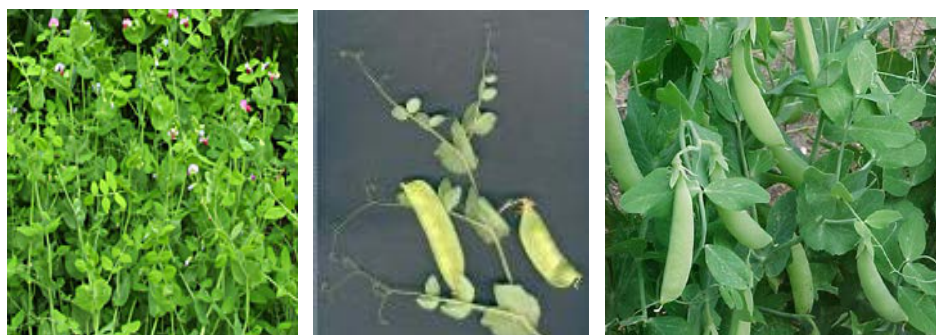


**LECTURE 8**  
**FIELDPEA**  
*Pisum sativum*

- *Matar* in Hindi
- Third important cool season crop next to chickpea and French bean
- Cultivated in about 6.51 million ha world wide with 10.95 million t annually
- Distributed in Asia, Africa, Europe, N.America, & Auastralia
- Usually cultivated for dry pods and variety of snacks



**World area production and productivity of Fieldpea**

Country	Million ha	Million t	T / ha
Europe	3.28	6.77	2.06
France	0.53	2.57	4.84
Russian Federation	1.18	1.00	0.85
Asia	1.58	1.87	1.19
China	0.70	1.15	1.64
India	0.62	0.56	0.91
N C America	0.72	1.40	1.96
Canada	0.63	1.26	2.00
Australia	0.31	0.38	1.24
South America	0.12	0.10	0.82
World	6.52	10.95	1.68

**Indian scene of Fieldpea**

State	Million ha	Million t	T / ha
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UP	0.41	0.54	1.32
MP	0.19	0.08	0.41
Assam	0.03	0.02	0.61
Rajasthan	0.01	0.02	2.19
All India	0.73	0.72	0.95

- **Origin**
  - Mediterranean region of Europe & West Asia
  - Before 3000 BC
- **Plant**
  - There are two varieties
    - Gardenpea : *P. sativum* var. hortense
    - Fieldpea : *P. sativum* var. arvense
  - Annual herbaceous well developed tap root system plant
- **Plant - gardenpea**
  - Flowers auxiliary, long peduncle, raceme with 1-2 flowers
  - Pods are variable length and breadth, curved/ straight
- **Plant - Fieldpea**
  - Flowers are purple or lavender colored
  - Short peduncle
  - Seeds smaller than garden pea, angular
- **Varieties**
  - Rachna, Pant Marter 5, HUP 2, DMR 11
  - Crop duration 110-140days
  - Seed weighs 160 – 240mg
- **Soil**
  - All types of soil
  - Poor to fertile
  - Well drained soil is more suitable since sensitive to salinity and alkalinity
- **Field preparation**
  - On heavy soils rough seed bed is suitable
  - Medium tillage is sufficient
- **Seed treatment**
  - For seed borne pests and diseases

- Rhizobium for nodulation
- **Season**
  - NW Plains – end of October
  - NE Plains – Second fortnight of November
    - Soil moisture availability decides the time
    - Delay in sowing end with terminal drought
- **Seed rate**
  - Depends up on the size of the seeds & spacing
  - 50-60 kg for small seeded and 80-90 kg for bold seeded
- **Method of sowing**
  - Broadcasting and planking
  - Drilling manually
  - Seed drill sowing
- **Depth of sowing**
  - Since all cool season pulses are hypogeal can be planted deep depending on the moisture
- **Nutrient Management**

Ecosystem	Planting time	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	S
Rainfed	Normal	20	40	0	20
Irrigated	Normal	40	40	20	20
	Late	40	40	20	20

- ✓ Crops are sown in residual soil moisture
- ✓ They may face terminal drought
- ✓ One or two supplemental irrigation is needed
- ✓ May be moisture conservation practices
- **Weed management**
  - ✓ All methods to be employed
  - ✓ Herbicides can also be as per kharif pulses
- **Cropping systems**
  - ✓ Cereal – legume is always good
  - ✓ They also under mixed community with winter cereals like wheat and barley
- **Harvest**
  - ✓ Over ripening leads to great loss of yield
  - ✓ Staggered harvesting is one way

- ✓ Cut entire plant and carry with moisture & then dry and thrash, clean
- ✓ Store the seeds at 8-10% moisture

### Multiple choice questions

1. Pea is commonly known as \_\_\_\_\_  
a. Arhar                      b. Channa                      **c. Matar**
2. Centre of origin of pea is \_\_\_\_\_  
a. **Mediterranean**      b. America                      c. W.bengal
3. The inflorescence of pea is called \_\_\_\_\_  
a. Ear                      b. panicle                      **c. Axillary raceme**
4. The recommended seed rate for pea is \_\_\_\_\_ kg/ha  
a. **60-80**                      b. 75-100                      c. 40-50
5. Pea crop needs \_\_\_\_\_  
**a. Cold & dry climate**      b. Hot & humid                      c. dry & hot
6. Pea should be treated with rhizobium inoculation of \_\_\_\_\_  
a. R. Japonicum                      **b. R. leguminosarum**      c. R. glycine
7. How much seed of Pea should be treated with one packet of *rhizobium* culture  
a. 5 kg                      **b. 10 kg**                      c. 15 kg
8. What is the ideal temperature for germination for pea  
a. 15-20<sup>0</sup>c                      **b. 22-25<sup>0</sup>c**                      c. 25-30<sup>0</sup>c
9. Maximum area under pea cultivation in India is in  
a. M.P                      **b. U.P**                      c. Bihar
10. Higher yield of pea could be achieved by  
**a. Use of higher dose of phosphate**  
b. Adequate amount of N  
c. No nitrogen application