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**Crop Outlook Reports of Andhra Pradesh**

**GREENGRAM  
(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

### Green gram– June to May, 2023-24

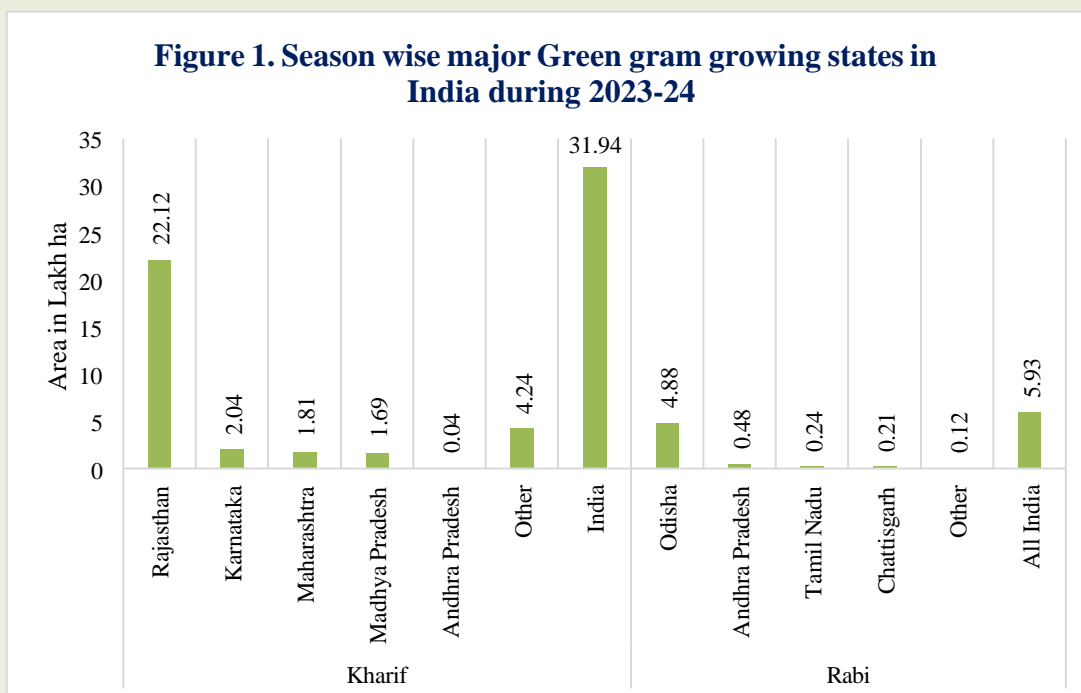
#### *Factsheet of Green gram*

- Globally, Green gram was cultivated in 7.3 million hectares with an average productivity of 721 kg/ha.
- India and Myanmar collectively account for 30% of the world's 5.3 million tonnes of Green gram production. Other significant producers include China, Indonesia, Thailand, Kenya, and Tanzania.
- In India, the Green gram was cultivated in 3.787 million hectares during 2023-24, producing 2.916 million tonnes with an average yield of 670 kg/ha.
- In 2021, the global mung beans market generated revenue of around USD 3,787.83 million. It is expected to grow at a Compound Annual Growth Rate (CAGR) of over 3.31% from 2021 to 2028, reaching approximately USD 4,757.59 million by 2028.
- Major Green gram varieties grown in India include Pusa Vishal, PDM-139, ML-818, Pusa Baisakhi, and Sabarmati, while Andhra Pradesh cultivates LGG460, LGG462, TM96-2, PL2-14, and LGG407.
- The primary states for Kharif Green gram cultivation are Rajasthan (69.3%), Karnataka (6.4%), and Maharashtra (5.7%).
- The leading states for Rabi Green gram cultivation are Odisha (82.4%), Andhra Pradesh (8.1%), and Tamil Nadu (4%).
- Key export destinations for Green gram are the USA (24%), Nepal (18%), the UK (18%), Canada (10%), Bangladesh (6%), Qatar (4%), the Netherlands (4%), Australia (2%), the UAE (2%), and Malaysia (2%).
- The cost of cultivation for Green gram crop in Krishna Zone of Andhra Pradesh was Rs. 60,486.94 /ha.

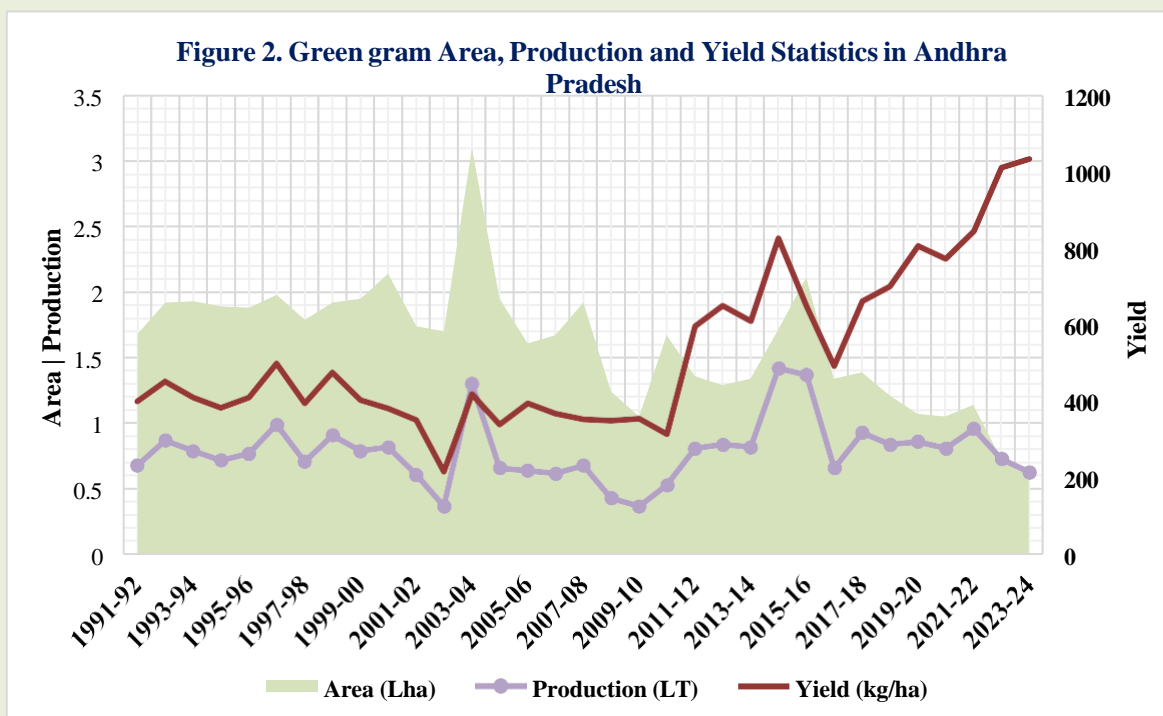
Green gram, scientifically known as *Vigna radiata*, is a plant species in the legume family and is commonly called mung bean or moong in India. India is its primary origin, and it is mainly cultivated in East Asia, Southeast Asia, and the Indian subcontinent. It is the third-most important pulse crop in the country, occupying nearly 13 percent of the total pulse area in India. It contains protein-rich seeds with 20–25 percent protein, and sometimes the plants are cut and ploughed into the soil as green manure to enrich the soil with nitrogen. India is the major producer of Green gram in the world, and it was grown on 37.87 lakh hectares during 2023–24 and the production of Green gram was estimated to be about 29.16 lakh tonnes, contributing 12 percent to the total pulse production (3<sup>rd</sup> AE, DA&FW).

In India, during the kharif season of 2023, Green gram was sown over 31.94 lakh hectares, which is 2.06 lakh hectares less than the previous year. The main states for kharif Green gram cultivation are Rajasthan (69.3 percent), Karnataka (6.4 percent), and Maharashtra (5.7 percent). The production of kharif

Green gram was estimated to be about 11.44 lakh tonnes, which is 34 percent less than the previous year's production.



During the rabi season of 2023-24, the area for Green gram cultivation decreased by 12.5 percent to 5.93 lakh hectares, compared to 6.78 lakh hectares the previous year. The primary states for rabi Green gram cultivation are Odisha (82.4 percent), Andhra Pradesh (8.1 percent), and Tamil Nadu (4 percent). The production of rabi and summer Green gram was estimated to be about 17.72 lakh tonnes, which is 9percent less than the previous year's production.



In the last three decades, the Green gram cultivation area in Andhra Pradesh decreased by 63.69 percent with a Compound Annual Growth Rate (CAGR) of -2.39 percent (Figure 2). However, overall Green gram production decreased by only 7.35 percent (CAGR of 0.33 percent) due to a significant increase in productivity by 157.61 percent (CAGR of 2.80 percent).

In Andhra Pradesh, Green gram was cultivated over an area of 0.61 lakh hectares during 2023-24, with 93.4 percent of this area cultivated during the rabi season (3<sup>rd</sup> AE, DESAP). With an average yield of 1033 kg/ha, the production was estimated at approximately 0.63 lakh tonnes, contributing 5.51 percent to the country's total Green gram production.

The major Green gram growing districts, namely Srikakulam, Guntur, Bapatla, and Vizianagaram, hold 60.3 percent of the area and contribute 60 percent to the state's total Green gram production (Table 1). Among these districts, Guntur (1717 kg/ha) ranks first in productivity, followed by Eluru (1455 kg/ha), Krishna (1450 kg/ha) and Bapatla (1416 kg/ha). The average productivity of the state during 2022–23 was 1010 kg/ha.

**Table 1. Inter-District Comparison of Green 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     |      |               |
| Srikakulam            | N                    | 12        | 12        | 1    | N                        | 7         | 7         | 4    | 631           |
| Guntur                | N                    | 11        | 11        | 2    | N                        | 17        | 17        | 1    | 1717          |
| Bapatla               | N                    | 11        | 11        | 2    | N                        | 15        | 15        | 2    | 1416          |
| Vizianagaram          | N                    | 10        | 10        | 3    | N                        | 5         | 5         | 5    | 556           |
| Eluru                 | N                    | 6         | 6         | 4    | N                        | 9         | 9         | 3    | 1455          |
| Krishna               | 0                    | 5         | 5         | 5    | 0                        | 7         | 7         | 4    | 1450          |
| Kakinada              | N                    | 4         | 4         | 6    | N                        | 3         | 3         | 6    | 674           |
| Other districts       | 5                    | 9         | 14        |      | 3                        | 7         | 10        |      |               |
| <b>Andhra Pradesh</b> | <b>5</b>             | <b>68</b> | <b>73</b> |      | <b>3</b>                 | <b>70</b> | <b>73</b> |      | <b>1010</b>   |

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

The cost-return structure of Green gram in Andhra Pradesh for the year 2023–24 is presented in Table 2. Cultivation of Green gram costs Rs. 60,486.94 per hectare, among which labor costs have a lion share of 37.24 percent of the total cost. In total, the working capital share is 64.06 percent, and the fixed capital share is 35.94 percent. The cost of production in Green gram was Rs. 8555.44 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. 20,140 per ha and Rs. -1,600.44 per ha, respectively. The return on rupee investment was

0.97, which is concerned with tenant farmers, and the return on variable costs was 1.52, which is mostly related to owner farmers.

**Table 2. Cost-return structure of Green gram in Andhra Pradesh 2023-24 (Rs./ha)**

| S.No. | Particulars                         | Cost (Rs.)             |
|-------|-------------------------------------|------------------------|
| 1     | Labour costs (Rs/ha)                | 22,526.62 (37.24)      |
| 2     | Material costs (Rs/ha)              | 15,411.45 (25.48)      |
| 3     | Variable costs (Rs/ha)              | 38,745.7 (64.06)       |
| 4     | Fixed costs (Rs/ha)                 | 21,741.24 (35.94)      |
| 5     | <b>Total cost (Rs/ha)   Cost C2</b> | <b>60,486.94 (100)</b> |
| 6     | Yield (Qtl/ha)                      | 7.07                   |
| 7     | Price (Rs./qtl)                     | 8,301.09               |
| 8     | <b>Gross returns (Rs/ha)</b>        | 58,886.51              |
| 9     | Net returns (Rs/ha)                 | -1,600.44              |
| 10    | Gross Margin (Rs/ha)                | 20,140.81              |
| 11    | Return on rupee BCR                 | 0.97                   |
| 12    | Return on VC                        | 1.52                   |
| 13    | COP [C3] (Rs./qtl)                  | 8,555.44               |

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

The balance sheet in Table 4 indicates that the demand for Green gram was 25.3 lakh tonnes, while the total supply was 27.75 lakh tonnes in 2023-24. Exports increased by 130.7 percent, rising from 0.13 lakh tonnes in 2022-23 to 0.3 lakh tonnes in 2023-24. Imports decreased from 0.12 lakh tonnes in 2022-23 to 0.05 lakh tonnes in 2023-24.

**Table 4. Balance sheet for the year 2022-23 to 2023-24 (in lakh tonnes)**

| Particulars         | 2022-23      | 2023-24*     |
|---------------------|--------------|--------------|
| <b>Supply</b>       |              |              |
| Opening Stock       | 6.51         | 7.29         |
| Production          | 25.79        | 20.41        |
| Import              | 0.12         | 0.05         |
| <b>Total Supply</b> | <b>32.42</b> | <b>27.75</b> |
| <b>Demand</b>       |              |              |
| Exports             | 0.13         | 0.3          |
| Consumption         | 25           | 25           |
| <b>Total Demand</b> | <b>25.13</b> | <b>25.3</b>  |
| Ending Stock        | 7.29         | 2.45         |

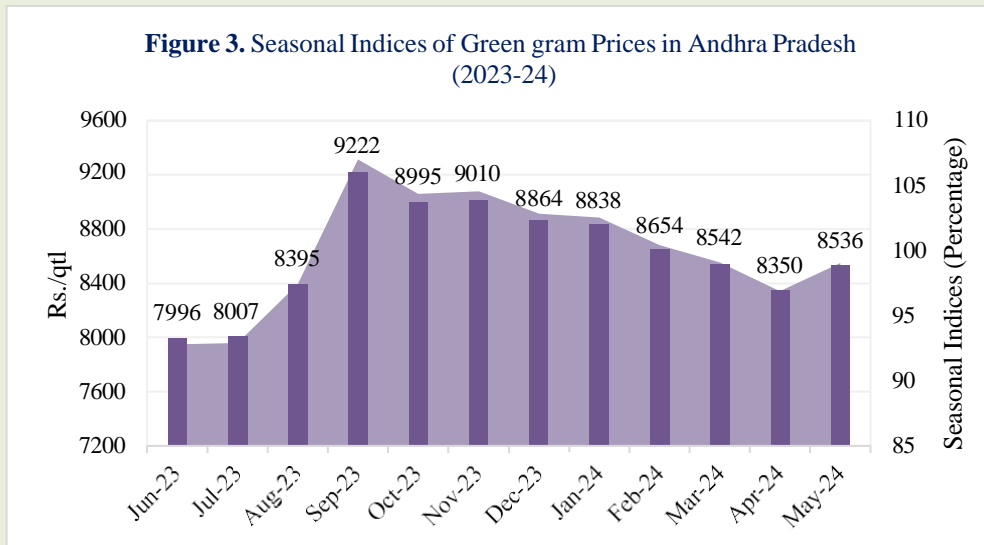
*Source: [agriwatch.com](http://agriwatch.com); \*Advance Estimates*

Domestic consumption of Green gram remained steady at 25 lakh tonnes. According to the estimates, India had a Green gram surplus of 2.45 lakh tonnes in 2023-24. The reason behind the decline in pulse production is improved irrigation facilities, which allows to grow-intensive crops such as

rice/wheat. The family’s pulses consumption has also reduced due decline in cultivating area. Earlier, dal was prepared every other day but now it is served once or twice a week. (Down to earth, 2023)

**Green gram Production and Price Outlook:**

Percent deviations from yearly average prices were calculated for Green gram for the year 2023–24 using monthly modal prices from the major market of Andhra Pradesh. The results depict an average deviation of 5 percent in the monthly average prices from an annual average price of Rs. 8617 per quintal. The prices pick up in June, reach a maximum in September, and then gradually decrease (Figure 3).



Source: Data obtained from Adoni AMC

**Table 5: Minimum Support Price for the Green gram from 1980-81 to 2024-25.**

| Years   | MSP  | Difference in amount increase over preceding year |
|---------|------|---|
| 1980-81 | 200  | 280   |
| 1990-91 | 480  |   |
| 2000-01 | 1200 | 1970  |
| 2010-11 | 3170 |   |
| 2015-16 | 4850 | 1680  |
| 2016-17 | 5225 | 375   |
| 2017-18 | 5575 | 350   |
| 2018-19 | 6975 | 1400  |
| 2019-20 | 7050 | 75  |
| 2020-21 | 7196 | 146   |
| 2021-22 | 7275 | 79  |
| 2022-23 | 7755 | 480   |
| 2023-24 | 8558 | 803   |
| 2024-25 | 8682 | 124   |

Source: Source: <https://farmer.gov.in>

From the table 5, it shows the MSP prices for the Green gram over the years, the major hike was occurred in the year 2010-11 with difference from the previous year of Rs. 1970. Another significant increase appeared during the year 2015-16 and 2018-19 i.e. Rs.1680 and Rs.1400 respectively. Green gram MSP prices increased in 2024-25 by Rs. 124 compared to the previous year.

Table 6 shows the number of days when the market prices of Green gram were above, equal to, or below the MSP in major markets of Andhra Pradesh during June-May, 2023-24. On average, for 273 days from September to February, Green gram prices were above the MSP, while for 37 days from April to July, prices were below the MSP.

**Table 6. MSP vis-a-vis Market Prices of Green 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         |
| Green gram | 8558          | Ponnuru, Penamaluru & Mangalagiri | 273                                | September to February | 37            | April to July |

Source: vyavasayamarketingshakha.ap.gov.in

Based on data from the Directorate of Economics and Statistics, Andhra Pradesh (DESAP), the Time series analysis shows that the area for Green gram cultivation is expected to 8.02 thousand hectares during the kharif season and 77 thousand hectares during the rabi seasons of 2024-25. Under normal conditions, the estimated annual production is 86.97 thousand tonnes in Andhra Pradesh.

Green gram stocks in Central Pool and private stocks are more than sufficient. Purchasing of Green gram at MSP in various states is not letting the prices to go down. After that market prices may fall slightly from current levels.

Under these circumstances, the Agricultural Market Intelligence Centre, ANGRAU expects that Green gram may trade in the price range of **Rs. 8,400–9,000 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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