

STUDY ON CONSUMER'S PERCEPTION AND BUYING BEHAVIOUR TOWARDS BIOFERTILIZER (BHUMIKA) IN MEERUT DISTRICT OF UTTAR PRADESH

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ABSTRACT

The study titled "Study on Consumer's Perception and Buying Behaviour towards Biofertilizer (Bhumika) in Meerut District of Uttar Pradesh" aimed to explore the factors influencing consumer perceptions, buying behaviour, and purchase decisions regarding Agrostar biofertilizers. The research was confined to the Rohta block in Meerut district, where five percent of villages cultivating sugarcane, wheat, and paddy were purposively selected. A random sample of ten percent of respondents from these villages participated in the study. The findings revealed that consumers predominantly perceived biofertilizers as environmentally beneficial and effective in enhancing soil health and sustainability. However, opinions regarding their cost-effectiveness were mixed. In terms of buying behaviour, product effectiveness, price, and peer influence were identified as the most important factors, with brand reputation and product availability holding moderate significance. Farmer training was deemed less critical. The primary drivers of purchase decisions were the product's effectiveness, affordability, and market availability, with effectiveness being the most decisive factor. Social influences, such as peer recommendations and farmer testimonials, were found to play a role, but their impact was less significant compared to technical and commercial considerations. Overall, the study emphasized that practical utility was the dominant factor in shaping consumer perceptions and decisions regarding biofertilizers.

Keywords: Consumer Perception, Buying Behaviour, Biofertilizers, Agrostar and Sustainable Agriculture

INTRODUCTION

Biofertilizers, which consisted of living microorganisms, were used to enhance soil fertility and promote plant growth by improving nutrient availability. These microorganisms played a vital role in processes such as nitrogen fixation, phosphorus solubilization, and the production of plant growth-promoting hormones.

As a result, biofertilizers contributed to reducing the reliance on chemical fertilizers, thereby supporting sustainable agricultural practices. In recent years, there had been a growing interest in biofertilizers due to their potential to improve soil health and environmental sustainability.



They were particularly valued for their ability to improve soil structure and microbial activity, ultimately increasing crop yields and enhancing soil quality over time. The use of biofertilizers was also associated with lower environmental risks compared to synthetic fertilizers, which could lead to soil degradation, water pollution, and harmful effects on biodiversity. Despite these advantages, the adoption of biofertilizers had faced challenges, particularly in terms of consumer awareness, product availability, and cost-effectiveness. Farmers' perceptions and buying behavior towards biofertilizers were influenced by factors such as product effectiveness, price, peer recommendations, and the reputation of the brand. The adoption rate was also impacted by the availability of information and training on the proper use of biofertilizers. Given these dynamics, understanding the factors that shaped consumers' perceptions and purchasing decisions was crucial for promoting the widespread use of biofertilizers and fostering sustainable agricultural practices.

RESEARCH METHODOLOGY

The methodology employed for selecting the district, blocks, villages, and respondents combined purposive and random sampling techniques. Meerut district was purposively selected to minimize inconvenience and time constraints for the investigator. Among the various blocks in the district, Rohta block was chosen due to the significant involvement of respondents in the cultivation of sugarcane,

wheat, and paddy. A comprehensive list of villages in the selected block was compiled, and five percent of these villages, exhibiting a high concentration of sugarcane, wheat, and paddy farmers, were randomly selected. Subsequently, a list of all farmers in these villages engaged in the cultivation of the aforementioned crops was prepared and categorized by landholding size. The landholding size categories were as follows: Marginal (less than 1 hectare), Small (1-2 hectares), Semi-medium (2-4 hectares), Medium (4-10 hectares), and Large (more than 10 hectares). From the population of 100 farmers, a proportionate random sample was selected. In addition, to assess consumer perception and buying behavior, 5 wholesalers, 5 distributors, and 10 retailers were chosen for the study. Primary data were collected using a structured survey schedule, while secondary data were obtained from books, journals, reports, and records from district and block headquarters. Data collection from respondents was carried out via direct personal interviews during the 2024-2025 agricultural year. The data were then analyzed using appropriate statistical tools to present the findings of the study.

Analytical Tools

Likert scale: Likert scale (2, 4, 5, or 7) is a common classification format used in studies. Respondents rank a product or service's quality (data) from highest to lowest, and from better to worse.

RESULTS AND DISCUSSION

Table 1: Factors Affecting Perception of Biofertilizers (Agrostar)

Factor	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
Environmental Benefits	40%	45%	10%	5%	0%
Improved Soil Health	50%	30%	15%	5%	0%
Higher Crop Yield	30%	40%	20%	5%	5%
Long-Term Sustainability	35%	50%	10%	5%	0%
Cost-Effectiveness	25%	30%	25%	15%	5%



Table 1: Represented the factors influencing the perception of biofertilizers among respondents, highlighting various benefits associated with their use. A significant majority strongly agreed or agreed that biofertilizers provided environmental benefits, with 40% and 45% respectively endorsing this view, and only 5% disagreeing. Improved soil health was perceived very positively, with 50% strongly agreeing and 30% agreeing. In terms of crop yield, 30% strongly agreed and 40% agreed that biofertilizers contributed to higher yields,

though 10% remained neutral and a combined 10% expressed disagreement. Long-term sustainability was also widely acknowledged, with 35% strongly agreeing and 50% agreeing. However, cost-effectiveness appeared to be a comparatively less convincing factor, with only 25% strongly agreeing and 30% agreeing, while a notable 25% remained neutral and 20% disagreed to some extent. Overall, the data suggested that while biofertilizers were largely perceived as beneficial for the environment and soil health, concerns about cost remained.

Table 2: Factors Influencing Buying behaviour of Agrostar Biofertilizer.

Factor	Very Important (%)	Important (%)	Neutral (%)	Less Important (%)	Not Important (%)
Price of Biofertilizer	45%	35%	10%	5%	5%
Effectiveness of Product	55%	30%	10%	5%	0%
Brand Reputation	25%	45%	15%	10%	5%
Peer Influence	40%	35%	15%	5%	5%
Product Availability	30%	35%	25%	5%	5%
Farmer Training	25%	30%	30%	10%	5%

Table 2: Illustrated the key factors influencing the buying behaviour of Agrostar biofertilizer among users, categorized by perceived importance. The effectiveness of the product was deemed the most crucial factor, with 55% rating it as very important and 30% as important, while none considered it unimportant. The price also played a significant role, with 45% marking it as very important and 35% as important. Peer influence followed closely, with 40% rating it very important and 35% important,

suggesting social networks had considerable impact. Brand reputation was important to 45% of respondents, though only 25% considered it very important. Product availability received mixed responses, with only 30% finding it very important and 25% remaining neutral. Farmer training was seen as less critical, with only 25% rating it very important and 30% neutral. Overall, the findings suggested that product performance, affordability, and peer recommendations were the strongest drivers of purchase decisions.



Table 3: Purchase Decision Factors for Agrostar Biofertilizer.

Factor	Frequency	Percentage (%)
Effectiveness	80	80.00
Price	70	70.00
Availability in Local Market	65	65.00
Brand Reputation	60	60.00
Farmer Testimonials	50	50.00
Peer Recommendations	40	40.00

Table 3: Reveals the factors influencing the purchase decisions of Agrostar biofertilizer, based on frequency and percentage responses. Effectiveness emerged as the most decisive factor, with 80 respondents (80%) considering it influential in their buying decisions. This was followed by price, noted by 70 respondents (70%), indicating cost remained a critical consideration. Availability in the local market was also significant, with 65 respondents (65%) highlighting its importance. Brand reputation influenced 60 respondents (60%), showing moderate weight in decision-making. Farmer testimonials were cited by 50 respondents (50%), suggesting that firsthand user experiences had a notable impact. Lastly, peer recommendations influenced 40 respondents (40%), showing that while social influence mattered, it ranked lower compared to technical and commercial aspects. The data indicated that practical factors such as product effectiveness, affordability, and accessibility were prioritized over social and brand-driven influences when purchasing biofertilizers.

CONCLUSION

The findings of the study concluded that biofertilizers, particularly Agrostar biofertilizers, were widely perceived as environmentally beneficial and effective in improving soil health and contributing to sustainable agricultural practices. A

significant majority of respondents acknowledged the positive impact of biofertilizers on soil health and long-term sustainability, with many agreeing that they could enhance crop yields. However, concerns regarding their cost-effectiveness were evident, as a notable proportion of respondents remained neutral or disagreed on this aspect. In terms of buying behavior, product effectiveness emerged as the most crucial factor influencing purchase decisions, followed by price and peer influence, indicating that practical and economic considerations dominated the decision-making process. While brand reputation and product availability were also important, they ranked lower in significance compared to technical aspects such as product performance and affordability. The influence of social factors, such as farmer testimonials and peer recommendations, was less pronounced but still relevant. Overall, the study highlighted that consumers prioritized the practical utility of biofertilizers, particularly their effectiveness, affordability, and accessibility in local markets, over brand-driven and social influences. These insights are valuable for enhancing the adoption of biofertilizers and addressing the concerns related to cost, thereby promoting their widespread use in sustainable farming practices.



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