

**ASSIGNMENT TOPICS**

<b>Course code-</b> ASPG3205		<b>Credit -</b> (1-1-0)
<b>Course Title -</b> Crop Improvement- II ( <i>Rabi crops</i> )		
<b>Lecture no.</b>	<b>Topic</b>	
1	Cereals –Wheat, oat and barley - Centers of origin, Distribution of species, wild relatives, Floral biology, Major breeding objectives and procedures including conventional and modern innovative approaches for development of hybrids and varieties for yield, abiotic and biotic stress tolerance and quality (physical, chemical, nutritional)	
2	Pulses –Chickpea- Centers of origin, Distribution of species, wild relatives, Floral biology, Major breeding objectives and procedures including conventional and modern innovative approaches for development of hybrids and varieties for yield, abiotic and biotic stress tolerance and quality (physical, chemical, nutritional)	
3	Oilseeds –Sunflower and Safflower- Centers of origin, Distribution of species, Wild relatives, Floral biology, Major breeding objectives and procedures including conventional and modern innovative approaches for development of hybrids and varieties for yield, abiotic and biotic stress tolerance and quality (physical, chemical, nutritional)	
4	Oilseeds –Linseed, Rapeseed and Mustard- Centers of origin, Distribution of species, wild relatives, Floral biology, Major breeding objectives and procedures including conventional and modern innovative approaches for development of hybrids and varieties for yield, abiotic and biotic stress tolerance and quality (physical, chemical, nutritional)	
5	Fodders –Napier, Bajra, Sorghum, Maize and Berseem- Centers of origin, Distribution of species, wild relatives, Floral biology, Major breeding objectives and procedures including conventional and modern innovative approaches for development of hybrids and varieties for yield, abiotic and biotic stress tolerance and quality (physical, chemical, nutritional)	
6	Cash -Sugarcane - Centers of origin, Distribution of species, wild relatives, Floral biology, Major breeding objectives and procedures including conventional and modern innovative approaches for development of hybrids and varieties for yield, abiotic and biotic stress tolerance and quality (physical, chemical, nutritional)	
7	Vegetable-Potato- Centers of origin, Distribution of species, wild relatives, Floral biology, Major breeding objectives and procedures including conventional and modern innovative approaches for development of hybrids and varieties for yield, abiotic and biotic stress tolerance and quality (physical, chemical, nutritional)	
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8	Vegetable-Field pea- Centers of origin, Distribution of species, wild relatives, Floral biology, Major breeding objectives and procedures including conventional and modern innovative approaches for development of hybrids and varieties for yield, abiotic and biotic stress tolerance and quality (physical, chemical, nutritional)
9	Horticultural crops-Mango, Aonla and Guava- Centers of origin, Distribution of species, wild relatives, Floral biology, Major breeding objectives and procedures including conventional and modern innovative approaches for development of hybrids and varieties for yield, abiotic and biotic stress tolerance and quality (physical, chemical, nutritional)
10	Plant genetic resources, its utilization and conservation
11	Adaptability and stability
12	Hybrid seed production technology in Rabi crops -Sunflower, Safflower, Castor, Rabi Sorghum
13	Ideotype concept and climate resilient crop varieties for future- Wheat, Rice, Maize, Sorghum and Cotton
14	Heritability- Definition; types-narrow and broad sense heritability; Components of genetic variation- Classification; definition and gene action; features of additive; dominance and epistatic variance
15	Handling of segregating population through Single seed descent method- concept of SSD method; its application; detailed procedure of SSD method; its merits; demerits and achievements