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AN ECONOMIC ANALYSIS ON MARKETING OF VIPUL BOOSTER (PGR) IN BAHRAICH DISTRICT OF UTTAR PRADESH

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ABSTRACT

The research titled "An Economic Analysis on Marketing of Vipul Booster (PGR) in Bahraich District of Uttar Pradesh" was carried out to evaluate the marketing pathways and their economic impact concerning the distribution of Vipul Booster, a plant growth regulator. The study was limited to the Bahraich district, with Balha block deliberately selected due to its prominence in paddy cultivation. A sample comprising 5% of villages known for paddy farming was chosen, and within these villages, 10% of farmers were randomly selected for the survey. The study identified two main marketing channels: Channel I, which follows the route from producer to wholesaler to consumer, and Channel II, which includes an additional intermediary—retailer—between the wholesaler and the consumer. In Channel-I, the producer's net earnings amounted to ₹488, with a marketing cost of ₹64, yielding a marketing margin of ₹143 and a total price spread of ₹207. The marketing efficiency of this channel was found to be 2.36%. In contrast, Channel-II showed the same producer price of ₹488, but incurred higher marketing costs of ₹79, a margin of ₹223, and a price spread of ₹302, resulting in a lower efficiency of 1.61%. The findings suggest that Channel-I offers better economic efficiency due to reduced costs and margins, while Channel-II, despite involving more intermediaries, is less efficient and more costly.

Keyword: Plant Growth Regulator (PGR), Marketing Channels, Vipul Booster, Marketing Efficiency, Price Spread.

INTRODUCTION

Plant growth regulators (PGRs) were chemical substances that significantly influenced plant growth and development by regulating various physiological processes. These substances, which could be naturally occurring or synthetic, were used to control or modify plant growth, affecting key stages such as seed germination, root and shoot development, flowering, fruit ripening, and overall plant Vigor. The primary classes of PGRs included auxins, cytokinins, gibberellins, abscisic acid, and ethylene, each playing distinct roles in regulating plant responses. Auxins, for example, promoted cell elongation and were involved in root formation, while cytokinins stimulated cell division and delayed aging in plants. Gibberellins were known to promote stem elongation and seed germination, and abscisic acid played a key role in stress responses and

seed dormancy. Ethylene, a gaseous PGR, influences fruit ripening and plant responses to stress. These regulators were widely used in agriculture and horticulture to enhance crop yields, improve resistance to environmental stresses, and synchronize growth patterns for better harvests. PGRs were applied to manipulate plant development in various ways, such as promoting flowering in certain crops, increasing fruit set, and controlling plant height to improve mechanical harvesting. By optimizing these growth regulators, agricultural practices were significantly advanced, increasing production efficiency and crop quality. Overall, PGRs played an essential role in modern agriculture by improving the sustainability and profitability of crop production, providing a means to manipulate plant growth under varying environmental conditions.

RESEARCH METHODOLOGY

The methodology used to select the district, the blocks, the villages and the respondents was purposively cum random sampling. The district of Bahraich was selected in order to avoid the inconvenience and time constraints on the investigator. Out of all the blocks falling within the district of Bahraich, Balha block was selected based on the majority of respondents involved in paddy cultivation. A separate list of villages was prepared for the selected block, and five percent of the villages from the selected block were randomly selected, with a high number of respondents cultivating paddy were randomly selected. From the villages, a list of all paddy farmers was prepared and then broken down into five size categories based on their land holding size. The size groups were: Marginal size (less than 1 hectare), Small size (1-2 hectares), Semi-medium size (2-4 hectares), Medium size (4-10 hectares), and large size (more than 10 hectares). A list of 100 farmers growing paddy was randomly selected using proportionate random sampling. From the 5 producers, 10 wholesalers, 5 retailers and a consumer were selected to study Marketing costs, marketing margins, price distribution and marketing fulfilment in the study area. Primary data was collected through the suitably designed schedule. Secondary data was collected from books/journals/reports/records of the district/block headquarters. Data from respondents were collected through survey methods via direct personal interviews. Statistical tools were used to analyse the data and present the result. The information was gathered during the 2024-2025 Agricultural Year.

ANALYTICAL TOOLS

***Cost of Marketing*:** $C = Cf + Cm1 + Cm2 + Cm3 + ... + Cmn$

***Margin of Market*:** $AMI = Pri - (Ppi + Cmi)$

***Spread in Price*:** Marketing Cost + Market Margin

$$\textit{Efficiency of Marketing} = \frac{\text{Price received by producer}}{\text{Marketing Cost + Marketing Margin}}$$

RESULTS AND DISCUSSION

Table 1: Reveals the preferred marketing channel by the respondents.

Sr. No.	Channel Type	No of respondent	Percentage
1	Channel -I	40	40.00
2	Channel-II	60	60.00
	Total	**100**	**100.00**

Table 1, The study revealed that out of the 100 respondents, 40 (40.00%) preferred Channel-I for buying and selling Vipul Booster (PGR), while 60 (60.00%) respondents opted for Channel-II to buy or sell the product in the study area. This indicates a higher preference for Channel-II, suggesting that respondents in the area found it more favourable for Vipul Booster (PGR) distribution.

Table 2: Marketing costs, marketing margins, marketing performance, and price distribution of VIPUL boosters (PGRs) in Channel I.

Sr. No.	Particulars	Amount (Rs./Litre)
1.	Selling Price from Producer to Wholesaler	530.00
2.	Expenses Borne by Producer	
i.	Cost of Packing	4.00
ii.	Packing Material Charges	5.00
iii.	Transportation Charges	6.00
iv.	Market-Related Expenses	7.00
v.	Labour Charges	4.00
vi.	Loading and Unloading Expenses	3.00
vii.	Other Miscellaneous Costs	13.00
	Total Cost Incurred by Producer	**42.00**
3.	Net Amount Received by Producer	488.00
4.	Selling Price from Wholesaler to Consumer	695.00
5.	Marketing Costs Incurred by Wholesaler	
i.	Loading and Unloading Charges	2.00
ii.	Local Transportation to the Shop	1.00
iii.	Weighing Charges	3.00
iv.	Market-Related Expenses	4.00
v.	Transportation Charges	5.00
vi.	Losses and Miscellaneous Costs	7.00
6.	**Total Cost Incurred by Wholesaler**	**22.00**
7.	Wholesaler's Profit Margin	143.00
A.	**Combined Marketing Cost**	**64.00**
B.	**Total Marketing Margin**	**143.00**
C.	**Overall, Price Spread**	**207.00**
D.	**Marketing Efficiency (%)**	**2.36%**

Table 2, The study revealed the marketing price of Vipul Booster (PGR) in Channel-I. The producer sold the product to the wholesaler at Rs. 530 per litre but received a net price of Rs. 488 after deducting various costs such as packing, transportation, labor, and market charges, which totaled Rs. 42. The wholesaler then sold the product to consumers at Rs. 695 per litre. The wholesaler's marketing expenses, including transportation, loading, and miscellaneous charges, amounted to Rs. 22. As a result, the wholesaler's profit margin was Rs. 143. Consequently, the total marketing cost in Channel-I was Rs. 64, and the total marketing margin was Rs. 143. The price spread in Channel-I was Rs. 207, and the marketing efficiency of this channel was 2.36%. This analysis highlights the cost structure and efficiency of Channel-I, providing insight into the economic dynamics of Vipul Booster distribution.

Table 3: Marketing costs, marketing margins, marketing performance, and price distribution of VIPUL boosters (PGRs) in Channel II.

S. No.	Description	Amount (Rs. /Litre)
1.	Sale Price from Producer to Wholesaler	530.00
2.	Expenses Incurred by Producer	
i.	Packing Expenses	4.00
ii.	Cost of Packing Materials	5.00
iii.	Transportation Charges	6.00
iv.	Market-Related Expenses	7.00
v.	Labour Expenses	4.00
vi.	Loading & Unloading Charges	3.00
vii.	Miscellaneous Expenses	13.00
	Total Cost to Producer	**42.00**
3.	Net Revenue to Producer	488.00
4.	Wholesaler Sale Price to Retailer	657.00
5.	Expenses Incurred by Wholesaler	
i.	Loading & Unloading Costs	2.00
ii.	Transport to Shop	1.00
iii.	Labour Costs	3.00
iv.	Market Charges	4.00
v.	Transportation Charges	5.00
vi.	Miscellaneous and Losses	7.00
6.	**Total Cost to Wholesaler**	**22.00**
7.	Profit Margin of Wholesaler	105.00
8.	Retailer Sale Price to Consumer	790.00
9.	Expenses Incurred by Retailer	
i.	Loading & Unloading Expenses	1.50
ii.	Local Transport to Shop	0.75
iii.	Labour Charges	1.75
iv.	Market Charges	3.00
v.	Transportation Expenses	3.50
vi.	Miscellaneous and Losses	4.50
10.	**Total Cost to Retailer**	**15.00**
11.	Retailer's Profit Margin	118.00
A.	**Combined Marketing Cost**	**79.00**
B.	**Overall Marketing Margin**	**223.00**
C.	**Total Price Spread**	**302.00**

Table 3, The analysis of Channel-II in the marketing of Vipul Booster (PGR) showed that the producer sold the product to the wholesaler at ₹530 per litre. After accounting for production-related expenses amounting to ₹42—which covered costs such as packing, transportation, labour, and miscellaneous charges—the producer's net earnings stood at ₹488. The wholesaler, after spending ₹22 on marketing activities, sold the product to the retailer at ₹657 per litre and earned a margin of ₹105. The retailer then sold the product to the final consumer at ₹790 per litre, incurring ₹15 in marketing costs and realizing a profit margin of ₹118. Altogether, the total marketing cost in this channel came to ₹79, and the combined marketing margin reached ₹223. The overall price spread was ₹302. The calculated marketing efficiency for Channel-II was 1.61%, indicating lower efficiency due to higher cumulative costs and margins when compared with Channel-I. This assessment underscores the cost-intensiveness and reduced efficiency associated with the additional intermediary in Channel-II.

CONCLUSION

The study found notable differences in the marketing performance of Vipul Booster (PGR) between Channel-I and Channel-II in Bahraich district. Channel-I, which included only the producer, wholesaler, and consumer, emerged as the more efficient option. Although producers received the same net price of ₹488 in both channels, Channel-I had a lower total marketing cost of ₹64 and achieved a higher marketing efficiency of 2.36%. In comparison, Channel-II, which added a retailer to the chain, involved higher costs of ₹79 and a reduced efficiency of 1.61%. The marketing margin and price spread were also higher in Channel-II at ₹223 and ₹302, respectively, compared to ₹143 and ₹207 in Channel-I. While Channel-II allowed intermediaries to earn greater profits, the increased costs and additional layer in distribution made it less efficient and more expensive for consumers. Overall, the findings highlight that Channel-I offered a more cost-effective and streamlined marketing route. The study emphasizes the need to refine distribution strategies in the agricultural input market to reduce costs and improve benefits for both producers and end users, particularly in the case of plant growth regulators like Vipul Booster.

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