

# भारत सरकार

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



सत्यमेव जयते

# 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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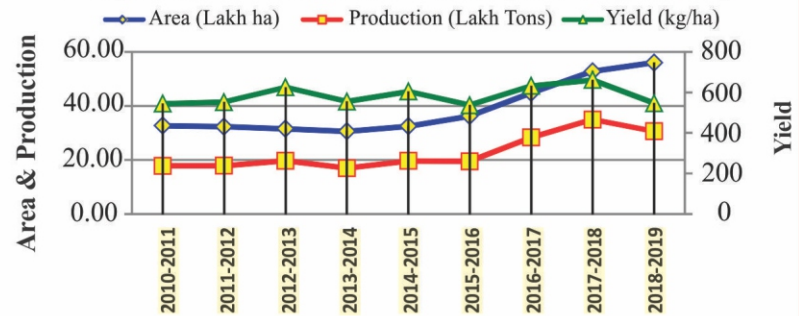


## URDBEAN

Scientific Name:  
**Vigna Mungo (L.)**

Area : 44.46 Lakh ha  
Production: 26.58 Lakh tonnes  
Yield: 598 kg/ha  
(Avg. of 2014-15 to 2018-19)  
**Ever Highest Production –  
35 Lt. (2017-18)**

### Area, Production & Yield of Urdbean (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
Madhya Pradesh	14.65	33	8.62	32	589
Andhra Pradesh	3.98	9	3.44	13	863
Uttar Pradesh	6.01	14	3.08	12	512
Tamil Nadu	4.13	9	2.95	11	713
Rajasthan	5.13	12	2.86	11	558
<b>All Above</b>	<b>33.91</b>	<b>(76%)</b>	<b>20.95</b>	<b>(79%)</b>	<b>618</b>
<b>All India</b>	<b>44.46</b>		<b>26.58</b>		<b>598</b>

### Major Districts (2018-19) Except Tamil Nadu (2017-18)

Major States	Major Districts
Madhya Pradesh (80%)	Sagar, Chattarpur, Damoh, Tikamgarh, Panna, Satna, Ashoknagar, Niwadi, Jabalpur, Shivpuri
Andhra Pradesh (96%)	Krishna, Guntur, Srikakulam, Kurnool, East 7 West Godavari, Prakasam, Vizianagaram
Uttar Pradesh (72%)	Lalitpur, Budaun, Unnao, Mahoba, Hardoi, Kanpur City, Jhansi, Hamirpur, Jaunpur, Sitapur
Tamil Nadu (80%)	Villupuram, Cuddalore, Thanjavur, Thoothukudi, Thiruvarur, Nagapattinam, Tirunelveli, Thiruvannamalai
Rajasthan (90%)	Tonk, Kota, Baran, Sawai Madhopur, Bhilwara, Bundi, Ajmer, Jhalawar

### Economic Importance:

- Black gram is one of the important pulse crop grown in all the 3 seasons such as kharif, rabi and summer and throughout India.
- Being deep rooted crop, helps in binding soil particles and thus prevents soil erosion.
- It fixes atmospheric N (42 kg/ha/year) to the soil through symbiosis and improves fertility of soil.

### Crop Products:

- It is consumed in the form of dal (whole/ split/ husked/ unhusked/ parched).
- It is the chief constituent of papad and also of spiced balls – make a curry.
- Savoury Products, Sweets, Idli, Vada, Dosa.
- Used as a nutritive fodder specially for milch cattle, Green manuring crop.
- Urd grain contains 24% protein, 60% Carbohydrate, 1.3% fat and is the richest source of phosphoric acid among pulses (5-6% richer than others)

### New Varieties:

Year	Varieties	Year	Varieties
2009	NUL7, LBG 752, CO 6/COBG 653	2016	LBG 787, Indira Urd Pratham, Tirupati Minumu-1 (TBG 104), PDKV Blackgold (AKU 10-1)
2010	LU 391, KUG 479	2017	VBN 8, ADT 6, KKM-1
2011	VBG 04-008, TU 40, VBN 6	2018	Mulundra Urd 2 (KPU 405), Tripura Maskalai (TRC U 99-2)
2012	UH-1	2019	VBN 10 (VBG 12-034), VBN 9 (VBG 12-111), Pant Urd 10 (PU 10-23), Pant U 7 (PU 10-16), Pant U 8 (PU 11-14), Pant U 9 (PU 11-25), IPU 13-1, IPU 10-26, IPU 11-02, GBG 1 (Ghantashal Minumu-1)
2014	DBGV-5, SBC 40, MDU1	2020	VBN 10 (VBG 12-034), VBN 9 (VBG 12-111), KPU 12-1735 (Kota Urd 4), VBN 11 (VBG 12-062), OBG 33 (Shashi), KPU 524-65 (Kota Urd 3)

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**Sowing Season:** Kharif, Rabi and Spring/Summer (Zaid)  
**Sowing Time :** **Kharif :** Last week of June to mid or 1<sup>st</sup> week of July.  
**Rabi:** 2<sup>nd</sup> fortnight of Oct. to 2<sup>nd</sup> fortnight of November  
**Spring/Summer-** 15<sup>th</sup> Feb. to 1<sup>st</sup> 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 15 cm  
**Seed Depth :** 5-8 cm  
**Seed Rate :** **Kharif:** 12-15 kg/ha, **Rabi:** 18-20 kg/ha. (Upland);  
40 kg / ha (Rice Fallow); **Summer :** 30-35 kg/ha.  
**Seed Treatment:** Treat the seed 2 days before sowing.  
**Disease:** Carbendazim @2.5 gm./kg.  
**Culture & Micronutrient :** Rhizobium culture (5 gm/kg seed)

**Soil Type:** Soils to heavy cotton soils .The most ideal soil is a well drained loam with pH of 4.7 to 7.5. Black gram cannot be grown on alkaline and saline soils.

**Climate:** Crop needs high temperature, less humidity and moderate rainfall of about 60-75 cm. Heavy rains during flowering are harmful.

**Plant Nutrient Management:** 15-20 kg N,40-50 kg P<sub>2</sub>O<sub>5</sub>, 30-40 kg K<sub>2</sub>O at sowing time.

**Sulphur :** 20 kg/ha; **Manganese:** Seed soaking with 2% manganese sulphate or foliar spray of 1% manganese sulphate.; **Molybdenum:** 0.5 kg Sodium Molybdate/ ha as basal or two foliar sprays of 0.1% or seed treatment is recommended.

**Weed Management :** i) 1<sup>st</sup>- 20-25 DAS, 2<sup>nd</sup> – 45 DAS; ii) Pendimethalin @ 700 gm. a.i. per ha in 800 -1000 lit. of water a pre-planting spray;

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

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

### Cropping System:

**Rotation:** i) Maize-Potato-Urd; ii) Maize-Toria-Urd; iii) Rice-Wheat-Urdbean; iv) Urdbean-mustard-mungbean/urd; v) Potato-wheat-urd

**Intercropping:** Kharif – Urd + Pigeonpea (1:1).

Spring – Urd+ Sugarcane (2:1), Urd+ Sunflower (2:6)

### Seed Replacement Rate :

Crop	2011	2012	2013	2014	2015	2016
Urdbean	34.41	33.96	49.55	30.27	33.72	37.97

### Harvesting :

Urd should be harvested when 70-80 % pods matured & most of the pods turn black. The clean seeds should be sun dried for 3-4 days to bring their moisture content at 8-10% to safely store in appropriate bins.

### Economics of Crop Cultivation:

Parameters	Rabi
Yield (Normal 2014-15 to 2018-19)	5.98 qtls/ha
Gross income (at MSP 2020-21)	Rs. 35880/ha
Cost of Cultivation (CoC A <sub>2</sub> +FL)*	Rs. 21033/ha
Cost of Production	Rs. 3517/qtls

\*CoC – Cost of Cultivation ; A<sub>2</sub>-Actual paid out cost ; FL- Imputed value of Family labour

### Insect-Pest & Disease Management:

Major Diseases	Management
Yellow Mosaic Virus	i) Spray – Oxydemeton methyl 25 EC @ 2 ml/lit. at 10-15 days intervals. ii) Diseased plants should be rogued out; iii) Grow resistant var.-IPU94-1 (Uttara), Shekhar 3, Ujala (OBJ 17),VBN (Bg) 7, Pratap Urd 1.
Powdery Mildew	i) Spray -NSKE @ 50 g/liter of water or neem oil 3000 ppm @ 20 ml/lit; ii) Grow resistant var.- LBG 648, Prabha, IPU 02-43, AKU 15 .; iii) Adopt clean cultivation, crop rotation.
LeafBlight	Basal application-zinc sulphate @ 25 kg/ha or neem cake @ 150 kg/ha or soil application P. fluorescens or T. viride @ 2.5 kg/ha + 50 kg of well decomposed FYM at the time of sowing.

Major Insect Pest	Management
Aphids	i) Spray with 5% crude neem extract or 2% neem oil 3000 ppm; ii) Spray with Imidacloprid 17.8 SL @ 0.2 ml/liter of water; iii) Conserve Coccinellid beetles, their grubs and Chrysoperla.
Tobacco Caterpillar	i) Foliar Spray of Novaluron 10 EC @ 0.75 ml/lit., chitin synthesis inhibitor against eggs of S. Litura; ii) Spray extract of custard apple as feeding deterrent against the pest.

### Minimum Support Price:

(Rs. per qtls)

Crop	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Urdbean	4625*	5000^	5400@	5600	5700	6000

\*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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