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MARKETING CHANNELS, MARKETING COST, MARGIN AND PRODUCER'S SHARE IN CONSUMER'S RUPEE IN SUPPLY CHAIN MANAGEMENT ON COTTON IN GUNTUR, ANDHRA PRADESH

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ABSTRACT

Sustainability in the cotton supply chain has become a critical concern due to the industry's significant environmental and social impacts. This research paper examines the cotton supply chain through the lens of sustainability, analysing each stage—from cultivation and harvesting to textile manufacturing and retail distribution. The study highlights key challenges, including water consumption, pesticide use, carbon emissions, and labour rights issues, particularly in developing countries. It also explores the role of sustainable farming practices, certification systems (e.g., Organic, Better Cotton Initiative), and supply chain transparency in promoting environmental stewardship and ethical sourcing. Through case studies and current data, the paper identifies best practices and emerging technologies aimed at reducing the ecological footprint of cotton production while ensuring economic viability for stakeholders. This research underscores the importance of collaborative efforts among farmers, manufacturers, brands, and consumers to build a more sustainable and responsible cotton supply chain.

Keywords: Sustainability, Environment, Harvesting, Manufacturing, Certification

INTRODUCTION

Cotton is one of the most important fibre and cash crop of India and plays a dominant role in the industrial and agricultural economy of the country. It provides the basic raw material (cotton fibre) to cotton textile industry. Cotton in India provides direct livelihood to 6 million famers and about 40 – 50 million people are employed in cotton trade and its processing. In India, there are ten major cotton growing states which are divided into three zones, viz. north zone, central zone and south zone. North zone consists of Punjab , Haryana, and Rajasthan. Central zone includes Madhya Pradesh, Maharashtra and Gujarat. South zone comprises Andhra Pradesh, Telangana, Karnataka and Tamil Nadu. Besides these the ten States, cotton cultivation has gained momentum in the Eastern State of Orissa. Cotton is also cultivated in small areas of non – traditional States such as Uttar Pradesh, West Bengal & Tripura. Cotton is currently the leading plant fibre crop worldwide and is grown commercially in the temperate and tropical regions of more than 50 countries (Smith 1999), with a total coverage of 34 million ha. The cotton seed coat extends into tubular fibre and is spun into yarn. Specific areas of production include countries such as USA, India, China the Middle East and Australia, where climatic conditions suit the natural growth requirements of cotton , including periods of hot and dry weather, and where adequate moisture is available, often obtained through irrigation. Among the five

major cotton growing countries, China holds the highest productivity level (1,265 kg/ha), followed by USA (985kg/ha) , Uzbekistan (831 kg/ha), Pakistan (599 kg/ha) and India (560kg/ha) (Table 1.1) . India ranks first in terms of cultivated area, occupying over a quarter of the world cotton area, followed by China , USA, and Pakistan. About 26.247 million metric tons of cotton are produced globally , and the major countries contributing the most are China ,India, USA and Pakistan followed by Uzbekistan, Turkey , Australia, Greece , Brazil and Egypt. Cotton one of the world's leading agricultural crops , is plentiful and economically produced, making cotton products relatively inexpensive. The fibres can be made into a wide variety of fabrics ranging from lightweight voiles and laces to heavy sail cloths and thick – piled velveteen, suitable for a great variety of wearing apparel, home furnishings, and industrial uses. Cotton fabrics can be extremely durable and resistant to abrasion. Cotton accepts many dyes is usually washable, and can be ironed at relatively high temperatures. It is comfortable to wear because it absorbs and release moisture quickly. When warmth is desired , it can be napped a process giving the fabric a downy surface. Various finishing processes have been developed to make cotton resistant to stains, water and mildew to increase resistance to wrinkling , thus reducing or eliminating the need for ironing, and to reduce shrinkage in laundering to not more than 1 % . Nonwoven cotton, made by fusing or bonding the fibres together , is useful for making disposable uniforms and sheets for hospital and other medical uses.

RESEARCH METHODOLOGY

The methodology adopted for present study was a combination of purposive and random sampling techniques. The district of Guntur in Andhra Pradesh was purposively selected to minimize the logistical challenges and time constraints for the investigator. Among the blocks within the Guntur district, Phirangipuram block was selected based on predominance of respondents engaged in layer bird rearing. Methodology plays an important role in all social science researches and investigations. Unless the methodology is on the correct lines, the analysis of facts and figures and the conclusions will not be scientific and significant. This study is mainly based on the primary data, collected personally through field survey and with help of questionnaire. In order to select samples for study, Purposive Stratified Random Sampling Techniques have used. For the purpose for this study, 10 villages were proportionately chosen randomly. Personal interview technique was used to collect the primary data. Face to face discussion proved very useful. Secondary data and information were also collected through various censes reports. Research reports, Statistical abstracts, five year plans, periodicals, journals and books. Secondary data as published by the non – government organizations (NGO's) and other agencies were also taken into consideration for analysis and classification. Sample survey methodology was used with adequate contextual and historical perspective. The description of tools and techniques used for collecting, analysing and classifying data is given below.

Analytical tools:

1. Chi-Square: $\chi 2 = \sum(Oi - Ei) / Ei$

2. Garre Ranking: 100 (Rij-0.5) /Nj

RESULTS & DISCUSSION

Table 4.1 Distribution of the respondent on the basis of age

Sl. no	Age	Farmers (Numbers)					Total	Total Percentage
		Marginal	Small	Semi – medium	Medium	Large		
1	Below 30 years	4	3	2	1	0	10	10%
2	Between 30 to 50 years	10	6	12	9	5	45	45%
3	Above 50 years	6	8	12	11	8	45	45%
	Total	20	20	26	21	13	100	100%

Table 4.1 reveals about the age of respondents in the study area in which 45% were between 30 years to 50 years followed by 45% were below 30 years and 10% were above 40 years.

4.2 Education qualification of the Respondents

Sl. no	Education level	Farmers (Numbers)					Total	Total Percentage
		Marginal	Small	Semi – medium	Medium	Large		
1	Illiterate	6	4	3	2	0	15	15%
2	Primary Education	5	6	4	2	1	18	18%
3	Secondary Education	6	5	6	5	2	22	22%
4	Higher Secondary	3	3	7	6	3	22	22%
5	Graduate and Above	2	2	6	6	7	23	23%
6	Total	20	20	26	21	13	100	100%

The table 4.2 reveals about the literacy of respondents in the study area in which 22% had done high schooling followed by 23% graduate and 18% primary level, 15% were illiterate .

4.3 Distribution of the respondent on the basis of income

Sl.no	Income Occupation category	Farmers (Numbers)					Total	Total Percentage
		Marginal	Small	Semi – medium	Medium	Large		
1	Low income (<1 lakh/yr	8	5	2	0	0	15	15%
2	Medium income (<1 lakh/yr	7	8	6	2	0	23	23%
3	High income (<1 lakh/yr	3	5	10	6	2	26	26%
4	Very High income (<1 lakh/yr	2	2	8	8	11	31	31%
5	Total Income group	20	20	26	16	13	100	100%

Table 4.3 reveals about the income level of respondents in the study area in which 15% has income of Rs.10000 to Rs.150000 followed by 23% has income of medium 15% has income of Rs. 150001 to 200000, 10% has income below Rs 50000 and 5% has income above Rs.20000.

4.4 Distribution of the respondent on the basis of occupation.

Sl. No.	Particular (Occupation)	Farmers Size					Total	Percentage
		Medium	Small	Semi-medium	Medium	Large		
1	Agriculture	11	5	3	4	3	**26**	**26%**
2	Horticulture (other than cotton)	8	10	5	6	4	**33**	**33%**
3	Animal Husbandry	6	4	2	4	0	**16**	**16%**
4	Salaried	2	2	1	3	2	**10**	**10%**
5	Business / Profession	4	2	5	3	1	**15**	**15%**
	Total	**31**	**23**	**16**	**20**	**10**	**100**	**100%**

Table 4.1.4 reveals about the occupation of respondents in the study area in which 33% has occupation of horticulture followed by 26% responded for agriculture, 16% responded for animal husbandry, 15% responded for business and 10% were salaried respondents.

Marketing Constraints

Sl. No.	Marketing Constraints	Garrett Mean Score	Garrett Rank
1	Fluctuation in market price	76.42	1
2	Lack of storage facilities	72.18	2
3	Dependence on middlemen	68.75	3
4	Delayed payments by buyers	64.37	4
5	Poor access to regulated markets	61.45	5
6	Inadequate market information	59.83	6
7	High transportation cost	56.21	7
8	Lack of grading and standardization facilities	52.76	8
9	Limited access to government procurement (CCI)	49.34	9
10	Exploitation during peak season (low prices, distress sales)	47.91	10

CONCLUSION

The cotton supply chain in Guntur represents a dynamic and integral part of the region's agricultural and economic framework . As one of the key cotton – producing districts in Andhra Pradesh, Guntur supply chain stretches from cotton cultivation at the farm level to its transformation into yarn and fabric for both domestic and international markets. The process begins with thousands of small and medium – scale farmers who grow cotton under various climatic and soil conditions. Their produce is typically sold to local traders or ginning mills. These intermediaries play a critical role in aggregating, processing (ginning) , and transporting cotton to spinning mills, where it is further processed into yarn. The yarn is then either exported or sold to textile manufacturers. A key strength of this supply chain is its established market linkage, particularly through the Guntur Cotton Market Yard, which acts as a hub for trade. Additionally, the presence of ginning and spinning mills in and around Guntur reduces the need for long – distance transportation at the early stages of processing, ensuring operational efficiency. However, several challenges still persist. Price volatility in the global cotton market affects income stability for farmers. A lack of adequate warehousing and storage infrastructure often results in post – harvest losses to the need to sell cotton immediately at lower prices. Further, limited access to real – time market information, financial support, and advanced farming inputs hampers the productivity and bargaining power of small farmers.

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