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Market research on Bt-cotton in Wardha district of Maharashtra

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Abstract: The study is an analysis of price spread, producer's share in consumer's rupee and marketing efficiency of Bt-cotton in Wardha district of Maharashtra. A multistage sampling technique was employed to select the market functionaries from whom information was collected and analyzed. The data was collected using well designed questionnaires from two different marketing channels – Channel 1: Producer- Ginner and channel 2: Producer- Commission agent- Ginner. Then the data was analyzed using tabulation method alongwith statistical tools. The marketing costs and marketing margins were found to be increasing in channel 2.

Keywords: Cotton, Price spread, Producer's share in consumer's rupee, marketing efficiency.

INTRODUCTION

The core of the Indian economy is agriculture. The Central and State Governments' Gross Domestic Products are receiving a greater contribution from agriculture and related industries. With the advent of the Green Revolution in 1966–1967, the rise in the agricultural growth in agricultural production is supported by the use of high yielding crop types, large irrigation systems, efficient herbicides, and cropping techniques, among other things. In Maharashtra and throughout India, Bt-cotton is one of the major fibre crops that producers grow. Also, the All India Coordinated Cotton Improvement Project (AICCP) was started in 1967 by the Indian Council of Agricultural Research (ICAR), New Delhi. The first phase of the AICCP focussed on increasing the yield of medium and long-length stapled cotton to supply the nation's textile sector. Changes in cotton production, productivity, and fibre quality parameters have been brought about, particularly under dryland cottons, since the introduction of hybrid cotton H-4 in 1970 and the subsequent research and release of improved hybrid cotton in the 1970s.

Approximately 23.83 per cent of the world's total cotton production is produced in India, where cotton is one of the most

significant commercial crops. It is crucial to the livelihoods of 40–50 million people who work in agriculture and are estimated to be 6 million cotton farmers and also people associated in activities like the trading and processing of cotton. In contrast to the rest of the world, where the ratio of cotton to non-cotton fibres is around 30:70, the Indian textile industry uses a wide variety of fibres and yarns.

Cotton is not only the second most important food source in the world for providing clothes, but it also accounts for a significant portion of India's net foreign exchange earnings through exports of raw cotton and intermediate products like yarn and fabrics, final goods in the shape of knitwear, made-ups, and clothing. The term 'White-Gold' is also applied to it because of its economic significance in India.

MATERIALS AND METHODS

Based on the major area under Bt-cotton crop, Wardha district of Maharashtra was purposively selected as the climatic conditions in Wardha district were suitable for Bt-cotton cultivation, hence major crop grown in this area was Bt-cotton. Therefore, it was the main reason to select Bt-cotton crop in this area for the study.The district, tehsils and villages were chosen using a multistage sampling design. The sampling design involved four stages. A total of 90 Bt-cotton farmers were chosen to collect the data. Data on production costs, gross profits, marketing channels and marketing costs for the year 2021-22 was gathered. The actual marketing costs incurred by sample Bt-cotton farmers through different marketing channels were considered. The primary data regarding area under Bt-cotton, marketing costs, marketing channels, price spread and marketing efficiency were collected from the sample farmers with the help of specially designed questionnaires during the agricultural year 2021-2022.

RESULTS AND DISCUSSION

There were two marketing channels for cotton marketing in Wardha district of Maharashtra as follows:

Channel I: Producer- Ginner

Channel II: Producer- Commission agent- Ginner

Table 1 Channel wise marketing of Bt-cotton **(Qty/ha)**

Sr. no.	Marketing channel	Size group			
		Small	Medium	Large	Overall
1	**I**	10.78 (50.26)	11.73 (47.78)	15.83 (57.02)	12.78 (51.97)
2	**II**	10.67 (49.74)	12.82 (52.22)	11.93 (42.98)	11.81 (48.03)
3	**Total quantity marketed**	**21.45 (100.00)**	**24.55 (100.00)**	**27.76 (100.00)**	**24.59 (100.00)**

(Figures in the parentheses indicate percentage to the total)

It could be seen that there are two marketing channels in Bt-cotton marketing. It was observed that marketing channel- I (Producer – Ginner) was the most preferred channel.

Per Quintal Cost of Marketing through Different Channels of Bt-cotton

Various marketing functions viz., labour, transport, weighing charges etc., were required to be performed in the marketing of Bt-cotton. The cost incurred for performing these operations was very important in cotton marketing.

The per quintal marketing cost of Bt-cotton in different marketing channels on performing the operations such as labour charges, transportation charges, weighing charges, etc. are worked out and presented in Table 2.

Table 2 : Per quintal marketing cost, price spread and marketing efficiency in different channels of Bt-cotton (/qtl)

Sr. no.	Particulars	Channel-I (Producer-Ginning mill)	Channel -II (P-CA-G)
A	Marketing cost incurred by producer		
1	Gross price received by the farmer	7995.32	7920.12
2	Cost of packing	15.62	15.86
3	Loading	102.31	93.74

4	Transportation	96.17	109.75
5	Weighing charges	10	10
6	Sub total	224.10	229.35
B	Marketing cost incurred by commission agent		
1	Price paid by commission agent		7920.12
4	Marketing margin of commission agent (1%)	-	79.20
C	Purchase price of Ginning mill	7995.32	7999.32
D	**Total marketing cost**	**224.10**	**229.35**
E	Total marketing margin	-	79.20
F	**Net price received by the producer**	**7771.22**	**7690.77**
G	Price spread	224.10	308.55
H	Producer's share in consumer's rupee (%)	97.20	96.14
I	**Marketing efficiency**	**35.68**	**25.93**

It can be seen from the table that, the per quintal cost of marketing of Bt-cotton of Channel-I (Producer-Ginning mill) and Channel-II (Producer-Commission agent - Ginning mill) were □ 224.10 and □ 229.35, respectively. Thus, per quintal cost of marketing was highest in Channel-II (Producer-Commission agent- Ginning mill). Among the marketing costs, transportation charges and loading charges were the major items and contributed highest share in the total cost of marketing. Transportation charges contributed to be the maximum cost in Channel-II.

Price Spread and Marketing Efficiency in Different Marketing Channels

Price spread is the difference between the price paid by the consumer and price received by the producer. This consists of marketing costs and margins of the different channels. It is observed from the table, the net price received by the producer was □ 7,771.22 per quintal and □7,690.77 per quintal in Channel-I and Channel-II, respectively. Price spread was maximum in Channel-II (□ 308.55 per quintal), followed by Channel-I (□ 224.10 per quintal).

Marketing efficiency was worked out by using modified method as suggested by Acharya and Agrawal. From the table 5.13 it was seen that, the marketing efficiency was maximum for

Channel-I (35.68) followed by Channel-II (25.93), respectively. Channel I was the most popular and efficient channel in marketing of Bt-cotton.

The findings of the marketing cost and marketing efficiency reveals that the total marketing cost in channel I (224.10 per quintal) is less as compared to channel II (229.35 per quintal).Also, the marketing efficiency in channel I is found to be higher (35.68 per cent) as compared to channel II (25.93 per cent).

This reveals that when the marketing cost is found to be lower it leads to more efficient marketing. Thus, the hypothesis that marketing cost significantly affects the marketing efficiency is proved and the alternate hypothesis is accepted.

The similar findings were noticed by Srivastava, S. C., Rajeev Kumar Singh, Sudeep, Tomar, S. and Sudhanshu Jain (2015). The analysis revealed that marketing efficiency in channel -I was comparatively high due to less marketing cost and margins.

CONCLUSION

The study was based on primary data collected by 90 farmers of selected villages in the two tehsils of thedistrict. Among the two marketing channels identified in the Wardha district, producer's share in consumer's rupee and marketing efficiency was found to be more in channel I as compared to channel II. So, with less involvement of middlemen, there can be more producer's share in consumer's rupee and less marketing costs.

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