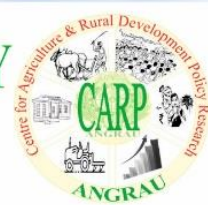




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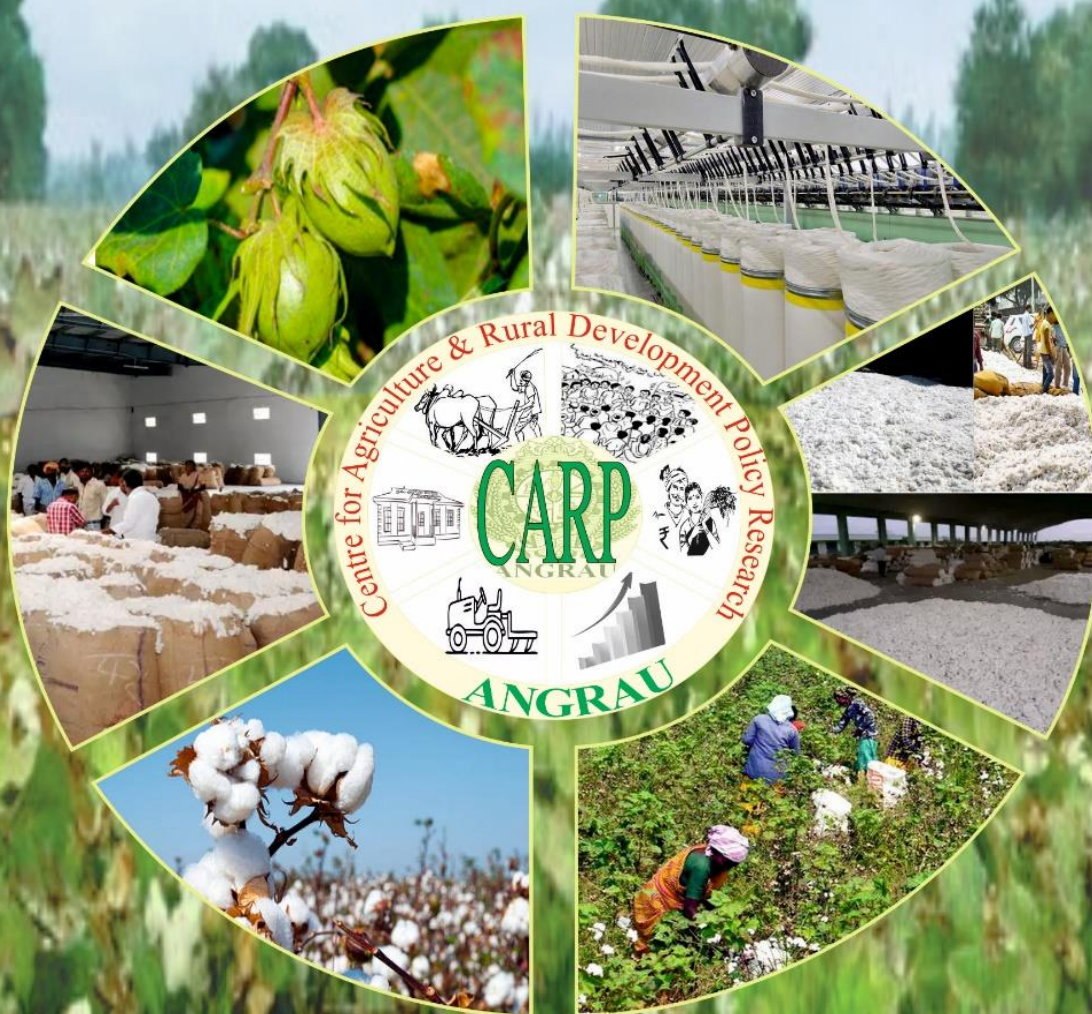
Lam, GUNTUR - 522034.



Crop Outlook Reports of Andhra Pradesh

COTTON

(January to December, 2022)



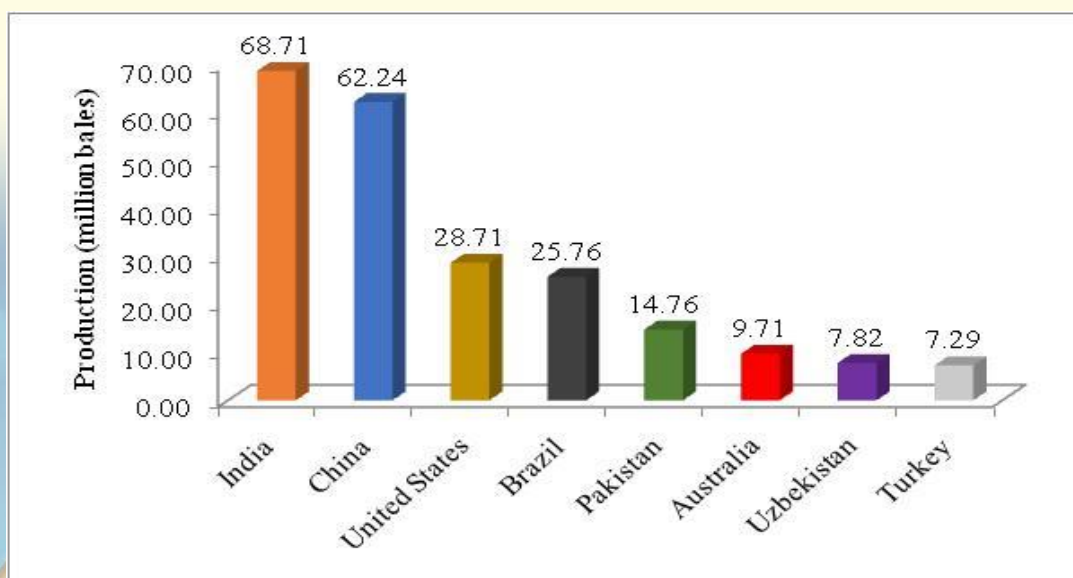
Centre for Agriculture & Rural Development Policy Research (CARP)

ANGRAU, Lam, Guntur - 522 034.

ANGRAU Crop Outlook Reports of Andhra Pradesh COTTON– January to December, 2022

Cotton is one of the most important fiber and a cash crop of India and plays a dominant role in the industrial and agricultural economy of the country. Globally, the area under cotton for the year 2021-22 was 32.10 million hectares, production and productivity accounted for 257.71 million bales and 1370 kg/ha respectively. India has emerged as the largest producer of cotton in the world and occupies the first position in terms of both total area and production. Among the major cotton producing countries in the world, India occupied 1st position with 68.71 million bales (Figure 1).

Figure 1: Major cotton producing countries in the world (2021-22)



Source: fas.usda.gov

In India during 2021-22, production of cotton was 312.03 lakh bales cultivated under an area of 119.66 lakh hectares with a productivity of 431 kg per hectare. In Andhra Pradesh, cotton was cultivated in an area of 5.54 lakh ha with a production and productivity of 12.77 lakh tonnes and 392 kg/ha respectively contributing 4 per cent to total country's production (des.ap.gov.in, 2021-22). According to 1st advance estimates during 2022-23, cotton was grown in 6.02 lakh hectares with a production of 17.85 lakh tonnes and productivity was 504 kg/ha. In India, there are nine major cotton growing states which fall under three zones, viz. the North Zone (Punjab, Haryana and Rajasthan), the Central Zone (Maharashtra, Madhya Pradesh and Gujarat), and the Southern Zone (Andhra Pradesh, Karnataka and Tamil Nadu). Nearly 65 per cent of the cotton crop is cultivated under rainfed conditions in the country. Nearly 2/3rd of the Cotton production in India comes from the states of Maharashtra, Gujarat, Andhra Pradesh, and Telangana, collectively known as the Cotton Basket of India.

Table 1: Balance sheet for the year 2017-18 to 2021-22 (in lakh bales)

Particulars	2017-18	2018-19	2019-20 (P)	2020-21 (P)	2021-22(P)
Supply					
Opening Stock	43.76	42.91	56.52	120.79	73.20
Production	370.00	333.00	365.00	353.84	323.63
Import	15.80	35.37	15.50	11.03	15
Total Supply	429.56	411.28	437.02	485.66	411.83
Demand					
Mill Consumption	280.11	270.78	233.70	297.45	285.00
Consumption By SSI	26.18	22.43	20.49	22.42	22.00
Non-Mill Consumption	12.77	18.00	15.00	15.00	13.00
Exports	67.59	43.55	47.04	77.59	40.00
Total Demand	386.65	354.76	316.23	412.46	360
Ending Stock	42.91	56.52	120.79	73.20	51.83

Source: Cotton Association of India, caionline.in/; Bale -170 kg. (P)- Provisional

The balance sheet in Table 1 explains that the demand for cotton was 360 lakh bales in 2021-22 and the exports have decreased from 67.59 lakh bales in 2017-18 to 40 lakh bales in 2021-22. Total supply was 411.83 lakh bales in 2021-22. Imports have decreased from 15.80 lakh bales to 15 lakh bales from 2017-18 to 2021-22.

Table 2: Cotton Exports and Imports of India

Year	Exports		Imports	
	Quantity in lakh bales of 170 Kgs	Value in Rs. Crores	Quantity in lakh bales of 170 Kgs	Value in Rs. Crores
2006-07	58.00	5267.08	5.53	752.29
007-08	88.50	8365.98	6.38	978.54
2008-09	35.00	3837.13	10.00	1377.80
2009-10	83.00	10270.21	6.00	1195.64
2010-11	76.50	14483.31	2.38	1709.11
2011-12	129.57	23488.59	7.51	1059.20
2012-13	101.43	17462.87	14.59	2057.77
2013-14	116.96	23153.24	11.51	2746.16
2014-15	57.72	9499.87	14.39	2848.50
2015-16	69.07	11434.80	22.79	4230.00
2016-17	58.21	11676.00	30.94	7268.00
2017-18	67.59	13976.71	15.80	4224.84
2018-19	43.55	9502.72	35.37	8339.26
2019-20	47.04	8731.32	15.50	3588.38
2020-21(P)	77.59	17753.83	11.00	3482.72
2021-22 (P)	40.00		18.00	
AVERAGE	71.86	12593.58	14.23	3057.21
CAGR (%)	-2.41***	3.78***	10.43***	17.76***

*Source: Cotton Corporation of India, cotcorp.org.in. NA: Not Available, *** - Significant at 1 per cent levels (P): Provisional*

From table 2, it is observed that the average exports of cotton by India are 71.86 lakh bales from 2006-07 to 2021-22, whereas the average imports are 14.23 lakh bales. The compound growth rate of exports showed a negative and significant growth -2.41 per cent, whereas imports in India showed a positive and significant growth rate of 10.43 per cent. Even though, the growth rate of exports showed negative from 2014-15 to 2021-22 exports in absolute terms have increased from 57.72 lakh bales to 77.59 lakh bales in 2020-21 whereas imports have decreased from 22.79 lakh bales to 18 lakh bales, signaling the better terms of trade for cotton.

Table 3: Cotton Consumption by Organized sector Textile mills (Non-SSI Mills) and Small-Scale Spinning Mills (SSI) Units in India

Year	Non-SSI mills		SSI mills	
	Average Consumption (Quantity in lakh bales)			
	Cotton Consumption	Monthly Consumption	Cotton Consumption	Monthly Consumption
2000-01	149.36	12.45	10.97	0.91
2001-02	147.00	12.25	11.70	0.98
2002-03	142.42	11.87	11.63	0.97
2003-04	150.39	12.53	13.00	1.08
2004-05	163.98	13.67	16.57	1.58
2005-06	180.00	15.00	19.00	1.67
2006-07	194.89	16.24	21.26	1.32
2007-08	195.67	16.31	22.08	1.59
2008-09	190.00	15.83	20.00	1.58
2009-10	219.00	18.25	23.00	1.92
2010-11	221.77	18.48	24.46	2.04
2011-12	223.59	18.63	22.12	1.84
2012-13	251.74	20.97	23.59	1.97
2013-14	268.03	22.34	25.20	2.10
2014-15	278.06	23.17	26.38	2.20
2015-16	270.20	22.50	27.08	2.26
2016-17	262.70	22.00	26.21	2.18
2017-18	280.11	23.33	26.18	2.18
2018-19	270.78	22.57	22.43	1.87
2019-20	233.70	19.48	20.49	1.71
2020-21	297.45	24.79	22.42	1.87
2021-22(P)	276.90	23.08	20.87	1.74
2022-23(P)	275.00	22.92	20.00	1.67
CAGR (%)	3.39**	3.40**	2.89**	2.99**

Source: Cotton Advisory Board, cotcorp.org.in (P): Provisional **-Significant at 5 per cent level

Consumption of cotton by SSI and non-SSI mills is explained in table 3. It is shown that the consumption of cotton by SSI mills increased by 2.89 per cent whereas non-SSI mills, whose growth rate over the years was 3.39 per cent. Consumption of Cotton by organized sector textile mills (Non-SSI) has increased consistently from 149.36 lakh bales in 2000-01 to 275 lakh bales in 2022-23. Consumption of Cotton by SSI mills has also increased from 10.97 lakh bales in 2000-01 to 20.00 lakh bales in 2022-23.

Table 4: State-wise Cotton Purchases by Cotton Corporation of India (CCI) for 2020-21
(Quantity in '000 bales)

States	MSP	Commercial	Total
Punjab	536.00	0.00	536.00
Haryana	1057.00	0.00	1057.00
Gujarat	415.00	0.00	415.00
Maharashtra	1751.00	0.30	1751.30
Madhya Pradesh	444.00	0.00	444.00
Andhra Pradesh	342.00	0.00	342.00
Karnataka	126.00	0.00	126.00
Odisha	205.00	0.00	205.00
Telangana	3401.00	0.00	3401.00
Tamil Nadu	0.00	0.20	0.20
Total	9189.00	0.50	9189.50

Source: Agricultural statistics at a glance 2021.

The Cotton Corporation of India procures the cotton from the farmers at MSP by arranging infrastructure in the form of regular procurement centres as well as satellite centres so that farmers are not compelled to travel long distances to sell their cotton kapas produce. Besides MSP operations, to fulfil the raw material requirements of the domestic textile industry, CCI also undertakes viable commercial purchase operations as and when required. The main aim of these operations is to meet at least the annual cost of the minimum infrastructure maintained by the Corporation for Price Support operations. Table 4 shows that in the year 2020, CCI procured 9189.50 thousand bales of cotton from all over India, of which 9189 thousand bales were at MSP and only 0.50 thousand bales were at commercial price. Procurement of cotton was highest in Telangana, Maharashtra, Gujarat, Haryana, Punjab and Rajasthan.

Table 5: Major producing states of cotton in India

States	Area ('000 Hectares)			Production ('000 Bales of 170 Kgs. each)			Rank
	2015-16	2020-21	2021-22 (P)	2015-16	2020-21	2021-22 (P)	
Gujarat	2722	2279	2255	9400	7397	8516	1
Maharashtra	4207	4226	4182	7500	6247	7528	2
Telangana	1773	2413	2051	3661	7752	6587	3
Rajasthan	448	668	756	1214	2451	2436	4
Haryana	615	737	648	993	2532	1894	5
Andhra Pradesh	666	606	554	1888	1604	1277	7
India	12292	12947	11966	30005	35384	31203	

Source: Cotton Advisory Board, cotcorp.org.in (P): Provisional

The results in Table 5 shows that, Gujarat, Maharashtra and Telangana are the major producing states in India with a production of 85.16, 75.28 and 65.87 lakh bales respectively in 2021-22. Andhra Pradesh stood at 7th position in terms of area and production of cotton in India during 2021-22.

Table 6: Comparison of area, production of Cotton with respect to bifurcation of Andhra Pradesh and Telangana states

Year	Before Bifurcation				Year	After Bifurcation			
	Area (lakh ha)		Production (lakh bales)			Area (lakh ha)		Production (lakh bales)	
	India	AP	India	AP		India	AP	India	AP
2005-06	86.77	10.33	184.99	21.08	2015-16	122.9	6.66	332.0	18.17
2010-11	112.4	17.76	330.0	38.90	2021-22	119.66	5.54	312.03	12.77

Source: AP Data: various issues of Agricultural statistics at a glance, des.ap.gov.in, 2021-22
3rd Advance Estimates India data, eands.dacnet.nic.in.

The details of the comparison of cotton production and area between India and Andhra Pradesh are presented in Table 6. It is seen from the table that in 2005-06 to 2021-22, the area has declined from 10.33 to 5.54 lakh hectares while the production has declined from 21.08 to 12.77 lakh bales because of state bifurcation.

Table 7: Inter-District Comparison of Andhra Pradesh for Cotton crop (2020-21)

Major Districts	Area (in '000 ha)	Rank in Area	Production (in lakh bales)	Rank in Production
Kurnool	275	1	863	1
Guntur	163	2	458	2
Krishna	48	3	111	3
Anantapur	40	4	35	5
Prakasam	33	5	46	4
Total of 5 districts	559		1513	
Other Districts	47		87	
Andhra Pradesh	606		1600	
Share (%) of 5 districts	92		95	

Source: Various issues of Andhra Pradesh Agricultural statistics at a glance.

The inter-district comparison of Andhra Pradesh for the cotton crop (2020-21) is explained in Table 7. It shows that Kurnool ranks first in the area and production due to high productivity followed by Guntur and Krishna districts. Among the 13 districts of Andhra Pradesh state, five districts, viz., Kurnool, Guntur, Anantapur, Krishna and Prakasam, cover 92 % of area under cotton acreage and 95 % cotton production of the state.

Table 8: Cost-return structure of Cotton in Krishna Zone 2021-22 (Rs./ha)

S NO	Particulars	Cotton
1	Labour costs (Rs/ha)	53290(35.99)
2	Material costs(Rs/ha)	48968(33.07)
3	Variable costs(Rs/ha)	104048(70.27)
4	Fixed costs(Rs/ha)	30556(20.64)
5	Total cost(Rs/ha)	148064(100)
6	Yield (Qtl/ha)	11
7	Price (Rs./qtl)	8350
8	Gross returns (Rs/ha)	88273
9	Net returns (Rs/ha)	-59791
10	Gross Margin (Rs/ha)	-15775
11	Return on rupee BCR	0.596
12	Return on VC	0.848
13	Cost of Production (Rs./qtl)	14006

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 cotton in Krishna Zone (Guntur, Prakasam and Krishna districts) in Andhra Pradesh for the year 2021-22 is presented in Table 8. Cost of Production in cotton was Rs. 14006/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. Because of the lower productivity during 2021-22, the gross margin and net returns were Rs. -15775 per ha and Rs. -59791 per ha respectively. The return on rupee investment was 0.596 which is concerned to tenant farmers and return on variable costs was 0.848 which is mostly related to owner farmers.

Cotton Price Outlook:

For calculating seasonal indices, modal prices of cotton kapas from the Adoni market of Kurnool district were taken. Seasonal indices measure the monthly per cent deviation from the average arrivals and prices of 2022.

Table 9: Seasonal Indices of Cotton in Adoni Market (2022)

Months	Arrivals	Price
January	192.99	92.88
February	57.42	99.25
March	37.21	93.46
April	36.35	111.07
May	18.35	125.14
June	15.86	111.09
July	19.98	96.89
August	54.51	110.29
September	262.17	96.70
October	216.39	87.70
November	205.25	89.15
December	83.52	86.39

Source: Data obtained from Adoni AMC

The results in Table 9 indicates that the maximum arrival indices of cotton in the Adoni market were observed in September (262.17 %) followed by October (216.39 %) November (205.25 %). Minimum arrival indices were observed May and June. The highest price indices were observed in May (125.14%), followed by June (111.09%) and April (111.07%). The minimum price indices were observed in December and October. The average monthly prices of cotton were Rs. 9249, 8388, 8527 and 8263 for the months of September, October, November and December 2022 respectively in Adoni AMC.

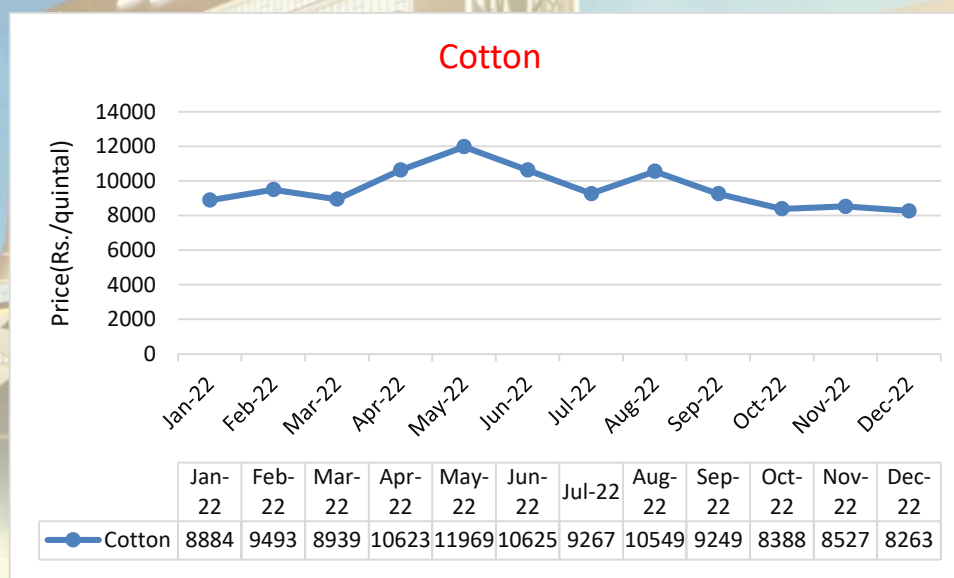
Table 10: Market Prices vis-à-vis MSP of Cotton in Major Producing States in Kharif Marketing Season 2022

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 %	
Maharashtra	142	140	0	1	0	0	50.0
Gujarat	129	126	3	0	0	0	42.9

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 10 shows the number of days when market prices stayed above/below MSP for cotton in major two cotton producing States during the current marketing season. The average difference between market prices and MSP was 50 percent in Maharashtra and 42.9 percent in Gujarat.

Figure 2: Average monthly prices of Cotton in Andhra Pradesh



Source: Data obtained from Andhra Pradesh AMC

The figure 2 shows the monthly average prices of cotton in Andhra Pradesh, obtained from all major markets. As per the information shared by Agricultural market Intelligence Centre, ANGRAU, Cotton arrivals in the domestic market are not increasing as farmers are holding stock in anticipation of higher prices. Overall weather is favorable for the cotton crop.

As on 16th December 2022, 127.39 lakh hectares of cotton was sown compared to 118.56 lakh hectares last year in India (agricoop.nic.in). In Andhra Pradesh as on 28th December 2022, 6.64 lakh hectares of cotton was sown compared to 5.22 lakh hectares last year (apagrisnet.gov.in). Cotton exports are getting affected despite of higher production in India. Indian traders so far in the new season have contracted about 70,000 bales for exports, significantly lower than the 500,000 bales contracted during the same period previous season. Bangladesh, Vietnam, and China are the major buyers of Indian Cotton. Further, exports are unlikely to gain momentum unless local prices fall, or global prices move higher. Global cotton production is estimated down by 700,000 bales from the previous month to 115.7 million bales, largely owing to lower production in Pakistan. Pakistan production has fallen due to floods and poor weather.

Under these circumstances, AMIC, ANGRAU is here with providing the latest information with regard to the forecast price range of Rs. 7700-8300 per quintal for cotton in this rabi marketing/harvesting season 2022-23.

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