

Peas (*Pisum sativum* L.)

French: Pois; Spanish: Guisante; Italian: Piselli, German: Erbsen

Under Temperate Conditions

Harvested part: green seeds, used fresh or for processing, and mainly for freezing. Seed quality evaluation is based on resistance to pressure (tenderometer), water content (about 70 %) and sugar/starch ratio.

Plant density: 40-80/m² depending on plant habit and sowing time. Yields 2.5-10.0 t/ha depending on variety and degree of seed maturity.

Interval from sowing to harvest: depends on growing season and variety (dwarf or climbing), with a minimum of about 70 days (corresponding to 600-700 degree-hours above 4.4 °C). Because the plant needs temperatures in the range 10-20 °C, it can be sown in different seasons; with higher temperatures the time from sowing to harvest is shorter but the product quality is poorer.

The crop requires well-drained soils which allow a good symbiotic activity on the roots.

Preferred pH 6.0-7.5. Calcareous soils may cause plant chlorosis.

Nutrient demand/uptake/removal

Yield t/ha	Source	(kg/ha)				
		N	P ₂ O ₅	K ₂ O	MgO	CaO
7	Anstett	146	44	125	12	62
10	Penningsfeld	125	43	88	10	152

About 60 % of this uptake is in the seeds.

Fertilizer recommendations

In normal soil conditions, N requirements are assured by symbiotic activity. Application of fertilizer N (at about 30 kg/ha N) is advisable only during the initial stages and/or in adverse climatic or soil conditions.

As regards other nutrients, application of 60-100 kg/ha P₂O₅ and about 110 kg/ha K₂O is recommended at sowing. For topdressing, rates of about 50 kg/ha P₂O₅ and 100 kg/ha K₂O are advisable. Direct contact of fertilizer with the roots should be avoided.

Adequate P benefits the Rhizobium symbiosis.

Low K may cause lack of colour in the pods.

The crop is sensitive to Cu deficiency, so application of this element before sowing may be useful, but problems regarding Cu availability and other micronutrients are rather rare in soils well supplied with organic matter.