



Trends in Cotton Crop in Three Regions of Andhra Pradesh and All-India

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ABSTRACT

Cotton is the oldest among all fibres, and one of the most important commercial crops playing a key role in the world economy. India is one of the prominent cotton producers in the world, covering an area of nearly nine million hectares and accounting for 25 per cent of the world cotton area. Cotton textile and secondary manufacturing industry provides employment to about 35 million people and contribute to 14 per cent of the India's industrial production, 27-30 per cent of the export earnings and 4 per cent of Gross Domestic Product (GDP). Andhra Pradesh occupies a prominent position among cotton producing states in India as it accounts for around 11 per cent of the nation's cotton production and occupies third place in terms of area and production in the country. An attempt has been made in this paper to study the trends and responses of area, production and productivity of cotton crop in the three regions of Andhra Pradesh.

Keywords: Cotton Crop, Trends, Andhra Pradesh

INTRODUCTION

Cotton is the oldest among all fibres, king of textiles, used by human beings and forms as one of the most important commercial crops playing a key role in the economy of the world. It is grown in more than 80 countries in the world as a major commercial crop with an average area of 33–34 million hectares every year. The five largest cotton producing countries in the world are China, USA, India, Pakistan and Uzbekistan, which together account for about 70 per cent of world area and production. It is the single most important textile fibre in the world accounting for over 40 per cent of the total world fibre production. United States, China and India together provide over half the world's production. The world's largest producing and consuming countries are China, the United States, India and Pakistan. Together these four countries account for around 60 per cent of world cotton production and consumption (www.motilaloswal.com).

India is the third largest cotton producer in the world behind China and the United States, accounting for 25 per cent of the world acreage but only 14 per cent of world production (USDA 2001). Cotton occupies a significant position in Indian economy as a commodity that forms a means of livelihood to millions of cotton cultivating farmers, provides direct employment to over 35 million people in the secondary manufacturing textile industry that contributes to 14 per cent of the country's industrial production, 27–30 per cent of the country's export earnings and 4 per cent of its gross domestic product (GDP)

Cotton is grown on nine million hectares of land across India and occupies around 5 to 6 per cent of the total cultivated area distributed over 12 states in the country. The major cotton producing states in India are Gujarat, Maharashtra, Andhra Pradesh, Rajasthan, Punjab, Madhya Pradesh, Haryana, Karnataka and Tamil Nadu.

Andhra Pradesh occupies a prominent position among the principal cotton producing states in India, as it accounts for around 11 per cent of the nation's cotton production and occupies third place in terms of area and production of cotton in the country. Cotton is mostly raised as a kharif crop in the state. The state of Andhra Pradesh is made up of three agro-climatic regions namely, Rayalaseema, Coastal Andhra and Telangana. Thus, in this paper an attempt has been made to study the trends of area, production and productivity (yield)

of cotton crop in the above mentioned regions of Andhra Pradesh and all-India.

SOURCE OF THE DATA

The present study have been made use of secondary data, such as Reports of East India Cotton Association, Andhra Pradesh Cotton Association, Season and Crop Reports, CMIE Reports, Statistical Abstracts of Andhra Pradesh and An Outline of Agricultural Situation in Andhra Pradesh. Besides, several books, published and unpublished reports, monographs, brochures and websites were also used for securing the necessary data and information on cotton crop.

METHODOLOGY

The growth rates of area, production and productivity of cotton crop have been computed using the following formulas:

$$Y_t = \alpha \beta^{X_t} \text{ (compound) or}$$

$$\text{Log } Y = \text{Log } \alpha + X_t \text{Log } \beta$$

Where,

$Y_t = \text{Area} / \text{Production} / \text{Productivity}$

$X_t = \text{Time}$

To test the significance of the growth rates of the area, production and productivity, the 't' test has been used with the following formula:

$$t \text{ test} = \hat{\alpha} / \text{Standard Error of } \hat{\alpha}, t(n-2, \alpha \%)$$

RESULTS AND DISCUSSION

The growth rates of area, production and productivity under Coastal Andhra, Rayalaseema and Telangana regions of Andhra Pradesh and all India during the period from 1969-70 to 2003-04 have been computed and the details are presented in the table-1.

A perusal of table-1 indicates that the area under cotton increased at growth rate of 5.4217 and 6.8445 per cent in Coastal Andhra and Telangana respectively, which were significant at 1 per cent level. But, Rayalaseema region registered a negative growth of -1.3235 per cent which is statistically significant at 5 per cent level. In case of Andhra Pradesh and all-India, the area under cotton crop increased

significantly at 1 per cent level with growth rates of 4.1013 and 0.3442 per cent respectively.

Table-1: Trends in Area, Production and Productivity of Cotton in three Regions of Andhra Pradesh and all-India

(Percent)

Region	Area		Production		Productivity	
	Growth Rate	t-value	Growth Rate	t-value	Growth Rate	t-value
Coastal Andhra	5.4217	7.337**	7.1202	5.495**	1.6988	2.125
Rayalaseema	-1.3235	-2.094*	3.8802	4.946**	5.2049	9.300**
Telangana	6.8445	21.150**	11.8494	14.925**	4.9899	8.069**
Andhra Pradesh	4.1013	15.406**	7.8539	12.901**	3.7541	6.349**
India	0.3442	2.633**	3.5241	13.418**	3.2549	15.864**

Note: ** and * indicates significant at 1 per cent and 5 per cent level respectively.

Considering the production of cotton crop, the growth rates were registered 7.1202percent, 3.8802percent, 11.8494percent, 7.8539percent and 3.5241 per cent in Coastal Andhra, Rayalaseema, Telangana, Andhra Pradesh and all-India and statistically significant at 1 per cent level.

The productivity is an important factor in determining the crop to be raised. It shows that the productivity of cotton exhibits a significant growth in all the regions except Coastal Andhra. The growth rates in respect of cotton productivity in Rayalaseema, Telangana, Andhra Pradesh and all-India are 5.2049, 4.9899, 3.7541 and 3.2549 per cent and significant at 1 per cent level implying that there is a significant increase in cotton productivity during 1969-70 to 2003-04. This happened due to advancement in research pertaining to evolution of high yielding varieties of cotton over the period of time and adoption of IPM (Integrated Pest Management) by the cotton growers in the county.

CONCLUSIONS AND SUGGESTIONS

The state of Andhra Pradesh is made up of three agro-climatic regions namely Coastal Andhra, Rayalaseema and Telangana. During 1969-70 to 2003-04, the area cotton crop exhibited an increasing trend in Coastal Andhra, Telangana regions of Andhra Pradesh and all-India, while it shows decreasing trend in Rayalaseema region. As far as the production and productivity of cotton area covered, an increasing trend during the same period in all the regions is noticed. The area under cotton increased significantly in all the regions except Rayalaseema while the production and productivity grew significantly in all regions.

Based on the above analysis, the following are the suggestions for profitable farming of cotton crop. Steep decline in productivity in main cotton growing states can be prevented by stepping up research and extension efforts. The price of the cotton in the international market is highly volatile, and this can be reduced if not totally removed by providing minimum cotton support price by the Government, which will be helpful to the cotton farmers.

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