

## PEA

### *Pisum sativum* L.

#### Variety:

**T-163:** Selection from local pea of Bulandshahr (UP). Plant type is medium tall of 100 to 120 cm in height and double-podded variety. Maturity: 100-120 days. Yield: 10-11 q/ha. Other characters: Pods are 7-8 cm long and light green in colour, bear 5-6 seeds per pod. 1000 seed weight 150-200 g. It is susceptible to powdery mildew and Fusarium root rot.

**Boneville:** Plant type: Medium tall and double podded variety (used as vegetables) 100 to 120 cm in height. Maturity: 110-120 days Yield: 10-12 t/ha. Other characters: Seeds are wrinkled and light greenish to white in colour, pods are light green, straight and 8-9cm in length with 5-6 seeds per pod. It is susceptible to powdery mildew and fusarium root rot.

**HUP – 2:** T-163 x EC 33866. Plant type: Plants are tall, semi spreading and semi leafless, 130-140 cm in height. Maturity: 115-125 days. Yield: 13-15 q/ha. Other Characters: Bears 4-5 seeds per pod. Seeds are white, 1000 seeds weigh 200-250 g. It is resistant to powdery and downy mildew.

**KFPD 1:** Selection from material received from U.S.S.R. Plant type: Plants are dwarf, 50-60cm in height. Maturity: 100-105 days. Yield: 18-20 q/ha. Other characters: Bears 5-6 seeds per pod. Seeds are white and bold. 1000 seeds weigh 250-300 g. It is susceptible to powdery but escapes the disease because of earliness.

#### Soil type:

Peas can be grown on a variety of soils; well drained light soil is suitable.

#### Liming:

After soil test to bring pH around 6.0, requisite quantity of lime is to be applied at least 21 days before sowing.

#### Time of Sowing:

The optimum time of sowing is mid October

#### Field Preparation:

Peas generally require reasonably deeply worked soils. The field is to be ploughed 3 to 4 times to obtain a good tilth.

#### Seed rate:

1. T-163: 50 kg/ha or 7 kg/bigha
2. Boneville: 60 kg/ha or 8 kg/bigha
3. HUP – 2: 65 kg/ha or 8.5 kg/bigha

4. KFPD- 1: 77 kg/ha or 10 kg/bigha

In riverine tracts recommended seed rate 4-6 kg/bigha

**Relay cropping of pea:**

Pea seeds at 25-50% higher seed rate are to be broadcast in the standing crop of rice about 15-20 days before harvest, provided that the soil is in moist condition.

**Seed treatment:**

Seed treatment with Carboxin @ 2 g/kg of seed of seed is recommended

**Spacing:**

The seeds are to be sown in lines at spacing of 30 cm between rows and 10 cm between plants.

**Fertility Management:** Compost or FYM @ 4-5 t/ha or 6 q/bigha should be applied

Nutrient requirement		Name of fertilizer	Nutrient requirement (kg/ha) (Kg/bigha)	
<b>A. Without Rhizobium Culture</b>				
N	20	Urea	45	6
P <sub>2</sub> O <sub>5</sub>	45	SSP	285	40
K <sub>2</sub> O	0	MOP	0	0
<b>B. With Rhizobium Culture</b>				
N	10	Urea	22	3
P <sub>2</sub> O <sub>5</sub>	46	SSP	285	40
K <sub>2</sub> O	0	MOP	0	0

For Upper Brahmaputra Valley, Lower Brahmaputra Valley and North Bank Plain Zones, 10 kg K<sub>2</sub>O/ha is recommended in addition to normal dose of NPK. In North Bank Plains Zone 10 kg Borax/ha is also recommended.

Diammonium phosphate (DAP) @ 100 kg/ha or 13 kg/bigha should be applied in lieu of urea and SSP in non-inoculated crops. NPK may also be supplied in the form of mixed fertilizers like.

**Suitable Rhizobium Culture:** *Rhizobium leguminosarum* can be used

**Irrigation:**

If required and available, one irrigation at 40-50 days of sowing may be given.

**Plant Protection:**

**A. Insect Pests:**

1) **Pod borer:** Apply Lamda-cyhalothrin 5EC @ 20 g ai/ha.

2) **Leaf miner & Aphid:** Apply Thiamethoxam 25WG @ 26 g ai/ha. Emmamectin benzoate 5 SG @ 220 g/ha.

**B. Disease**

- 1) **Wilt:** Seed treatment with carboxin @ 2 g/kg of seed
- 2) **Rust:** Foliar spray of Tebuconazole or Propiconazole @ 2 g/ltr of water at 10 days interval starting from the appearance of disease
- 3) **Powdery mildew:** Foliar spray of Wettable sulphur @ 0.5 % (2.5 to 3.5 kg in 500-700 ml in 500-700 lit of water) at 10 days interval starting from the appearance of disease.

**Harvesting:**

Harvesting should be done when 75-80% of the pods turn yellow.

**Seed storage:**

For seed storage, seeds should be treated with 3 g/kg seed black pepper powder to protect the seeds from storage pests such as *Callosobruchus* spp. Before treatment the seeds are to be dried to 10-12% moisture content level by sun drying for 10-12 days.