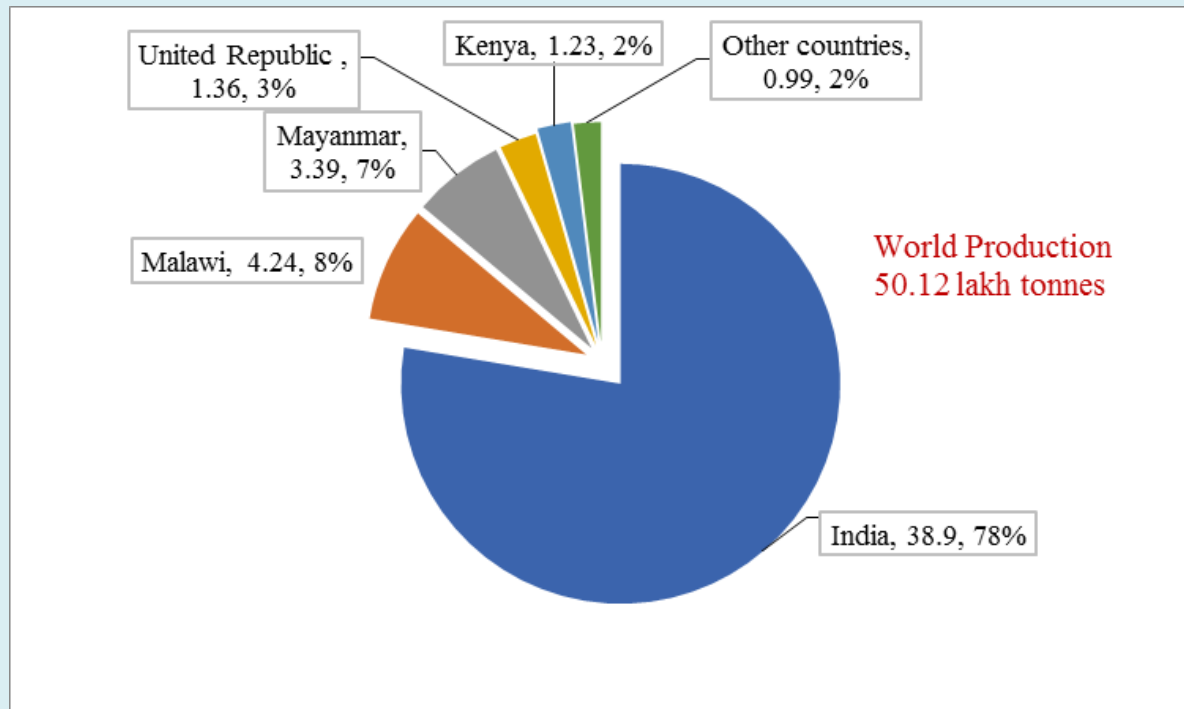


Acharya N.G. Ranga Agricultural University
Crop Outlook Reports of Andhra Pradesh
REDGRAM- January to December 2021

Pigeon pea (*Cajanaus cajan*), also known as redgram or arhar or tur, is an annual/perennial legume from the family Fabaceae. Since its domestication in the Indian sub-continent at least 3500 years ago, its seeds have become a common food in Asia, Africa and Latin America. It is consumed on a large scale in South Asia and is a major source of protein for the population of the Indian sub-continent. Globally, redgram is grown in an area of 60.96 lakh hectares with a production of 50.12 lakh tonnes and productivity of 822.2 kg/ha (FAO STAT, 2020). Major redgram producing countries in the world are presented in figure 1. India ranks first in redgram production globally with 42.8 lakh tonnes cultivated under 48.24 lakh hectares with productivity of 887 kg/hectare in 2020-21 (agricoop.nic.in). In Kharif 2021-22, redgram production was 44.3 lakh tonnes (1st advance estimates) in an area of 50.02 lakh hectares (agricoop.nic).

Figure 1: Major redgram producing countries in the world during 2020 (production in lakh tonnes)

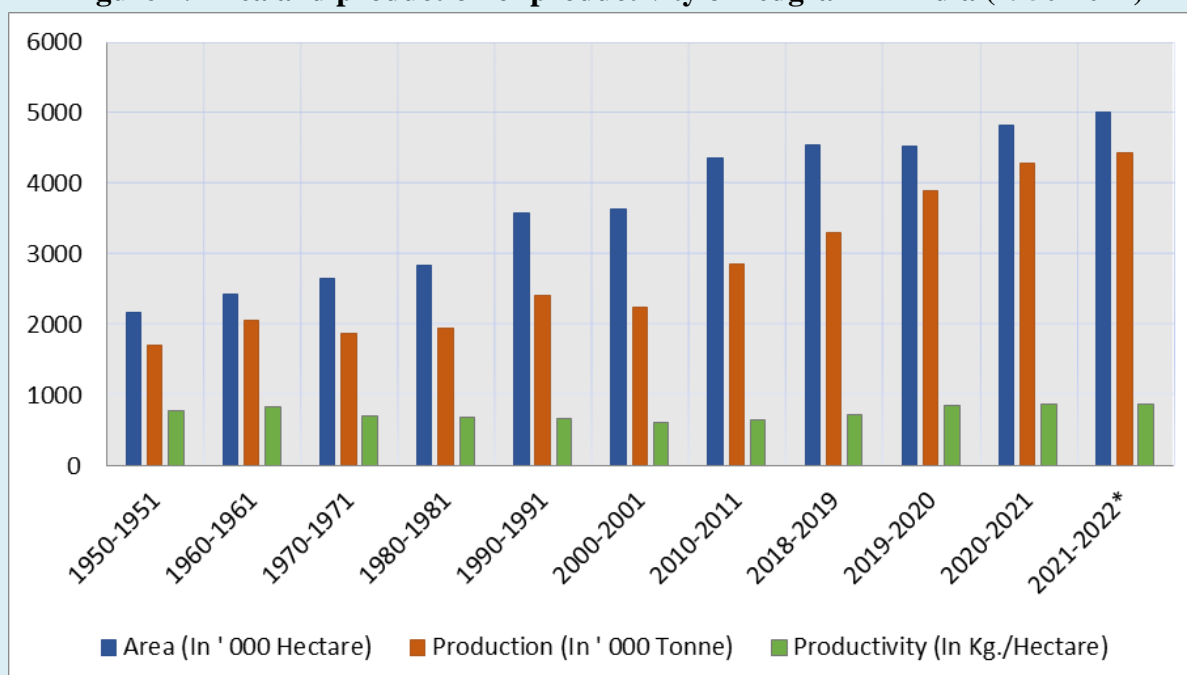


Source: fao.org/faostat/en

The decadal comparison of redgram area, production and yield statistics in India are presented in figure 2. In India, redgram takes second place in total pulse production after

bengalgram. Andhra Pradesh produced 0.84 lakh tonnes contributing 1.96% to total India's production cultivated in an area of 2.31 lakh hectares with 363 kg/hectare productivity in 2020-21 (Final Estimates). According to 2nd advance estimates during 2021-22, redgram was grown in 2.51 lakh hectares with a production of 1.21 lakh tonnes and productivity was 482 kg/ha.

Figure 2: Area and production of productivity of redgram in India (1950-2021)



Source: www.indiastat.com and * first advance estimates, agricoop.nic.in

Table 1: Major producing states of redgram in India (Area in '000 ha, production in '000 tonnes and productivity in kg/ha)

States	1990-91		2000-01		2010-11		2020-21		
	A	P	A	P	A	P	A	P*	Y
Maharashtra	1008	421	1096	660	1302	976	1247	1131	907
Karnataka	463	175	583	264	891	529	1280	933	729
Telangana	-	-	-	-	-	-	427	386	903
Uttar Pradesh	468	578	407	510	344	309	354	347	980
Andhra Pradesh	346	74	513	219	638	265	231	84	363
Other states	906	817	715	487	915	509	1285	1263	-
India	3593	2417	3632	2247	4367	2861	4824	4280	887

Source: www.indiastat.com & agricoop.nic.in

* provisional figures, yet to be finalized.

State wise redgram production in India is shown in Table 1. The figures explain that in 2020-21, Maharashtra and Karnataka were the major producing states with a production of

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11.31 and 9.33 lakh tonnes, respectively. Telangana and Uttar Pradesh produced 3.86 lakh tonnes and 3.47 lakh tonnes respectively. Andhra Pradesh produced 0.83 lakh tonnes of redgram cultivated in an area of 2.31 lakh hectares. Uttar Pradesh, Maharashtra and Telangana were found superior in terms of productivity of redgram.

Table 2: Balance sheet of redgram (in lakh tonnes)

Marketing Year (March to February)	2019-20	2020-21	2021-22*
Opening stocks	7.87	7.06	6.34
Production	37.19	37.28	39.46
Imports	4.50	5.30	5.00
Total Supply	49.56	49.64	50.80
Exports	0.50	0.30	0.25
Consumption	42.00	43.00	43.25
Demand	42.50	43.30	43.50
Ending stocks	7.06	6.34	7.30

* Advance Estimates Source: agriwatch.com

As per some private sources, the data compiled in Table 2 infers that in 2021-22 the total supply of 50.80 lakh tonnes can be met for the demand of 43.50 lakh tonnes supported with imports of 5.00 lakh tonnes.

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

Commodity/year	Support price (Rs per quintal for FAQ)	Quantity procured in tonnes	Value in lakh	Major states of procurement
2016-17	5050	195994	98976	Gujarat, Karnataka and Maharashtra
2017-18	5450	873759	476198	Andhra Pradesh, Gujarat, Karnataka, Maharashtra and Telangana
2018-19	5675	291001	165143	Andhra Pradesh, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Tamil Nadu and Telangana
2019-20	5800	547272	317417	Andhra Pradesh, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Tamil Nadu and Telangana
2020-21*	6000	10763	64580	Andhra Pradesh, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Tamil Nadu and Telangana

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**as on 04.03.2021 'FAQ: Fair and Average Quality*

Source: Agricultural Statistics at a glance, 2020, eands.dacnet.nic.in

The procurement of redgram under the Price Support Scheme is presented in Table 3. In 2016-17, a total of 195994 tonnes were procured at a price of Rs. 5,050 per quintal, and in 2020-21, a total of 10763 tonnes were procured at a price of Rs. 6,000 per quintal, which has a value of Rs. 64,580 lakhs.

Table 4: Area, production and yield of redgram in Andhra Pradesh

Year	Area ('000 ha)	Production ('000 tonnes)	Yield (Kg/ha)
2010-11	638	265	416
2015-16	220	132	599
2018-19	237	113	496
2019-20	243	119	486
2020-21	231	84	363
2021-22*	251	121	482

** Second Advance estimates, 2020-21 Source:apagrisnet.gov.in*

Table 4 shows that the redgram acreage in Andhra Pradesh before bifurcation was 6.38 lakh hectares, which has come down to 2.51 lakh hectares in 2021-22, and production has declined from 2.65 to 1.21 lakh tonnes during 2010-11 to 2021-22, which can be attributed to the decline in area only. The productivity recorded low in Andhra Pradesh during 2020-21 due to irrational rainfall received in redgram growing areas.

Table 5: Major redgram producing districts in Andhra Pradesh (2019-20)

District	Area ('000 ha)	Position	Production ('000 tonnes)	Position	Yield (Kg/ha)	Position
Prakasam	98	1	49	1	498	4
Kurnool	71	2	43	2	600	3
Guntur	20	4	15	3	729	1
Ananthapur	39	3	8	4	201	7
Y.S.R	4	6	2	5	354	6
Chittoor	6	5	1	6	77	8
Other districts	5		1			
Andhra Pradesh	243		119		486	

Source: apagrisnet.gov.in

Table 5 shows the area, production, and yield of redgram in Andhra Pradesh by district. In Andhra Pradesh, redgram production and area are highest in Prakasam district, with production of 49 thousand tonnes and 98 thousand hectares, respectively, followed by Kurnool district. The productivity of redgram is observed to be highest in the Guntur district at 729 kg/ha.

Table 6: Cost-return structure of Redgram in Krishna Zone 2020-21 (Rs./ha)

S NO	Particulars	Redgram
1	Labour costs (Rs/ha)	11282 (32.95)
2	Material costs(Rs/ha)	12458 (36.38)
3	Variable costs(Rs/ha)	23740 (69.33)
4	Fixed costs(Rs/ha)	10500 (30.67)
5	Total cost(Rs/ha)	34240 (100)
6	Yield (Qtl/ha)	1.2
7	Price (Rs./qtl)	6100
8	Gross returns (Rs/ha)	7320
9	Net returns (Rs/ha)	-26920
10	Gross Margin (Rs/ha)	-16420
11	Return on rupee BCR	0.21
12	Return on VC	0.31
13	Cost of Production (Rs./qtl)	28533.33

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 redgram in Krishna Zone (Guntur, Prakasam and Krishna districts) of Andhra Pradesh for the year 2020-21 is presented in Table 6. Cost of Production in redgram was Rs. 28533/quintal. Gross margin implies the returns over variable costs 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. -16420 per ha and Rs. – 26920 per ha respectively. Return on rupee investment was 0.21 which is concerned to tenant farmers and return on variable costs was 0.31 which is related to owner farmers. Our sample survey revealed that, the yields recorded were very low during 2020-21 in Krishna zone due to untimely rains.

Redgram Price Outlook:

Seasonal indices measure the monthly per cent deviation from the average arrivals and prices from 2015 to 2021. Modal prices of redgram from Kurnool and Yemmiganur AMCs were taken for calculating seasonal indices.

Table 7: Seasonal Indices of redgram arrivals and prices in major markets of Kurnool districts (Agricultural Years 2015-2021)

Months	Arrivals	Price
June	156.02	106.67
July	76.48	96.96
August	114.84	94.88
September	52.38	80.94

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October	59.60	103.46
November	16.97	93.83
December	54.02	93.02
January	179.11	113.45
February	206.56	110.10
March	115.58	115.05
April	69.85	76.56
May	98.59	115.08

Source: Data obtained from Kurnool and Yemmiganur AMCs

The results in Table 7 show the seasonal indices of redgram cumulative arrivals and average prices in the major markets of the Kurnool district (Kurnool and Yemmiganur). The results show that arrivals are highest in the month of February coinciding with peak harvests and prices are highest in the month of May. The average monthly prices of redgram were Rs. 5186, 5123, 3602 and 4711 for the months of September, October, November and December, 2021 respectively in Kurnool district. The average monthly price of redgram in Andhra Pradesh obtained from major markets is depicted in Figure 3.

Table 8: Market prices vis-à-vis MSP of redgram in major producing states in Kharif marketing season KMS 2020-21 (Oct 2020 to Feb 2021)

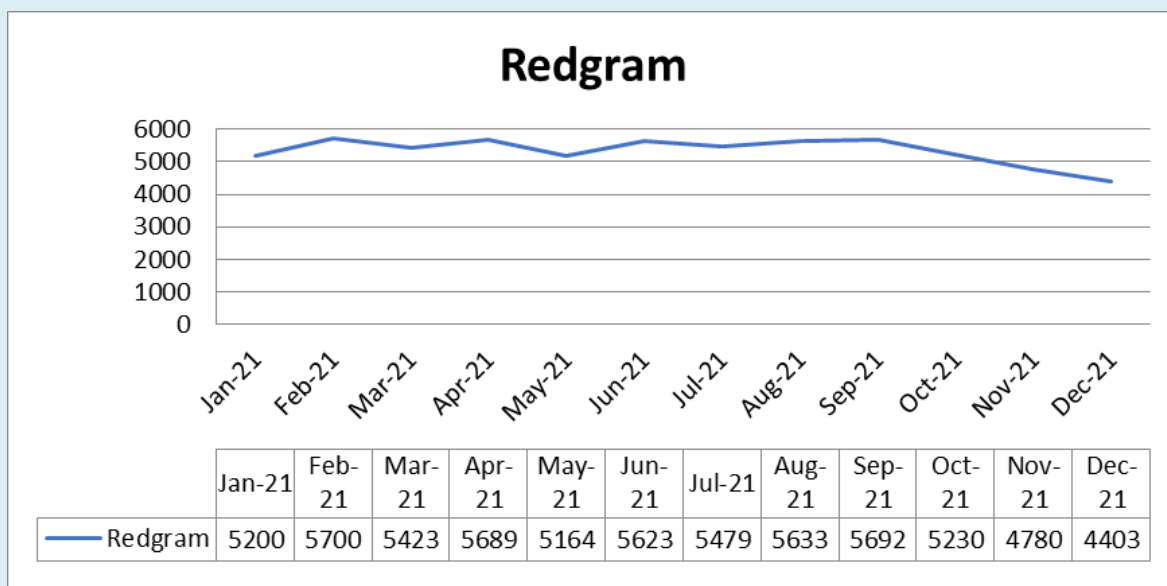
States	No. of days market prices reported	No. of days market prices were above MSP	No. of days market prices were below MSP				Average Difference (%) between MSP & market price
			<5 %	5%-10%	10%-15%	>15 %	
Gujarat	139	38	13	42	22	24	-6.3
Karnataka	129	56	28	29	11	5	1.2
Madhya Pradesh	128	19	7	14	25	63	-14.1
Maharashtra	137	53	32	31	15	6	0.0
Uttar Pradesh	151	2	23	98	26	2	-7.0

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

During Kharif Marketing Season (KMS) 2020-21, market prices of redgram have remained below MSP in most of the days for all the major States (Table 8). The price gap was highest in Madhya Pradesh (-14.1%), followed by Uttar Pradesh (-7.0%) and Gujarat (-6.3%). In Karnataka market price of redgram was marginally higher than MSP.

Figure 3: Average monthly prices of redgram in Andhra Pradesh



Source: Data obtained from Andhra Pradesh AMCs

As per the information shared by Agricultural Market Intelligence Centre, ANGRAU, redgram higher production would ensure better supply side in next season. The bad weather conditions may disturb the harvesting activities in South Indian states. The moisture level in the crop is high at 18 to 20 % against the normal of 12 to 13%. Demand is stable; mills and stockists are waiting for redgram with lower moisture content. There is a continuous supply from African countries. Imported redgram in Mumbai is being traded at Rs 5850- 5950. As the domestic prices of pulses are increasing in the country, government of India has removed import duty on pulses till 31 March 2022 which may be extended till June 31, 2022. In this context, the prices of redgram are decreasing. The other reason is that supply of produce to Karnataka and Maharashtra is also increasing. In Andhra Pradesh as on 29th December 2021, 2.50 lakh hectares of redgram was sown compared to 2.27 lakh hectares last year (apagrisnet.gov.in).

Under these circumstances, the AMIC, ANGRAU is here with provide the latest information with regard to the forecast price range of Rs. 5600 to Rs. 6000 per quintal for redgram in this rabi marketing/harvesting season 2021-22.
