

# भारत सरकार

कृषि एवं किसान कल्याण मंत्रालय  
(कृषि, सहकारिता एवं किसान कल्याण विभाग)  
दलहन विकास निदेशालय  
छठवीं मंजिल, विन्ध्याचल भवन  
भोपाल-462004 (म.प्र.)



# Government of India

Ministry of Agriculture & Farmers Welfare,  
Deptt. of Agriculture, Cooperation & Farmers Welfare  
Directorate of Pulses Development  
6<sup>th</sup> Floor, Vindhyaachal Bhavan  
Bhopal - 462004 (M.P.)

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## FIELDPEA

Scientific Name:

**Pisum sativum (L.)**

Area : 8.74 Lakh ha

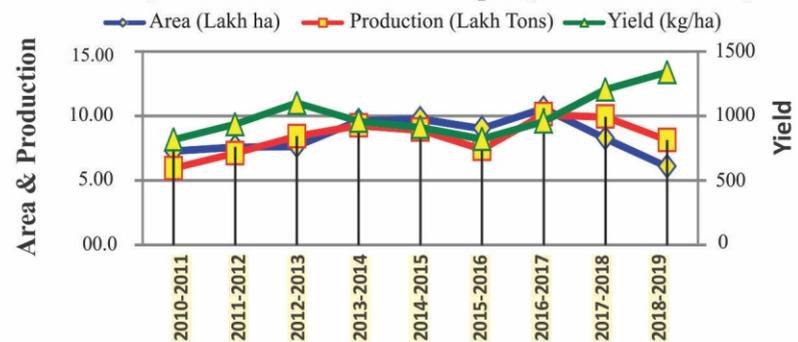
Production: 8.89 Lakh tonnes

Yield: 1018 kg/ha

(Avg. of 2014-15 to 2018-19)

Ever Highest Production –  
> 10 Lt. (2016-17)

## Area, Production & Yield of Fieldpea (2010-11 to 2018-19)



## Major States (Avg.: 2014-15 to 2018-19)

(Area in lakh ha; Production in lakh tonnes; Yield in kg/ha)

Major States	Area	% Contri	Prod.	% Contri	Yield
Uttar Pradesh	3.43	39	3.98	45	1161
Madhya Pradesh	3.30	38	2.72	31	825
Jharkhand	0.47	5	0.54	6	1141
Rajasthan	0.13	1	0.26	3	2061
Assam	0.27	3	0.25	3	922
<b>All Above</b>	<b>7.59</b>	<b>(87%)</b>	<b>7.75</b>	<b>(87%)</b>	<b>1020</b>
<b>All India</b>	<b>8.74</b>		<b>8.89</b>		<b>1018</b>

## Major Districts (2018-19)

Major states	Major Districts
Uttar Pradesh (75%)	Jalaun, Jhansi, Lalitpur, Mahoba, Hamirpur, Kashganj, Azamgarh, Sultanpur, Jaunpur, Amethi, Mirzapur, Pratapgarh
Madhya Pradesh (71%)	Jabalpur, Mandla, Datia, Narsinghpur, Dindori, Satna, Seoni, Vidisha, Raisen, Sidhi, Rajgarh, Chattarpur, Gwalior
Jharkhand (70%)	Ranchi, Gumla, E.Singhbhum, Chatra, Simdega, Garhwa, Lohardaga, Palamu, W.Singhbhum, Saraikela, Hazaribagh
Rajasthan (90%)	Jaipur, Nagaur, Bundi, Ajmer, Alwar, Sikar, Hanumangarh
Assam (51%)	Lakhimpur, Sonitpur, Jorhat, Nalbari, Darrang, Nagaon, Barpeta

## Major Countries (Avg.: 2014 to 2018)

(Area in lakh ha; Production in lakh tonnes; Yield in kg/ha)

Country	Area	% Contri	Prod.	% Contri	Yield
Russian Fed.	11.08	15	22.01	16	1987
Canada	15.70	21	39.08	29	2489
China	10.31	14	20.46	15	1985
USA	8.20	11	12.48	9	1521
India	5.53	7	8.86	6	1603
<b>All Above</b>	<b>50.82</b>	<b>(68%)</b>	<b>102.89</b>	<b>(75%)</b>	<b>2025</b>
<b>World</b>	<b>74.40</b>		<b>136.33</b>		

## Economic Importance:

-Pea is the third most important pulse crop at global level, after dry bean and chickpea and third most popular rabi pulse of India after chickpea and lentil.

-It provides a variety of vegetarian diet hence liked throughout the world.

-The mature seeds are used as whole or split into dal and put to use in various ways for human consumption.

-Beside vegetable purposes, it is also grown as a forage crop for cattle and cover crop to prevent soil erosion but mainly for matured seed for human consumption.

## New Varieties:

Year	Varieties	Year	Varieties
2010	Aman (IPF 5-19), Gomati (TRCP-8)	2014	IPFD 10-12, HFP 715
2011	IPF 4-9, VL Matar 47 (VL47), Dantiwada Pea-1 (SKNP 04-09)	2015	Punjab-89
2012	HFP-529	2018	Pant Pea 243, IPFD 12-2, IPFD 2014-2



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सत्यमेव जयते

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**Sowing Season :** Rabi

**Sowing Time :** 15<sup>th</sup> October to 15<sup>th</sup> November

**Sowing Method :** Line sowing with the help of seed drill or opening the furrows at 30-40 cm between the rows.

**Spacing : Tall Varieties** -30 X 45 cm; **Dwarf varieties** - 22 X 10 cm.

**Seed Depth :** 4-5 cm

**Seed Rate : Tall varieties** -70-80 kg./ha; **Dwarf varieties** - 100 kg./ha.

**Plant Nutrient Management:** Apply 2.5-5 tons biogas slurry/compost per ha, apply 60 kg P<sub>2</sub>O<sub>5</sub> per ha. and 30 kg. Potash as basal dose in furrow bands based on soil test. In acid soils, rhizobium inoculated seed should be treated with 1.5 kg of finally powdered lime CaCO<sub>3</sub>, 300 mesh)

**Irrigation :** 1<sup>st</sup> - Branching (40-45 DAS); 2<sup>nd</sup> - Pod filling (80-85 DAS)

**Cropping System:**

**Rotation** – Maize –Pea; Paddy–Pea–Wheat–(being popular in Northern India); Cotton – Pea; Jowar–Pea; and Bajra–Pea.

**Intercropping** – It can be sown as intercrop with autumn sugarcane as two rows of pea at 30 cm row spacing in the centre of two sugarcane rows at 90 cm apart.

**Weed Management:**

-One weeding 30-45 DAS, depending upon the field conditions.

-Pre-emergence : Pendimethalin (STOMP) 30 EC @ 1 kg a.i./ha can also be used to control the weeds up to 50 days.

-Post Emergence- MCPB @ 1.2 kg a.i./ha in 500-600 liters of water after 6 weeks of sowing, is effective in sandy loam soils.

**Seed Replacement Rate :**

Crop	2011	2012	2013	2014	2015	2016
Fieldpea	21.76	28.48	36.12	34.09	29.97	30.23

**Harvesting :**

Leaves begin to fall, stem and pod turn brown or straw in brown colour and seeds are hard and rattle with 15% moisture inside them.

**Threshing and Storage:**

-Sun dried for 3-4 days to reduce their moisture up to 9-10% to be safely stored in appropriate bins.

-To avoid Bruchids and other storage pests, use fumigate before onset of monsoon and again after the monsoon with ALP @ 1-2 tablets per tonne.

-The small quantity of the produce can also be protected by mixing inert material (soft stone, lime, ash, etc) or by smearing edible/non-edible vegetable oils or by mixing plant products like neem leaf powder at the rate of 1-2% w/w basis.

**Soil Type:** A well-drained loamy soils, free from excessive soluble salts with neutral pH range of 6.5 to 7.5 is suitable for successful cultivation of the crop.

**Climate:** Fieldpea requires cold temperature during vegetative growth time. Growth is optimum at 13-18°C. Frost can damage the plants during flowering stage. High humidity associated with cloudy weather results into spread of fungal diseases like damping-off and powdery mildews.

*Application of fertilizer should be based on Soil Test Report.*

Major Diseases	Management
Rust	i) After harvest, the affected plants trash should be burnt. ii) Spray the crop with Mancozeb 75 WP at the rate of 2 kg. per hectare in 1000 lit. of water.;iii)Two to three sprays are sufficient.
Wilt	i) 3 yr. crop rotation; ii) Seed treat with Benomyl @ 3 g/kg of seed; iii) Drench the infected area with Carbendazim (0.5%); iv) Avoid early sowing in badly infested areas.
Powdery Mildew	i) Spraying with Karathon (0.05%) or wettable sulphur @ 3 gm/litre of water and repeat after 10-15 days, if necessary; ii) Adopt resistant var. Pant Pea-5, Malviya-15, JP-885, HUP-2 etc.; iii) Avoid late planting; iv) After harvest collect the plants left in the field and burn them.

Major Insect Pest	Management
Pea Stem fly	i) Mix 30 kg. Carbofuran (Furadon) 3 % granules or 10 kg. Phorate (Thimet) 10% granules in the soils before sowing the crop.; ii) Avoid early planting.; iii) Apply 7.5 kg of phorate 10G or 25 kg of carbofuran 3 G per ha in furrows at the time of sowing.
Leaf Miner	i) Spray 250 ml. of Phosmidon 85 SL (Dimecron) or 1 lit. of Oxydemeton methyl (Metasystox) 20 E.C. in 1000 lit. of water per hectare when the attack begins and repeat at 15 days intervals.
Pea Aphids	i) Spray oxydemeton methyl (Metasystox) 25 E.C. in 1000 lit. of water per hectare; Repeat the spray after 10-12 days (if required).

**Economics of Crop Cultivation:**

Parameters	Rabi
Yield (Normal 2014-15 to 2018-19)	10.18 qtls/ha

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