



STUDY ON MARKETING OF FUNGICIDE AMISTAR TOP'S IN BHAGALPUR DISTRICT OF BIHAR

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<https://doie.org/10.0530/AE.2024305264>

ABSTRACT

The study identifies several critical constraints in Amistar Top's marketing, including high transportation costs, storage issues, and the fungicide's high pricing, which collectively pose significant barriers to efficient market access and product adoption. Marketing channel analysis indicates a strong preference for traditional distribution channels over emerging online platforms, reflecting the existing trust and reliability placed in conventional marketing routes by the farming community. The report offers strategic recommendations aimed at optimizing marketing approaches for Amistar Top's fungicide. Tailoring marketing strategies to address the needs of small-scale farmers, leveraging digital platforms to engage younger farmers, and implementing cost-reduction measures to alleviate pricing and logistical constraints are identified as key measures. These strategies, coupled with educational initiatives to enhance product knowledge and application practices, are pivotal for boosting Amistar Top's fungicide's adoption, thereby supporting sustainable agricultural development in Bhagalpur District.

Keywords: Transportation, Fungicide, Trust, Logistic, Sustainable

INTRODUCTION

Agriculture significantly impacts India's economy, contributing around 17-18% to the country's GDP and employing about 58% of its population (World Bank, 2021). Bihar, in particular, plays a vital role in this sector, being one of the largest producers of food grains in India (Government of Bihar, 2021). Fungicides are critical in protecting crops from fungal diseases, which are a significant threat to agricultural productivity worldwide, potentially reducing yields by Bihar to 20-40% (FAO, 2020).

The Indian fungicide market, as of 2021, was showing a growth trend, indicative of the sector's response to the challenges posed by crop diseases (Agro Pages, 2021). In Bihar, where diverse agricultural practices prevail, the effective use of fungicides is pivotal for maintaining crop health and ensuring food security (Agricultural Statistics at a Glance, 2020). Studies highlight the underutilization of fungicides in certain regions, with factors such as cost, accessibility, and awareness influencing farmers' adoption rates (Singh et al., "Factors influencing the adoption of crop

protection measures by Indian farmers," *Journal of Agricultural Science*, 2019). The strategic marketing of fungicides, therefore, becomes essential to bridge this gap, potentially enhancing agricultural productivity and economic stability in these areas.

Socio-economic and educational factors also play a significant role in the adoption of agricultural innovations, including fungicides. Increased literacy rates and access to information have been correlated with higher adoption rates of such technologies (Kumar and Nair, "Education and its Impact on Farm Productivity in the Indian States: A Panel Data Analysis," *Agricultural Economics Research Review*, 2020). The digital revolution in rural India has further paved the way for innovative marketing strategies, significantly impacting young farmers' awareness and usage of agricultural inputs (Digital India, 2021).

SYNGENTA is a global leader in the crop protection industry, has been active in India, offering a range of products including fungicides like Amistar Top's. The company's commitment to innovation and sustainability aligns with the needs of the Indian agricultural sector, aiming to enhance crop productivity and protection while minimizing environmental impact (SYNGENTA India, 2021).

The reference to Amistar Top's benefits, such as its high bioavailability and reduced environmental impact, underscores the advancements in fungicide formulations aimed at addressing both efficacy and sustainability concerns (Environmental Protection Agency, "Reducing Pesticide Risks: A Half Century of Progress," 2022).

To sum Bihar, the strategic application of fungicides in India, particularly in

agriculturally dominant states like Bihar, is crucial for enhancing crop yields, securing livelihoods, and ensuring national food security. The role of companies like SYNGENTA in this ecosystem is significant, providing innovative solutions tailored to the challenges of the Indian agricultural landscape.

STATEMENT OF THE PROBLEM

The agricultural sector in Bhagalpur district of Bihar faces significant challenges in crop protection, notably in managing fungal diseases that compromise yield and quality. Despite the availability of advanced fungicides like Amistar Top's, there is a gap in effective marketing strategies and farmer adoption rates. This research project aims to investigate the marketing practices of Amistar Top's in Bhagalpur, identifying the barriers to its widespread adoption among farmers. The study will explore the effectiveness of current marketing strategies, the level of awareness among farmers, and the impact of socio-economic factors on fungicide utilization. Addressing these issues is crucial for enhancing crop productivity and ensuring sustainable agricultural practices in the region.

JUSTIFICATION OF PROBLEM

The justification for investigating the marketing of Amistar Top's fungicide in Bhagalpur district is grounded in the imperative to bolster agricultural productivity and sustainability. Fungal diseases pose a substantial threat to crop yields, directly impacting food security and farmers' livelihoods. Amistar Top's represents a potent solution, yet its underutilization underscores a critical gap in marketing and knowledge dissemination. Understanding and enhancing the marketing

strategies for such fungicides can significantly improve adoption rates, ensuring that farmers have the necessary tools to combat crop diseases effectively. This research could lead to improved agricultural outcomes, fostering economic stability and food security in a region heavily reliant on agriculture.

RESEARCH METHODOLOGY

Sampling design:

A multistage stratified random sampling procedure was adopted for the present investigation to select the ultimate unit of the sample.

1. First stage - Selection of District
2. Second stage - Selection of Block
3. Third stage - Selection of Village
4. Fourth stage - Selection of Respondent
5. Fifth Stage- Selection of Market and Market Functionaries

Selection of District: - There are 38 districts in Bihar state. Out of this Bhagalpur district of Bihar was selected purposively for the study.

Selection of Block: - A complete list of all 16 blocks of the selected district Bhagalpur district was obtained from the district headquarters out of which the Naugachia block was selected.

Selection of the villages: - A complete list of the villages of Naugachia block was 20 villages out of which 15% villages that is 3 villages were selected randomly for the present study.

Selection of Respondents: - A list of all the farmers of the block was prepared. Out of the total 10% of farmers were selected randomly according to farmer's productivity and experience.

Selection of Market and Market Functionaries: - Selection of the market is a crucial stage of sampling. the market is selected purposively in the Research Area. An appropriate number of markets are selected nearest to the farming area and district headquarters.

RESULTS AND DISCUSSION

Marketing channels involve in the marketing of amistar top's

Table 1: Marketing channels involve in the marketing of Amistar Top's

Channel I	Producer > Wholesaler > Retailer > Consumer
Channel II	Producer > Marketplace (Online) > Consumer

Table 1, describes two marketing channels for distributing Amistar Top's, a fungicide. Channel I outline a traditional distribution path from producer to consumer through wholesalers and retailers. Channel II represents a direct-to-consumer model via an online marketplace, bypassing the wholesaler and retailer stages. This illustrates the diverse strategies used to reach the end user.

MARKETING COST, MARKETING MARGIN, MARKETING SHARE & MARKETING EFFICIENCY OF FUNGICIDES.

Channel I: Producer > Wholesaler > Retailer > Consumer

Table 2: Price distribution of Amistar Top's/ Ltr in Channel I

S. No.	Particulars	Value in RBiharees/Ltr
1.	Producer sale price to wholesaler	850
Cost incurred by the producer		
i.	Packing cost	12.00
ii.	Packing material cost	37.00
iii.	Transportation cost	42.00
iv.	Labour cost	1.00
v.	Loading and Unloading cost	0.50
vi.	Miscellaneous charges	12.00
	Total cost (i-vii)	104.5
vii.	Margin of Producer	350
viii.	Net price received by producer	745
2.	Wholesaler sale price to Retailer	1200
i.	Margin of Wholesaler	350
3.	Retailer sale price to consumers	1400
i.	Margin of retailer	200
A.	Total Marketing cost	104.5
B.	Total Market margin	900
C.	Marketing Efficiency	1.39%
D.	Price Spread	665

Source: Surveyed Data

In Channel I, Amistar Top's is distributed through a traditional chain involving wholesalers and retailers. The producer sells to the wholesaler at ₹850 per liter, incurring costs totaling ₹104.5 for packing, transportation, and labour, leading to a net receipt of ₹745 after a margin of ₹350. The wholesaler then sells to the retailer at ₹1200, earning a margin of ₹350, while the retailer's sale price to consumers is ₹1400, with a margin of ₹200. The total market margin sums Bihar to ₹900 with a marketing efficiency of 1.39%, and the price spread is ₹665.

Channel II: Producer > Marketplace (Online) > Consumer

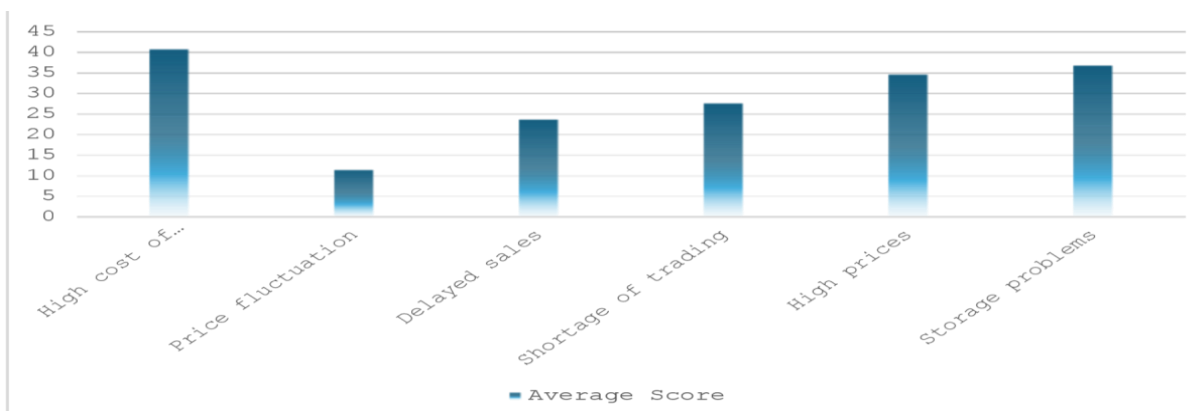
Table 3: Price distribution of Amistar Top's/ Ltr in Channel II

S. No.	Particulars	Value in RBiharees/Ltr
	Producer sale price to market place	1100
	Cost incurred by the producer	
i.	Packing cost	12.00
ii.	Packing material cost	37.00
iii.	Transportation cost	42.00
iv.	Labour cost	1.00
v.	Loading and Unloading cost	0.50
vi.	Advertisement/SEO cost	20.00
vi.	Miscellaneous charges	12.00
	Total cost (i-vii)	124.5
vii.	Margin of Producer	580
viii.	Net price received by producer	975
2.	Marketplace sale price to Consumer	1350
i.	Margin of Wholesaler	250
A.	Total Marketing cost	124.5
B.	Total Market margin	830
C.	Marketing Efficiency	1.41%
D.	Price Spread	375

Source: Surveyed Data

Channel II involves a direct sale to consumers via an online marketplace. The producer sells at ₹1100 per liter, with increased costs including advertisement/SEO, totaling ₹124.5, and receives ₹975 after a ₹580 margin. The marketplace sells to consumers at ₹1350, taking a ₹250 margin. This channel shows a total market margin of ₹830, a slightly higher marketing efficiency of 1.41%, and a price spread of ₹375. Both channels illustrate the costs and margins involved in fungicide distribution, with Channel II showing a more efficient path to the consumer, reflected in its marginally higher marketing efficiency.

CONSTRAINTS IN THE MARKETING OF AMISTAR TOP'S FUNGICIDE



Source: Surveyed Data

Fig. 1 Constraints in the Marketing of Amistar Top's Fungicide

The figure summarizes key obstacles in marketing Amistar Top's fungicide, based on survey results. Transportation costs lead as the Top's hurdle, identified by 41 respondents, underscoring high logistical expenses. Storage issues, flagged by 37 participants, emerge as the second major challenge, affecting product quality and inventory management. The fungicide's high pricing ranks third, with 35 mentions, potentially impacting buyer interest and market position. Lesser concerns include limited trading opportunities (28 mentions), sales delays (24 mentions), and price volatility (12 mentions), highlighting various factors that limit market efficiency.

CONCLUSION

This research delves into the intricacies of marketing the Amistar Top's fungicide, comparing traditional distribution channels with a direct-to-consumer online approach. In Channel I, the traditional route, the producer sells Amistar Top's at ₹850 per liter, incurring a total cost of ₹104.5 on various expenses, leading to a net receipt of ₹745 after a margin of ₹350. This channel, involving wholesalers and retailers, yields a total market margin of ₹900, with a marketing efficiency of 1.39%, and a price spread of ₹665. In contrast, Channel II adopts an online marketplace model, where the producer sells directly to consumers at ₹1100 per liter, facing higher costs, including advertisement/SEO expenses, totaling ₹124.5, and achieving a net receipt of ₹975 after a ₹580 margin. This approach results in a total market margin of ₹830, a slightly higher marketing efficiency of 1.41%, and a price spread of ₹375. The study also identifies critical marketing obstacles through a survey, with transportation costs Topping the list as cited by 41 respondents, emphasizing the significant impact of logistical expenses on market accessibility. Participants identified storage issues, high fungicide prices, limited trading opportunities, sales delays, and price volatility as challenges in maintaining product quality and competitive pricing. These findings highlight the nuanced trade-offs between distribution channels. Channel II, while offering a streamlined consumer

path, faces challenges in cost management, including transportation, storage, and product pricing, which significantly impact the market success of fungicides like Amistar Top's.

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