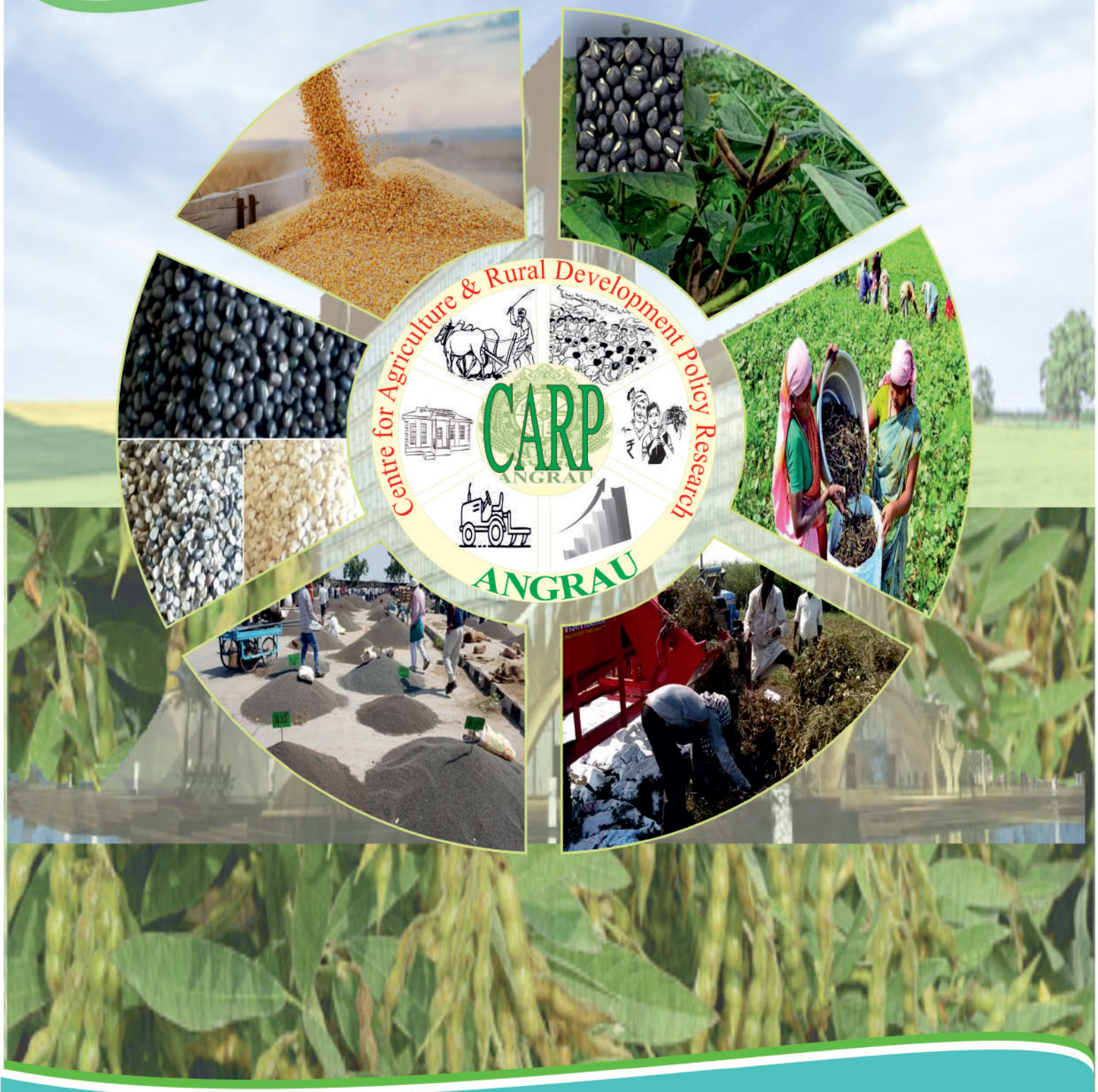
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Crop Outlook Reports of Andhra Pradesh

BLACKGRAM

(June, 2023 to May, 2024)



Centre for Agriculture & Rural Development Policy Research (CARP)

ANGRAU, Lam, Guntur - 522 034.

ANGRAU - Crop Outlook Reports of Andhra Pradesh
Black gram– June to May, 2023-24

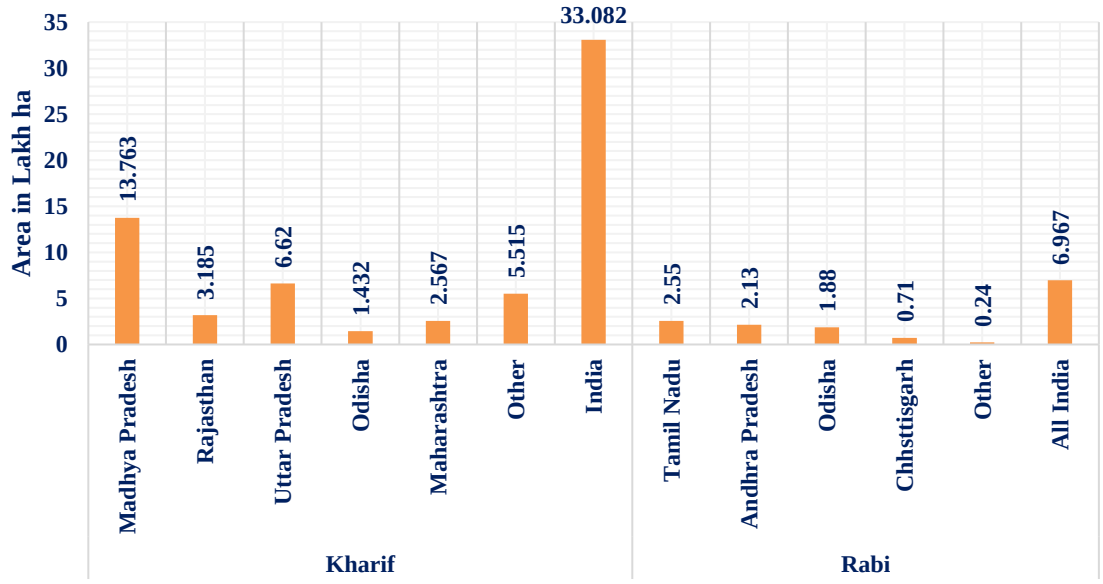
Factsheet of Black gram

- India is the world's largest producer of Black gram, contributing 70% of the global production, followed by Myanmar and Pakistan.
- India produces approximately 2 million tons of Black gram from around 4 million hectares, with an average yield of 598 kg/ha during 2023-24.
- In India, 80% of Black gram cultivation occurs during the Kharif season, and nearly 20% during the Rabi season.
- Black gram accounts for approximately 10% of the total pulse production in India, with more than 90% of its production coming from ten states: Maharashtra, Karnataka, Madhya Pradesh, Gujarat, Uttar Pradesh, Jharkhand, Telangana, Odisha, Andhra Pradesh, and Tamil Nadu.
- Notable Black gram varieties cultivated across India include Pant U-19, TAU-1, Sujata, Krishna, Azad-1, and Pant U-30, while in Andhra Pradesh, prominent varieties are PU-31, LBG-752, TBG-104, LBG-645, IPU-2-43, and GBG-1.
- In Andhra Pradesh, Black gram is cultivated during the Rabi season due to the adoption of early maturing (75–90 days) varieties in rice fallows, as well as its ability to fix atmospheric nitrogen and relative drought tolerance.
- In Myanmar and Thailand, Black gram is predominantly grown for export to Indian and Japanese markets. India also imports Black gram from countries such as Myanmar, Kenya, Mozambique, Australia, and Tanzania to meet domestic demand.
- The major Black gram growing districts in Andhra Pradesh- Krishna, Prakasam, Bapatla, and Nandyal account for 63% of the cultivation area and contribute 73% of the state's total Black gram production.
- In the Andhra Pradesh, the cost of cultivating Black gram is Rs. 62488 per hectare, with labor costs making up 39.25% of the total expenditure.

Black gram is scientifically known as *Phasiolus mungo* and commonly called as Urad in India. India is its primary origin and is mainly cultivated in Asian countries including Pakistan, Myanmar and parts of Southern Asia. India currently represents the largest producer of Black gram accounting for more than 70% of the global production. According to the 2nd advance estimates 2023-24 of Government of India, Black gram crop is estimated at 20.55 lakh tonnes as compared to 26.31 lakh tonnes in 2022-23 (agriwelfare.gov.in). Black gram area accounts for about 29 percent of India's total pulse acreage and contributes 10.25 percent of total pulse production.

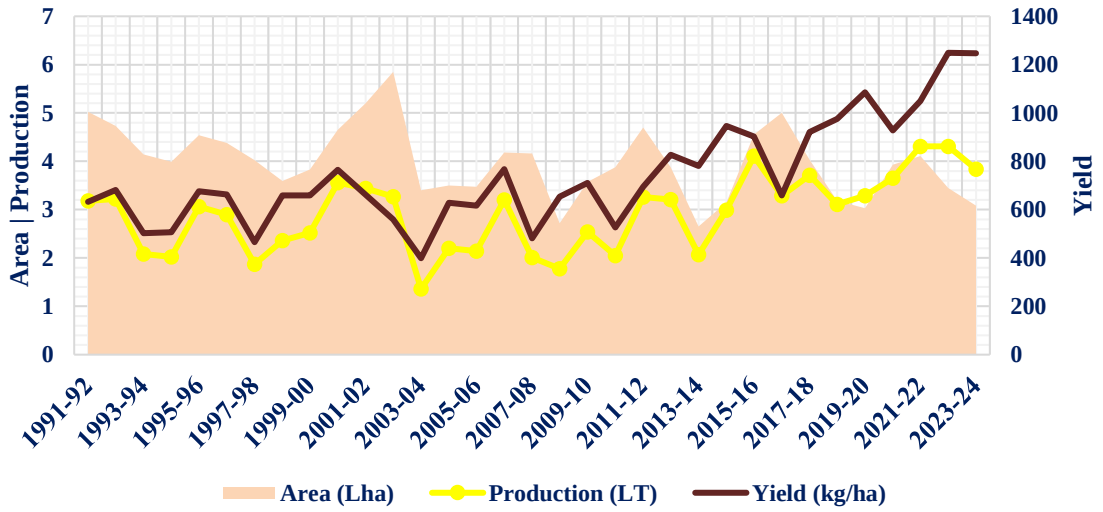
In India, during the kharif season of 2023 the sown area for Black gram was 33.08 lakh hectares, which is fifty thousand hectares less compared to the previous year. The major states where Black gram is grown during kharif are Madhya Pradesh (41.6 %), Uttar Pradesh (20 %), and Rajasthan (3.18 %).

Figure 1. Major Black gram growing states in India during 2023-24



During the rabi season of 2023-24 the Black gram area was down by 9.83% at 6.96 lakh hectares, as opposed to 7.74 lakh hectares last year. The major Black gram-growing states during rabi are Tamil Nadu with 2.55 lakh hectares (36.6 percent), Andhra Pradesh with 2.13 lakh hectares (30.6 percent), and Odisha with 1.88 lakh hectares (27 percent). In Black gram production, Madhya Pradesh is leading with 4.73 lakh tonnes during 2023-24, followed by Uttar Pradesh (4.42 lakh tonnes), Andhra Pradesh (3.33 lakh tonnes), Rajasthan (1.73 lakh tonnes), Tamil Nadu (1.71 lakh tonnes), and Maharashtra (1.05 lakh tonnes) (agriwelfare.gov.in).

Figure 2 Black gram Area, Production and Yield Statistics in Andhra Pradesh



In the last three decades, the Black gram cultivation area in Andhra Pradesh decreased by 38.5 percent with a Compound Growth Annual Rate (CGAR) of -0.81 (figure 2). However, the overall production increased by 20.7 percent (CGAR @ 1.32) due to a significant increase in productivity by 97 percent (CGAR @ 2.15).

Table 1. Inter-District Comparison of Black gram production in Andhra Pradesh (2022-23)

District	Area ('000 hectares)			Rank	Production ('000 tonnes)			Rank	Yield (Kg/ha)
	Kharif	Rabi	Total		Kharif	Rabi	Total		
Krishna	1	131	132	1	2	215	217	1	1642
NTR	2	N	2	17	2	N	2	16	801
Guntur	3	4	7	12	3	7	10	9	1479
Bapatla	3	21	24	4	2	35	37	3	1520
Prakasam	1	26	27	3	1	11	12	7	460
Palnadu	2	1	3	16	1	1	2	15	668
Nandyal	8	26	34	2	7	40	47	2	1378
Other districts	19	150	169		9	31	40		
Andhra Pradesh	**32**	**313**	**345**		**29**	**402**	**431**		**1249**

Source: Andhra Pradesh Agricultural statistics at a glance, 2022-23.

The major Black gram growing districts, namely Krishna, Prakasam, Bapatla, and Nandyal, hold 63 percent of the area and contribute 73 percent to the state's total Black gram production (Table 1). Among these districts, Krishna (1642 kg/ha) ranks first in productivity, followed by Bapatla (1520 kg/ha) and Guntur (1479 kg/ha). The average productivity of the state during 2022–23 was 1249 kg/ha.

Table 2. Balance sheet for the year 2021-22 to 2023-24 (in lakh tonnes)

Particulars	2021-22	2022-23	2023-24*
Supply			
Opening Stock	2.1	2.09	0.44
Production	22.91	19.16	17.42
Import	5.65	5.57	6.5
Total Supply	**30.66**	**26.82**	**24.36**
Demand			
Exports	0.57	0.38	0.25
Consumption	28	26	23
Total Demand	**28.57**	**26.38**	**23.25**
Ending Stock	**2.09**	**0.44**	**1.11**

Source:agriwatch.com; *Advance Estimates

The balance sheet in Table 2 explains that the demand for Black gram was 23.25 lakh tonnes in 2023-24, with exports decreasing from 0.57 lakh tonnes in 2021-22 to 0.25 lakh tonnes in 2023-24. Total supply was 24.36 lakh tonnes in 2023-24 with the increased imports compared to previous year. The domestic consumption of Black gram was estimated to decrease by 17.86 percent in 2023-24. Imports increased from 5.65 lakh tonnes to 6.5 lakh tonnes from 2021-22 to 2023-24.

The production of pulses has risen from 1970-71 to 2017-18, primarily due to the governments' effort to strengthen seed production and distribution, and the continuous increase of MSP. But this spurt in pulse production is not enough to meet the demand as the import of pulses has also risen. The reason behind the decline in pulse production is improved irrigation facilities, which allows to grow-intensive crops such as rice/wheat and commercial crops. So, the government is incentivizing MSP of Black gram which increased from Rs. 4350 in 2014-15 to Rs. 7400 in 2024-25.

The cost-return structure of blackgram in Andhra Pradesh for the year 2023–24 is presented in Table 4. Cultivation of blackgram costs Rs. 62,488 per hectare, among which labor costs have a lion share of 39.23 percent of the total cost. In total, the working capital share is 68.95 percent, and the fixed capital share is 31.05 percent. The cost of production in blackgram was Rs. 7,395.05 per quintal. Gross margin implies returns over variable costs, which are pertained to owner farmers, and net returns implies returns over total costs, which are pertained to tenant owners. Though the cost of production is high when compared to other states, higher productivity results good returns on yield. The gross margin and net returns were Rs. 26,998 per ha and Rs. 7,596 per ha, respectively. The return on rupee investment was 1.12, which is concerned with tenant farmers, and the return on variable costs was 1.63, which is mostly related to owner farmers.

Table 4: Cost-return structure of Blackgram in Andhra Pradesh 2023-24 (Rs./ha)

S.No.	Particulars	Cost (Rs.)
1	Labour costs (Rs/ha)	24,516.72 (39.23%)
2	Material costs (Rs/ha)	16,400.68 (26.25%)
3	Variable costs (Rs/ha)	43,086.69 (68.95%)
4	Fixed costs (Rs/ha)	19,401.455 (31.05%)
5	**Total cost (Rs/ha)**	**62,488.15 (100%)**
6	Yield (Qtl/ha)	8.45
7	Price (Rs./qtl)	8,289.66
8	**Gross returns (Rs/ha)**	70,084.75
9	Net returns (Rs/ha)	7,596.60
10	Gross Margin (Rs/ha)	26,998.05
11	**Return on rupee BCR**	1.12
12	**Return on VC**	1.63
13	**Cost of Production (Rs./qtl)**	7,395.05

Source: Survey Data, BCR-Benefit Cost Ratio, VC – Variable Costs

Black gram production and Price Outlook:

Percent deviations from yearly average arrivals and prices were calculated for Black gram for the year 2023–24 by using modal prices and market arrivals of Black gram from the major market of Andhra Pradesh. The results depict Black gram arrivals picking up from December to May, with the highest arrivals reported during the month of February (384.68%) against the yearly average of 440 metric tons.

Similarly, the average price of Black gram during the period is Rs. 8,394 per quintal, with 37.6% significant deviation from the average prices. The average difference between market prices and MSP was 12 percent.

Table 5. Seasonal Indices of Black gram in Andhra Pradesh (2023-24)

Months	Arrivals		Price	
	Tonnes	% deviation	Rs./qtl	% deviation
June-23	79	17.97	6192	73.76
July-23	8	1.82	7753	92.36
August-23	2	0.45	7642	91.04
September-23	29	6.60	9024	107.50
October-23	30	6.82	8002	95.33
November-23	37	8.42	8427	100.39
December-23	106	24.11	8752	104.26
January-24	435	98.96	8508	101.35
February-24	1691	384.68	9183	109.39
March-24	1032	234.77	8590	102.33
April-24	962	218.84	9315	110.97
May-24	864	196.55	9345	111.32
Yearly Average	**440**	**100**	**8394**	**100**

Source: Data obtained from Adoni AMC;

Table 6: Minimum Support Price for the Black gram from 1980-81 to 2024-25.

Years	MSP	Difference in amount increase over preceding year.
1980-81	200	
1990-91	480	280
2000-01	1200	
2010-11	3170	1970
2015-16	4850	1680
2016-17	5225	375
2017-18	5400	175
2018-19	5600	200
2019-20	5700	100
2020-21	6000	300
2021-22	6300	300
2022-23	6600	300
2023-24	6950	350
2024-25	7400	450

From the table 6, it shows the MSP prices for the Black gram over the years, the major hike was occurred in the year 2010-11 with difference from the previous year of Rs. 1970. In 2015-16 there is a significant increase in the MSP i.e. Rs.1680. Black gram MSP prices increased in 2024-25 by Rs. 450 compared to the previous year.

Table 7. MSP vis-a-vis Market Prices of Black gram in Andhra Pradesh during June to May, 2023-24

Crop	MSP (Rs. /qtl)	Major Markets	Average days and months of trading			
			Greater than MSP		Less than MSP	
			No. of Days	Month	No. of Days	Month
Black gram	6950	Duggirala, Tenali and Kurnool	136	February to May	130	June to August

Source: **vyavasayamarketingshakha.ap.gov.in**

Table 7 shows the number of days when the market prices of Black gram were above, equal to, or below the MSP in major markets of Andhra Pradesh during June-May, 2023-24. On average, for 136 days from February to May, Black gram prices were above the MSP, while for 130 days from June to August, prices were below the MSP.

The Black gram cash market also traded firmly, rising by 3-5% on average during the previous month due to a robust increase in C&F offers for FAQ & SQ varieties amidst demand for upcoming festivals like Gudi Padwa, Navratri, & Ramadan. C&F offers for FAQ increased by $60 and $65 to $1075 and $1155 per MT, respectively, at Indian ports during the month of March, as Burmese traders were not ready to release their stocks at lower levels. Consequently, market prices are likely to rise by INR 200-300 per quintal. Black gram FAQ traded at INR 8,850 per quintal, up by 4.12% in Mumbai, and at INR 9,150 per quintal, up by 3.39% in Delhi.

Based on data from the Directorate of Economics and Statistics, Andhra Pradesh (DESAP), the time series analysis shows that the area for Black gram cultivation is expected to increase to 38.79 thousand hectares during the kharif season and 319 thousand hectares during the rabi seasons of 2024-25. Under normal conditions, the estimated annual production is 447.41 thousand tonnes in Andhra Pradesh.

Under these circumstances, Agricultural Market Intelligence Centre, ANGRAU expects that Black gram may trade within a price range of Rs. 8400 to 9000 per quintal during the Kharif harvest season of 2024-25.

Note: The predicted / forecast values given in the report were estimated using historical data analyzed by different econometric models with the assumption of prevalence of normal weather and market conditions.

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