



Study on the Marketing of Fungicide in Udham Singh Nagar District of Uttarakhand

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ABSTRACT

The present study, entitled "Study on Marketing of Fungicide in Udham Singh Nagar District of Uttarakhand," was conducted in the Rudrapur block, where 110 farmers were randomly selected from three purposively chosen villages. The study aimed to examine the socio-economic status of respondents, assess the brand awareness and effectiveness of Dhanuka's Lustre fungicide, evaluate market perception, and identify marketing constraints. The socio-economic analysis showed that 30.90% were marginal farmers, with the majority being male (81.82%), from nuclear families (89.09%), and literate (70%). Regarding brand effectiveness, 33.64% found Lustre highly effective and 30.91% moderately effective. Factors influencing awareness included availability (20.90%), performance (16.36%), and brand reputation (13.63%). Key constraints were high transportation cost, shortage of trading, price fluctuations, and storage issues. Findings suggest targeted marketing and educational initiatives can improve market penetration of fungicides like Lustre. The study also highlights the need for strengthening distribution channels, enhancing farmer training programs, and improving product visibility through digital and offline campaigns. These measures can help bridge knowledge gaps and promote the optimal use of fungicides in the region.

Keywords: *Fungicide Marketing, Dhanuka's Lustre, Brand Awareness and Effectiveness, Socio-economic Status of Farmers, Marketing Constraints.*

INTRODUCTION

Fungicides are essential chemical compounds for managing plant diseases. They help protect crops from fungal infections, which can otherwise lead to significant yield losses. Their widespread use in modern agriculture highlights their

importance in maintaining crop health and ensuring food security. Despite their effectiveness, fungicides raise environmental and health concerns. Improper application or overuse can lead to contamination of soil and water bodies,



harm non-target organisms, and pose risks to human health. These concerns call for responsible usage guided by proper education and regulatory oversight. In India, where agriculture forms the backbone of the rural economy, fungicides are vital for protecting crops like wheat. Districts such as Udham Singh Nagar, known for intensive wheat cultivation, rely on fungicidal products to manage threats like yellow rust and leaf spots. Among these products, Dhanuka's Lustre stands out due to its dual active ingredients—Flusilazole 12.5% + Carbendazim 25% SE—that provide broad-spectrum disease control. However, adoption of such products hinges on various factors like farmer awareness, socio-economic background, perceived effectiveness, and marketing strategies. This study seeks to explore these factors in depth, with the goal of enhancing sustainable fungicide usage and empowering farmers through informed decision-making.

RESEARCH METHODOLOGY

The study was conducted in the Rudrapur block of Udham Singh Nagar district. A multistage stratified random sampling method was used. Three villages—Darau, Bindukhera, and Deoria—were selected. A total of 110 wheat farmers were surveyed. Primary data were collected through personal interviews using structured schedules, and secondary data were sourced from official records and literature. Analytical tools included descriptive statistics, Chi-square tests, Likert scale analysis, and Garrett's ranking method.

Analytical Tools

Chi-Square: A chi-square (χ^2) statistic is a test that measures how a model compares to actual observed data. The data used in calculating a chi-square statistic must be random, raw, mutually exclusive, drawn from independent variables, and drawn from a large enough sample. Chi-square tests are often used to test hypotheses. The chi-square statistic compares the size of any discrepancies between the expected results and the actual results, given the size of the sample and the number of variables in the relationship.

Where, X^2 = chi squared

O_i = observed value

E_i = expected value

Likert Scale:

A Likert scale is a rating scale used to assess opinions, attitudes, or behaviours. To collect data, you present participants with Likert-type questions or statements and a continuum of possible responses, usually with 5 or 7 items. Each item is given a numerical score so that the data can be analysed quantitatively.

Garrett Ranking:

Garrett's formula for converting ranks into percent was given by Garret and Woodsworth (1969):

$$\text{Percent position} = 100 \times (R_{ij} - 0.5) / N_j$$

Where, R_{ij} = Rank given for i th factor by j th individual

N_j = Number of factors ranked by j th individual

The percent position of each rank is then converted into scores using Garrett's table. For each factor, the scores of individual respondents are added together and divided by the total number of respondents for whom scores were added. These mean scores are arranged in descending order and ranks are assigned accordingly. This technique is adopted to study problems faced in marketing and decision-making scenarios.

Data were collected through structured schedules and interviews during the 2024–2025 agricultural year.

RESULTS AND DISCUSSION

- Age: 63.63% were 20–35 years old.
- Education: 70% literate, 35.45% with primary education.
- Gender: 81.82% male, 18.18% female.
- Family Type: 89.09% nuclear families.
- Annual Income: 37.27% earned <₹1 lakh; only 10% earned >₹5 lakh.



1. Socio-Economic Profile

Table 1: Distribution of Respondents by Farm Size

S. No.	Categories (members)	Respondent	
		Number	Percentage (%)
1.	Marginal (< 1 hectare)	3 4	30.90
2.	Small Farmers (1-2 hectares)	2 5	22.72
3.	Semi-Medium Farmer (2-4 hectares)	2 1	19.09
4.	Medium Farmers (4- 10 hectares)	1 8	16.36
5.	Large Farmers (Above 10 hectares)	1 2	10.90
Total		110	100.00

Interpretation

The distribution of respondents indicates that the majority (30.90%) belong to the marginal farmer category, possessing less than 1 hectare of land. This is followed by small farmers (22.72%) and semi-

medium farmers (19.09%). Medium farmers account for 16.36% of the respondents. Only 10.90% of the respondents are large farmers owning more than 10 hectares of land.



2. Brand Effectiveness of Lustre

Table 2: Farmer Perception on Brand Effectiveness

S. No.	Effectiveness Category	No. of Respondents	Percentage (%)
1	Highly Effective	37	33.64
2	Moderately Effective	34	30.91
3	Less Effective	21	19.09
4	Not Effective	18	16.36
Total		110	100.00

Interpretation

The perception of Dhanuka's Lustre among the surveyed farmers is largely positive, with 33.64% rating it as highly

effective and 30.91% rating it as moderately effective. However, 19.09% considered it less effective and 16.36% found it not effective.

3. Brand Awareness Factors

Table 3: Factors Influencing Brand Awareness

S. No.	Factors	No. of Respondents	Percentage (%)
1	Availability in Market	23	20.90
2	Performance and Quality	18	16.36
3	Brand Reputation	15	13.63
4	Price and Value Proposition	14	12.72
5	Marketing and Advertising	13	11.81
6	Distribution Reach	11	10.00
7	Packaging and Design	10	09.09
8	Social Media Presence	06	05.45
Total		110	100.00

Interpretation

Availability in local markets (20.90%) emerged as the most influential factor driving awareness of Lustre. Performance (16.36%) and brand reputation (13.63%) also played key roles. Factors like

marketing and advertising (11.81%) and packaging (9.09%) had lesser impact. Notably, social media had the least influence (5.45%), reflecting the limited penetration of digital platforms in these farming communities.



4. Market Perception

S. No.	Effectiveness Category	No. of Respondents	Percentage (%)
1	Good disease control	38	34.55
2	Improved crop yield	26	23.64
3	Cost-effective	18	16.36
4	Easy to use	15	13.64
5	Trusted brand	09	8.18
6	Phytotoxic effects	04	3.64
Total		110	100

5. Constraints

Constraint	No. of Respondents	Rank
High Transportation Cost	37	I
Shortage of Traders	09	II
Price Fluctuation	08	III
High Product Prices	07	IV
Storage Problems	07	V
Delayed Sales	03	VI

CONCLUSION

The study highlights the pivotal role of fungicides like Lustre in improving wheat productivity in Udham Singh Nagar. While product effectiveness and brand recognition are moderate to high, barriers such as logistics, price sensitivity, and awareness gaps hinder full adoption. Promotional strategies, including field demos, farmer training, and efficient distribution, can enhance reach. The market shows strong potential for growth with tailored interventions.

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