

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**

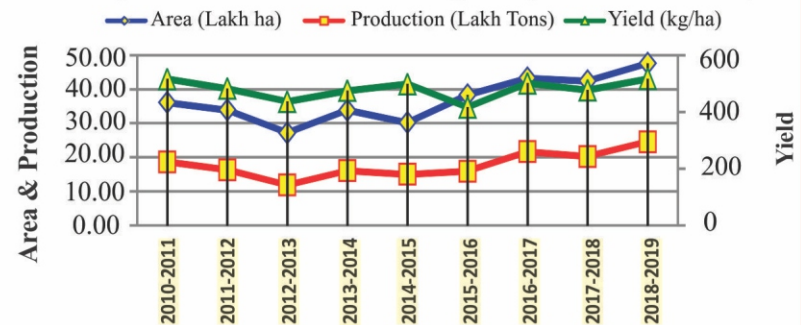
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**MUNGBEAN**

Scientific Name:
Vigna radiate (L.)

Area : 40.34 Lakh ha
Production: 19.48 Lakh tonnes
Yield: 483 kg/ha
(Avg. of 2014-15 to 2018-19)
**Ever Highest Production –
> 24 Lt. (2018-19)**

Area, Production & Yield of Mungbean (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
Rajasthan	16.16	40	7.66	39	474
Madhya Pradesh	3.54	9	2.19	11	621
Maharashtra	4.08	10	1.55	8	380
Bihar	1.71	4	1.12	6	652
Andhra Pradesh	1.55	4	1.04	5	670
All Above	27.04	(67%)	13.57	(70%)	502
All India	40.34		19.48		483

Economic Importance:

Excellent source of high quality protein (25%) having high digestibility. Good source of Riboflavin, Thiamine and Vitamin C (Ascorbic acid). Fix the atmospheric nitrogen (30-40 kg N/ha). Preventing soil erosion. Being a short duration crop, it fits well in many intensive crop rotations.

Major Districts (2018-19)**Except Bihar- (2017-18)**

Major States	Major Districts
Rajasthan (90%)	Nagaur, Jodhpur, Pali, Churu, Ajmer, Jaipur, Tonk, Ganganagar, Jhunjhunu
Madhya Pradesh (65%)	Rewa, Jabalpur, Dhar, Damoh, Bhind, Raisen, Aagar, Hoshangabad, Barwani, Satna, Vidisha, Sidhi, Shivpuri
Maharashtra (70%)	Akola, Jalgaon, Nanded, Ahmednagar, Parbhani, Buldhana, Amravati, Osmanabad, Satara, Nasik, Jalna
Bihar (81%)	Supaul, Madhepura, Muzaffarpur, Madhubani, Saharsa, Vaishali, Darbhanga, Araria, Samastipur, Nawada,
Andhra Pradesh (95%)	Guntur, Srikakulam, West & East Godavari, Krishna, Vizianagaram, SPSR Nellore, Ananthapuram

Crop Products:

- Consumed as whole grains, sprouted form as well as dal in a variety of ways.
- Savoury products, Sweets, Khichdi, Weaning food, Sprouts.
- The husk of the seed can be soaked in water and used as cattle feed.
- Mungbean is also used as green manure crop.

New Varieties:

Year	Varieties	Year	Varieties
2009	IPM 02-3, PKV AKM 4, Pusa 0672, MGG 347, MGG-207, VBN (Gg) 3	2016	Pusa 1371, IPM 410-3 (Shikha), IPM 205-7 (Virat), SML 1115, MH 318, Utkarsh (KM 11-584), Pant Mung 8 (PM 09-6), Yadadri (WGG 42) Sri Rama (MGG 351), MSJ 118 (Keshvanand mung 2), RMG 975, ML 2056, GBM-1
2010	IPM 02-14, Basanti, Pairymung, KM 2195, TM-2000-2, Pairymung SML 832	2018	GM 6, KM 2328, Pusa 1431, SGC 16 (Rupohi), GAM 5, Gujarat Mung-7, Varsha (IPM 2K 14-9), Kanika (IPM 302-2), Tripura Mung 1 (TRCM 131)
2013	Shalimar Moong-2, CO (Gg) 8	2019	VBN 4 (VGG 10-008), Pant M 9 (PM 09-11), SML 1827
2014	DGGV-2, MH 421, SGC 16, BGS 9 (Somnath)	2020	IPM 512-1 (Soorya), MH 1142, KM 2342 (Azad Mung 1), IPM 312-20 (Vashudha), IPM 409-4 (Heera)

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सत्यमेव जयते

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Sowing Season: Kharif, Rabi and Spring/Summer (Zaid)
Sowing Time : **Kharif :** Last week of June to mid or 1st week of July.
Rabi: 1st – 2nd week of October
Spring/Summer- 15th Feb. to 1st week of March
Sowing Method : **Manually :** Line Sowing , Broadcasting
Mechanical : Raised bed with the help of seed drill.
Spacing : **Kharif:** 45 cm X 10 cm ; **Rabi/Summer:** 30 cm X 10 cm.
Seeds Depth: 5-7 cm.
Seed Rate : **Kharif:** 15-20 kg/ha, **Rabi/Summer:** 25-30 kg/ha.
Seed Treatment: Treat the seed 2 days before sowing.
Disease: Hexaconazole @ 2 ml/kg seed.
Insect-Pest: Imidacloprid 70 WS @ 7g/ kg .
Culture & Micronutrient : Rhizobium and PSB culture (5 gm/kg seed)

Soil Type: It is successfully grown sandy loam to black cotton soils having good drainage capacity. Mungbean is very sensitive to water logging conditions.

Climate: Crop needs high temperature, less humidity and moderate rainfall of about 60-80 cm. Water logging is fatal for root development and nitrogen fixation during early vegetative stage.

Plant Nutrient Management: 15-20 kg N,30-40 kg P₂O₅, 20 kg-S/ha at sowing time.

Boron: Apply 5 kg borax/ha/ 3.6 kg di-sodium tetra borate penta hydrate);
Manganese: Seed soaking with 2% manganese sulphate or foliar spray of 1% manganese sulphate.

Weed Management : i) 1st- 20-25 DAS, 2nd – 45 DAS; ii) Pendimethalin @ 700 gm. a.i. per ha in 800 -1000 lit. of water a pre-planting spray; iii) Post-emergence Emejathoper (Persute)100 gm/ha spray 20 DAS to control grass family and broad leaf weeds..

Application of fertilizer should be based on Soil Test Report.

Irrigation : **Kharif-** One irrigation at the time of Pod formation stage.
Spring/Summer- 1st (20-25 DAS) before flowering,
2nd (40-45 DAS) at pod filling stage.

Cropping System:

Rotation: i) Rice-Wheat-Mung (summer); ii) Maize + Mung-Wheat-Mung; iii) Maize (early) Potato (early) wheat-Mung; iv) Sugarcane + Mung (summer 1:2); v) Cotton + Mung (1:3)

Intercropping

Kharif: Maize, Pearl Millet, Pigeonpea, Cotton

Spring/Summer: Sugarcane (2:1); Sunflower (2:6)

Seed Replacement rate :

Crop	2011	2012	2013	2014	2015	2016
Mungbean	30.29	32.41	49.63	23.55	30.72	33.55

Major Diseases	Management
Yellow Mosaic Virus	i) Diseased plants should be Rogued out; ii) Grow resistant varieties- Narendra Mung1, Pant Mung 3, PDM 139 (Samrat), PDM 11, MUM 2 ,ML 337; iii) Spray with Oxydemeton methyl 25 EC @ 2.0 ml/lit. at 10-15 days intervals if required.
Leaf Curl	i) Treat seeds -Imidacloprid 70 WS@ 5 ml/kg.; ii) Rogue out the infected plants; iii) Grow res. var -D-3-9, K 12, ML 26, RI 59, T-44.
Anthracnose	Hot water seed treat. at 58°C for 15 min. for seed-born infection; ii) Spray the crop with 0.2% Zineb 80% WP @ 2 g/l or Ziram 80% WP @ 2 gm/lit. with first appearance of symptoms on the crop and repeat after 15 days (if necessary).

Harvesting :

When pods are turned into black colour, two to three pickings are done. Pickings should be carried out only during morning hours. Threshing should be done in threshing yard and seeds are separated and cleaned.

Economics of Crop cultivation:

Parameters	Rabi
Yield (Normal 2014-15 to 2018-19)	4.83 qtls/ha
Gross income (at MSP 2020-21)	Rs. 34757/ha
Cost of Cultivation (CoC A ₂ +FL)*	Rs.19375 /ha
Cost of Production	Rs. 4011/qtls

*CoC -Cost of Cultivation ; A₂ -Actual paid out cost;FL- Imputed value of Family labour.

Major Insect Pest	Management
White fly	i) Install Sticky trap ii) Intercrop with Cotton; iii) Grow maize, sorghum or pearl millet as a barrier crop to minimize the incidence of whiteflies.
Stem fly & Bihar Hairy Caterpillar	i) Crop rotation, earthing up, growing trap crop, destroying alternative hosts; ii) Spray either Imidacloprid 17.8 SL @ 0.2 ml/lit. or Thiomethoxam 25 WG @ 0.3gm/lit. at 15 days after sowing.

Minimum Support Price:

(Rs. per qtls)

Crop	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Mungbean	4850*	5225^	5575@	6975	7050	7196

*Included bonus of Rs. 200 per qtl ; ^Included bonus of Rs.425 per qtls; @Included bonus of Rs. 200 per qtls.

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