

Cultivation of Pea

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Introduction

Botanical name: *Pisum sativum* – Garden pea

Family : Leguminaseae

Origin : Ethiopea

Chromosome number: $2n = 14$

Vitamins A and C, as well as digestible protein, are abundant in garden peas. Additionally, minerals including calcium, potassium, iron, and phosphorus are abundant in it. When eaten raw or cooked, fresh green peas make a fantastic vegetable or soup ingredient. However, most processed peas are canned, frozen, or dehydrated. A nutrient-dense food is pea straw. Methionine and cysteine are two amino acids that the pea protein contains, but in low amounts.

Varieties

Alderman: suitable for freezing.

Arkel: early wrinkled seeded variety introduced from England. It was tested by IARI.

Asauji: this was a selection from the material. Collected from Amritsar area made by IARI, New Delhi.

Bonneville: wrinkled seeded variety introduced from US

Early badger: dwarf early wrinkled seeded variety evolved at Wisconsin. Resistant to fusarial wilt.

Climate

Crops thrive in conditions that are somewhat colder. Up to a minimum temperature of 5 °C, seed germination occurs. Nonetheless, 22 °C is the ideal temperature for seed germination. Mature traits develop more quickly in warm conditions. Pea is not susceptible to cold but severe frost causes injury to freshly opened flowers and young pods. Pods grow best the regions where there is slow transition from cool to warm weather in spring.

Soil

Pea can be grown on many types of soils from light sandy to clay soils. Highly organic soils are unsuitable for pea as their moisture reserve leads to excess vegetative growth and poor pod formation. It is very sensitive to saline and alkaline conditions. Most favorable range of pH is between 6 to 7.5.

Time of Sowing

Pea is grown generally as a rabi crop. It is sown from the beginning of October to middle of November. In the hills of South India the crop is sown from March to May. In Darjeeling it is sown from June to August.

Seed Rate

If sowing are done in ridges and furrows method, seed rate adopted is 50 to 60 kg per ha. Seed rate also varies with growth habit of varieties for early varieties 100 to 120 kg per ha. Mid late varieties 80 to 90 kg per ha is the general recommendation. Seeds can be sown on flat beds or raised beds either by broadcasting or behind the plough. Seeds are also drilled through poras. (Tubes attached to deshi plough).

Depth of sowing: 5 to 7.5 cm

Spacing: 30 cm x 5 cm

Manuring

Well decomposed FYM is applied at a dosage of 8 to 10 t/ha at least 15 days before sowing. NPK should be applied in the ratio of 30: 50: 25 kg per ha. Foliar application of 0.1% ammonium molybdate is given to increase the number of root nodules, yield, TSS and number of grains per pod.

Irrigation

Crop requires 2 or 3 irrigations. First irrigation is given 40 DAS, second irrigation at bloom stage 60 DAS.

Method of irrigation – furrow method

Inter Culture

Manual or mechanical weed control has to be taken case of chemical weed control i.e. gaining dominance because it is cheaper and less time consuming. Various herbicides recommended are lasso (alachlor) at the rate of 0.75 kg a.i./ha, basalin at the rate 2 kg a.i./ha.

Harvesting

Generally 3 to 4 pickings are to be given in the season. For good quality of produce harvesting should be done either early in morning or late in the afternoon. Quality is ascertained by tenderometer or motovometer. Usually periodical pickings 6 to 8 day interval are taken. Care should be taken not to jerk the plants till they get injured. Harvesting is generally done by manual method employing female pickers is advisable compared to males. Green pods are packed in gunny bags or baskets.

Yield

- Early varieties 30 to 40 Q/ha.
- Late and Mid-season varieties 60 to 70 Q/ha.

Shelling percentage from 35 to 50 depending on variety, agro-climatic Conditions, management practices, grain yield about 15 to 20 Q per ha.

Storage

Fresh unshelled pea can be stored for 2 weeks at a temperature of 32° F. Relative humidity is 85 to 90%. Peas can also be stored in crushed ice for about 2 to 3 weeks. However pods will freeze at -100° C.