.	Crop harvesting and related numericals on harvest index.	1
12.	Working out seed index (test weight) and cost of cultivation.	1
13.	Oil extraction of medicinal crops	1
14.	Study of <i>rabi</i> forage experiments	1
15.	Study of important agronomic experiments of rabi crops at experimental	1
	farms	
16.	Visit to research stations of related crops	1

## **References:**

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- 2. Singh, S.S.1998. Crop Management Under Irrigated and Rainfed Conditions. Kalyani Publishers, New Delhi.
- 3. Panda, S.C.2012. Modern Concepts and Advance Principles in Crop Production. Agrobios (India), Jodhpur
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- 5. Rathore, P.S. 2000. Techniques and Management of Field Crop Production, Agrobios (India), Jodhpur.
- 6. Prasad, Rajendra. 2002. Text Book of Field Crops Production, ICAR, New Delhi.
- 7. ICAR. 2010. Handbook of Agriculture (6<sup>th</sup> edition), Indian Council of Agricultural Research, New Delhi.
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