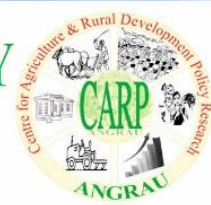




ACHRAYA N G RANGA AGRICULTURAL UNIVERSITY

Lam, GUNTUR - 522034.



Crop Outlook Reports of Andhra Pradesh

BENGALGRAM
(January to December, 2022)



Centre for Agriculture & Rural Development Policy Research (CARP)

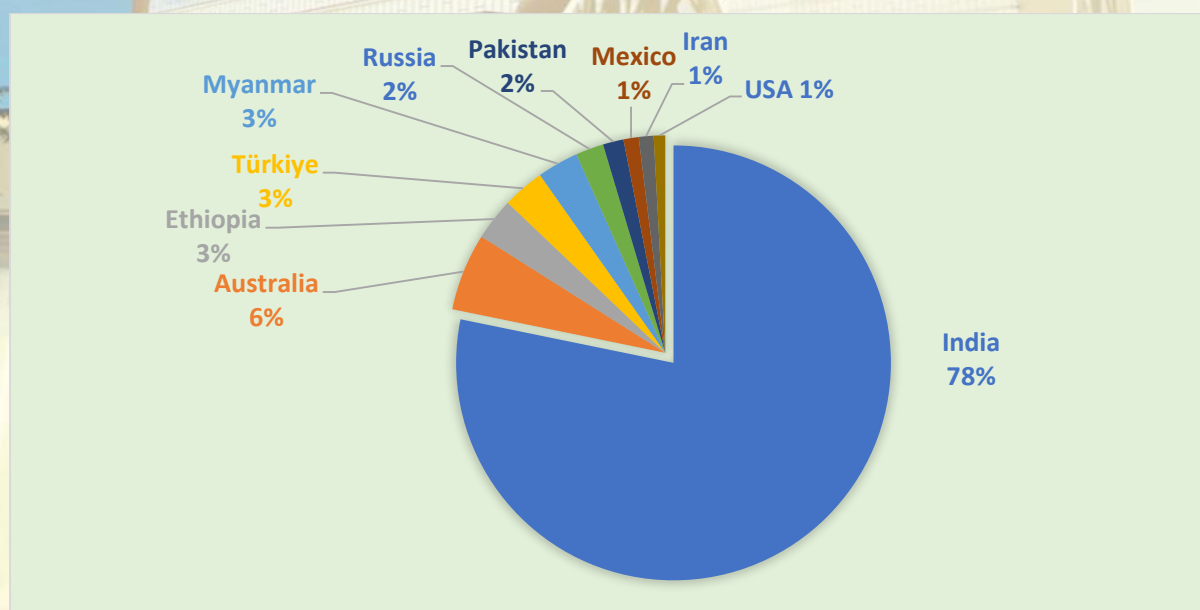
ANGRAU, Lam, Guntur - 522 034.

Acharya N.G. Ranga Agricultural University **Crop Outlook Reports of Andhra Pradesh**

BENGALGRAM – January to December 2022

The Bengal gram or chickpea or gram is an annual legume that belongs to the family Fabaceae. It is said to be one of the oldest pulses known and cultivated in Asia and Europe. The centre of origin of Bengal gram is stated to be in the Eastern Mediterranean, but its probable place of origin lies in South Western Asia. Globally, Bengal gram is grown in an area of 150.04 lakh hectares with a production of 158.71 lakh tonnes and productivity of 1057.8 kg/ha (FAO STAT, 2021). During 2021-22, India contributed 86% of total global bengal gram production, with **137.50** lakh tonnes grown on 102.65 lakh hectares with a productivity of 1447 kg/hectare (agricoop.nic.in). India is the largest producer of gram production in world, followed by Australia and Ethiopia (Figure 1). In India, Bengal gram takes first position in total pulse production, followed by red gram. Andhra Pradesh produces 4.92 lakh tonnes in an area of 4.45 lakh hectares with 1105 kg/hectare productivity in 2021-22 (Final Estimates, des.ap.gov.in). Andhra Pradesh accounts for 3.58 per cent of India's Bengal gram production.

Figure 1: India's share in production (lakh tonnes) of bengalgram in the World during 2020



Source: fao.org/faostat/en/

ANGRAU Bengalgram Outlook Report
-January to December 2022

Table 1: Supply and demand of Bengal gram in India (lakh tonnes)

Particulars	2021-22	2022-23
Opening Stock	21.32	19.97
Production	97.67	103.46
Import	3.00	2.50
Total Supply	121.99	125.93
Exports	3.50	2.25
Consumption	100.00	102.00
Total Demand	103.50	104.25
Ending Stock	18.49	21.68

Source: agriwatch.com

As per some private sources, the data given is compiled in Table 1, which depicts that the production has increased from 97.67 lakh tonnes in 2020-21 to 103.46 lakh tonnes in 2022-23. The total demand (104.25 lakh tonnes) for Bengal gram can be easily met by the total supply (125.93 lakh tonnes).

Table 2: Major bengalgram producing states in India (Area (A) in '000 ha, production (P) in '000 tonnes and productivity (Y) in kg/ha)

States	1990-91		2000-01		2010-11		2021-22			
	A	P	A	P	A	P	A	P*	Y*	Rank
Madhya Pradesh	2462	1892	1978	1620	3112	2687	2484	3696	1488	1
Maharashtra	673	358	676	351	1438	1300	2147	2305	1074	2
Rajasthan	1653	1011	673	397	1783	1601	2041	2187	1072	3
Uttar Pradesh	1275	1122	833	703	570	530	594	783	1243	4
Karnataka	230	69	370	239	959	631	1049	655	625	5
Andhra Pradesh	88	57	201	229	584	720	445	492	1105	
Other states	1140	847	454	316	849	900	2735	3632		
India	7521	5356	5185	3855	9186	8221	11495	13750	1339	

Source: DES

**estimated figures.*

As shown in Table 2, Madhya Pradesh ranks first in Bengal gram production with 36.96 lakh tonnes followed by Maharashtra (23.05 lakh tonnes), Rajasthan (21.87 lakh tonnes), Uttar Pradesh (7.83 lakh tonnes) and Karnataka (6.55 lakh tonnes). Whereas Andhra Pradesh production of Bengal gram with 4.92 lakh tonnes in 2021-22.

Table 3: Procurement of Bengal gram under Price Support Scheme (PSS)

Commodity/year	Support price (Rs per quintal for FAQ)	Quantity procured in tonnes	Value in lakhs	Major states of procurement
2018-19	4400	2769430	1218549	Andhra Pradesh, Gujarat, Madhya Pradesh, Maharashtra, Rajasthan, Telangana and Uttar Pradesh
2019-20	4620	776406	358699	Andhra Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Telangana and Uttar Pradesh
2021-22*	5100	636905	324822	Madhya Pradesh, Maharashtra & Gujarat

**as on 24.02.2022'FAQ: Fair and Average Quality
Source: Agricultural statistics at a glance 2021.*

The procurement of Bengal gram under Price Support Scheme by Government of India is presented in Table 3. In 2018-19, a total of 27.69 lakh tonnes was procured at a price of Rs. 4400 per quintal and 2019-20, a total of 7.76 lakh tonnes was procured at a price of Rs. 4,620 per quintal. In 2021-22, a total of 6.36 lakh tonnes was procured at a price of Rs. 5100 per quintal which has a value of Rs. 324822 lakhs.

Table 4: Comparison of area, production and yield of bengalgram in Andhra Pradesh

Year	Area (*000 ha)	Production (*000 tonnes)	Yield (Kg/ha)
2010-11	584	720	1204
2015-16	471	500	1062
2018-19	478	243	508
2019-20	459	559	1218
2020-21	469	532	1136
2021-22	445	492	1105

Source: des.ap.gov.in

It is observed that area declined from 5.84 lakh hectares to 4.45 lakh hectares and production declined from 7.20 lakh tonnes to 4.92 lakh tonnes from 2010-11 to 2021-22 (Table 4). In 2018-19, production was decreased due to aberrant weather conditions.

Table 5: Inter-district comparison of area, production, productivity of Bengal gram in Andhra Pradesh (2020-21)

Major Districts	Area (in '000 ha)	Rank	Production (in '000 tonnes)	Rank	Yield (kg/ha)	Rank
Kurnool	156	1	176	1	1186	5
Y.S.R	86	4	122	3	1148	6
Prakasam	91	3	138	2	1494	3
Ananthapuramu	92	2	38	4	433	7
Guntur	17	5	33	5	1904	1
Nellore	11	6	15	6	1393	4
Krishna	4	7	7	7	1649	2
Other districts	2		3		1925	
Andhra Pradesh	469		532		1136	

Source: apagrisnet.gov.in

From Table 5 it is clear that, the highest Bengal gram yield was observed in Guntur district in 2020-21. It is observed that Kurnool district ranks 1st both in area and production. In terms of production, the major districts were Kurnool (1.56 lakh tonnes), Ananthapuramu (0.92 lakh tonnes), Prakasam (0.91 lakh tonnes), YSR Kadapa (0.86 lakh tonnes), Guntur (0.17 lakh tonnes) and Nellore (0.11 lakh tonnes). Among 13 districts of Andhra Pradesh, these 6 districts covered 99 per cent of area and production under Bengal gram.

Table 6: Cost-return structure of Bengal gram in Krishna zone during 2021-22 (Rs. /ha)

S NO	Particulars	Bengalgram
1	Labour costs (Rs/ha)	32557(37.58)
2	Material costs(Rs/ha)	15835(18.28)
3	Variable costs(Rs/ha)	48816(56.35)
4	Fixed costs(Rs/ha)	29939(34.56)
5	Total cost(Rs/ha)	86631(100)
6	Yield (Qtl/ha)	21
7	Price (Rs./qtl)	4630
8	Gross returns (Rs/ha)	98922
9	Net returns (Rs/ha)	12292
10	Gross Margin (Rs/ha)	50106
11	Return on rupee BCR	1.142
12	Return on VC	2.026
13	Cost of Production (Rs./qtl)	4055

Source: Survey Data, Figures in the parentheses indicate the per cent of the item to the total cost, BCR – Benefit Cost Ratio, VC – Variable costs

The cost-return structure of Bengal gram in Krishna Zone (Guntur, Prakasam and Krishna districts) of Andhra Pradesh for the year 2021-22 is presented in Table 6. Cost of Production in Bengal gram was Rs. 4055/quintal. Gross margin implies the returns over variable cost which is pertained to owner farmers and net returns implies returns over the total costs which is pertained to tenant owners. Gross margin and net returns were Rs. 50106 per ha and Rs. 12292 per ha respectively. Return on rupee BCR was 1.14 which is concerned to tenant farmers and return on variable costs was 2.026 which is mostly related to owner farmers.

Bengal gram Price Outlook:

Seasonal indices measure the monthly per cent deviation from the average arrivals and prices from 2015 to 2021. Modal prices of Bengal gram in Kurnool district were taken for calculating seasonal indices.

Table 7: Seasonal indices of arrivals and prices of Bengal gram at major markets in Kurnool district (2022).

Months	Arrivals	Prices
January	83.79	104.87
February	259.93	96.35
March	225.98	96.14
April	121.48	94.96
May	76.32	94.35
June	50.08	109.88
July	50.51	94.68
August	53.48	99.47
September	54.67	99.64
October	51.02	106.52
November	49.24	103.76
December	52.89	99.38

Source: Data obtained from Kurnool and Yemmiganur AMCs

The results in Table 7 shows that the arrivals are highest in the months of February & March and prices are highest in the month of June. The average monthly prices of Bengal gram were Rs. 4576, Rs. 4892, Rs. 4765 and Rs. 4564 for the months of September, October, November and December 2022 respectively in the Kurnool market.

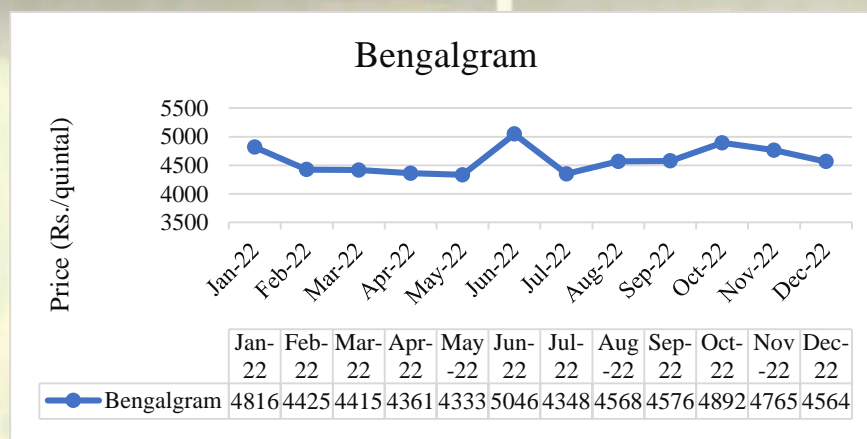
Table 8: Market Prices vis-a-vis MSP of Bengal gram in Major Producing States in Rabi Marketing Season 2022-23 (March-June 2022)

States	No of days market prices reported	No of days market prices were above/equal to MSP	No of days market prices were below MSP				Average Difference (%) between Market Price & MSP
			<5 %	5-10%	10-15%	>15 %	
Karnataka	109	38	26	24	15	6	-3.1
Madhya Pradesh	122	2	4	36	59	21	-11.3
Uttar Pradesh	122	23	64	29	6	0	-2.9
Rajasthan	120	0	1	24	42	53	-13.6

Source: 1. AGMARKNET, Directorate of Marketing & Inspection (DMI), Department of Agriculture, Cooperation and Farmers Welfare, Ministry of Agriculture and Farmers Welfare
2. Directorate of Economics & Statistics, Ministry of Agriculture and Farmers Welfare

Table 8 depicts the number of reported days when the market prices of Bengal gram were above or below or equal to MSP in major producing States. Among the major Bengal gram producing states, Karnataka has reported market prices equal to/above MSP on 38 days and during the remaining reported days the variation is found to be lesser than 5 percent of MSP. Where as in Madhya Pradesh the market prices 2 out of 122 reported days marked above or equal to MSP, the average difference between market prices and MSP is found to be -11.36 percent. For Uttar Pradesh and Rajasthan, market prices were below MSP on most of the days and average difference between market price and MSP in these States were (-) 3.9 percent and (-) 4.3 percent respectively.

Figure 2: Monthly average prices of Bengal gram in Andhra Pradesh



Source: Data obtained from Andhra Pradesh AMCs

ANGRAU Bengalgram Outlook Report **-January to December 2022**

Average monthly prices of Bengal gram in Andhra Pradesh markets for the month of December, 2022 was Rs. 4564 (Figure 2). As per the information shared by Agricultural Market Intelligence Centre, ANGRAU ongoing rabi area has reduced in the key growing states like M.P., Rajasthan and U.P. It seems that government purchases can be huge. Prakasam district of Andhra Pradesh has received satisfactory rains in the recent past and farmers are gearing up for gram cultivation. Rabi bengalgram sowing was completed, however, as per sources, it is expected to remain less by 10 to 15% this year as farmers may divert bengalgram area to other lucrative crops due to low prices throughout the season. Insect, pest and disease infestations has been observed due to cloudy weather, unseasonal rains, higher day temperatures. This may affect yield of Chana. Crop is in maturity to harvesting stage in southern India. As on 16th December 2022, 97.90 lakh hectares of Bengal gram was sown compared to 94.97 lakh hectares last year in India (agricoop.nic.in). In Andhra Pradesh as on 28th December 2022, 3.41 lakh hectares of Bengal gram was sown compared to 3.21 lakh hectares last year (apagrisnet.gov.in).

Under these circumstances, the AMIC, ANGRAU is here with providing the latest information with regard to forecast price range of Rs. 4500-4800 for Bengal gram in rabi harvesting / marketing season 2022-23.

For further details contact :

Dr G Raghunadha Reddy

Principal Scientist (Ag. Economics)

Head, Centre for Agriculture and Rural Development Policy Research (CARP)
ANGRAU, Lam, GUNTUR – 522 034, AP.

carp.angrau@gmail.com, Mobile : +91 98483 21232