PEA

B.N.: *Pisum sativum*

Family : Leguminoseae

Origin: Mediterranean region of Europe & West Asia

Economic Importance:

1. Field pea is a popular pulse crop of India.
2. Garden peas harvested in immature conditions to provide a delicious dish or to be canned or frozen for subsequent uses.
3. Field pea is generally grown for dry seeds which are used for a variety of snack preparation as well as dal.
4. Mature seeds are high nutrition a contain 22.5% protein, 62.1 % CHO, 1.8% fat, minerals like (calcium, Iron) & vitamins (Riboflavin, thiamine)
5. The field pea is also grown as Cover crop to reduce soil erosion, or as a green manure Crop.

Area and Distribution:

Important field pea growing countries are china, Russian fed. India, Ethiopia & China rank in 1^{st} in area & production followed by Russian fed. & In India Uttar Pradesh occupies highest area under field pea growing state.

Classification:

1) Garden Pea (*Pisum sativum var. hortence)*
   It is called as table pea; Green seeds are used for vegetable & canning purpose. Seeds are bold and flowers are whitish in colour.
2) Field Pea (*Pisum satisum var. arvence*)
   In this type the ripe, mature seeds are used as a pulse (dal). Flowers are coloured, Seeds are smaller than field pea.

Climatic requirement:

Pea is a winter season crop it requires cool growing season with moderate temperature is essential. Optimum temperature required for Germinations is 22^0C & 13 to18^0C for obtaining good growth and crop yield. High temperature is more injurious while, frost at flowering stage is harmful. High humidity is harmful to pea, is favor's incidence of disease

Soil requirement:

It can be grown in varieties of soils but well drained, sandy loam to clay loam with neutral in soil reaction is best for cultivation of pea. Pea is a highly sensitive to

water logging so waterlogged soils should be avoided for cultivation of pea. pH range between 6.0 to 7.5 and optimum is 6.5.

Field Preparation:

One ploughing followed by 2-3 harrowing and planking is necessary to prepare well pulverized weed free seed beds. Manure mixing should be done at last harrowing. Irrigation layout should be prepared according to irrigation facility. Powdery seed bed is not good for this crop.

Seed & sowing:

1. **Seed treatment:** a. seeds should be treated with Thiram or Carbendenzim @ 2.5 to 3 gm./kg of seeds. b. Seeds should be treated with Rhizobium and PSB @ 250 gm./10 kg of seeds.
2. **Time of sowing:** Field Pea- 2nd fortnight of Oct. Garden Pea- 1st fortnight at Nov.
3. **Method of sowing:** Line sowing is best as compared to broadcast method. Sowing is also done by putting seeds behind country plough.
4. **Seed rate & Spacing:** Early maturing Varieties require higher seed-rate & closer spacing. 100 to 125 kg/ha & 20 cm row to row. And for Late maturing varieties 75-80 kg/ha & 30 cm row to row.
5. **Depth:** 5 to 7 cm.

Manures & Fertilizers:

Apply 5-10 tons of FYM or Compost/ha at the time of land preparation, Pea is a being leguminous crop fulfills the major part of its nitrogen requirement through process of symbiotic nitrogen fixation so apply only 20-25 kg at nitrogen as a starter dose before formation of root nodules, 60-70 kg P_2O_5 & 30-40 kg K_2O per ha.

Water management:

Pea crop is mostly grown in un-irrigated areas because it can tolerate drought condition in some extent. Generally two irrigations are sufficient, apply first at 45 days & second if needed at pod filling stage. Pea is a sensitive to water logging condition so apply Light & uniform irrigation should be apply.

Weed control:

The field should be kept free from weeds up to 40-50 days after sowing, one hand weeding & one hoeing after three & six weeks of sowing. or use of fluchloralin (Basalin) @ 0.75 kg at in 800-1000 lit of water apply before sowing or Metribuzin @ 1.0 to 1.5 kg a.i. per ha. in 800-1000 lit of water as PE spray.

Pest & Diseases: Wilt & root rot, Powdery mildew, Rust are the important diseases while Pea stem fly, Leaf miner, Pea aphids and pod borer are the important insects observed on pea.

Harvesting & threshing:

Green peas i.e. Garden Pea should be harvested at green stage by picking the Pods. In case of field Peas should be harvested when they fully ripe & threshed after sufficient drying in sun.

Yield:

By adopting above mentioned improved technology, the yield of field pea obtained **20-25 quintals** grains per hectare.

Varieties:

Arkel, Bonneville, Khaperkheda, Arpana, Pant P-5, Rachana, Swati, Alankar, Harbhajan BR-122.