



# Study on Consumer's Perception of Ampligo (Syngenta) Insecticide in Barabanki District of Uttar Pradesh, India

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## Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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## ABSTRACT

Insecticides are chemicals used to control insects by killing or preventing them. These chemicals are important in agriculture to protect crops from pests that can reduce yield and quality. Insecticides come in many forms, including sprays, powders, and granules, and can be classified according to their chemical composition, such as organophosphates, pyrethroids, and neonicotinoids. While Insecticides are effective in controlling pests, they pose risks to human health, beneficial insects such as pollinators, and the environment. Overuse can cause pests to develop

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resistance, making them harder to control over time. Integrated Pest Management (IPM) strategies consider the use of Insecticides in conjunction with other practices such as biological control and crop rotation to minimize adverse impacts during agricultural management. Assessing the benefits and risks of pesticide use is critical to sustainable pest management. This study focused on consumer perception of Ampligo insecticide in Barabanki district of Uttar Pradesh. A sample of 100 respondents was selected from seven selected villages. During the research, it was determined that there were two businesses engaged in amligo marketing in the study area. Among them, most survey respondents prefer Pipeline II in dealing with business owners in the amligo industry, and 21 (21%) farmers prefer to purchase agrochemicals based on quality. Purchasing, about 15 (15%) farmers prefer commercial products, 13 (13%) farmers buy agricultural products as commercial products, about 07 (7%) farmers purchase agricultural products - persuade products through advertising strategies, 6 (6.) farmers get information about the product from their friends, neighbors or other people, and about 4 (4%) farmers like the appeal of the packaging.

*Keywords: Consumer's perception; marketing channels.*

## 1. INTRODUCTION

Over 70% of India's population is employed in or dependent upon the agricultural industry, which is vital to the country's economy. Increasing industrial output and productivity requires the use of Insecticide, which include fungicides, rodenticides, molluscicides, nematicides, and plant growth regulators [1,2,3]. Due to its effects, organochlorine (OC) Insecticide—which were once widely used to treat typhoid and malaria—have been banned or subject to limitations in many industrialised countries; in contrast, their usage is less than 1 kilogramme per acre in nations like the US and Japan. There are obstacles in reducing food crop losses, which now stand at 35–45% as a result of pests, illnesses, and inadequate storage facilities [4,5,6]. These constraints include limited knowledge, resources, and available land. With 13th-place exports and fourth-place agrochemical production after the US, Japan, and China, India has become a major participant [7,8,9]. In 2020, the Indian insecticide market was estimated to be worth ₹ 232 billion. Applying Insecticide to seeds, soil, irrigation water, and crops at recommended dilution levels is essential for managing pests, weeds, and diseases. India's reliance on agriculture and its ability to produce and export pesticides highlight the need for better storage, efficient weed control, and methods to reduce food grain waste.[10,11,12-15] These factors led to the conducting of a study titled " Study on Consumer's Perception of Ampligo (Syngenta) Insecticide in Barabanki District of Uttar Pradesh " with four main goals: identifying the socioeconomic profile of insecticide users among farmers; analysing factors influencing consumer purchasing decisions; assessing barriers in insecticide marketing; and examining the insecticide market

and brand awareness [16-18,19]. This two-month study was carried out in a few villages in Ramnagar block in Barabanki district of Uttar Pradesh.

## 2. METHODOLOGY

The methodology used to select the district, the blocks, the villages and the respondents was purposively cum random sampling. The district of Barabanki was selected in order to avoid the inconvenience and time constraints on the investigator. All the blocks falling within the district of Barabanki were selected, and the block of Ramnagar was selected based on the majority of respondents involved in chilli cultivation. A separate list of villages was prepared for the selected block, and five percent of the villages from the selected block with a high number of respondents cultivating chilli were randomly selected. From the villages, a list of all chilli cultivating farmers was prepared and then broken down into five size categories based on their land holding size. Marginal (less than 1 hectare), Small (1-2 hectares), Semi-medium (2-4 hectares), Medium (4-6 hectares), and Large (more than 10 hectares) were the size groupings. Using proportional random selection, 100 farmers who were cultivating chilli were chosen at random from the list. From the wholesalers/traders/retailers, 5 each were selected to study brand awareness and consumer's perception in the study area. Primary data was collected through suitable designed schedule. Secondary data was collected from books/journal/report/records of district/blocks headquarters. Data from respondents were collected through survey methods via direct personal interview. Statistical tools were used to analyse the data and present the result. Data pertained to the agricultural year of 2023-2024.

## 2.1 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.

## 3. RESULTS AND DISCUSSION

Table 1 Report of 100 samples collected from Barabanki district of Uttar Pradesh for Ampligo (Syngenta) advertisement. The study found that the majority of the sample (83 (83%)) purchased Ampligo (Syngenta) from Pathway II, while 16 (16%) purchased Ampligo (Syngenta) from Pathway I.

Table 2. The study revealed that about 34 (34%) farmers buy pesticides only because of their relationship with business owners, 21 (21%) farmers like to buy products based on their quality, and about 15 (15%) farmers prefer to buy pesticides based on their quality. they prefer commercial products 13 (13%) farmers buy products produced on the farm based on the picture 07 (7%) farmers are persuaded to buy agricultural products by advertising ideas 6 (6%) from farmer friends, neighbors or about 4 (4% of farmers buy from others He enjoys the appeal of packaging for his products.

**Table 1. Classification based on participants' marketing channel preferences**

S. No.	Channel	Respondents Number	Respondents					Percentage (%)
			Marginal	Small	Semi-medium	Medium	Large	
1	Channel- I	16	3	2	5	4	2	16.00
2	Channel -II	83	35	17	13	11	7	83.00
<b>Total</b>		<b>100</b>	<b>39</b>	<b>19</b>	<b>18</b>	<b>15</b>	<b>09</b>	<b>100.00</b>

**Table 2. What do customers think about ampligo (perception of consumer)**

Sr. No.	Parameter	Respondents	Percentage (%)
1.	Relation with Dealer	34	34.00
2.	Quality	21	21.00
3.	Price	15	15.00
4.	Brand image	13	13.00
5.	Promotional Strategies	07	07.00
6.	Source of Information	06	06.00
7.	Packaging	04	04.00
<b>Total</b>		<b>120</b>	<b>100.00</b>

## 4. CONCLUSION

Currently, and in the near future, Insecticides have a promising future because the need for Insecticides is increasing year by year. The farmers rely on Insecticides which shows the increasing need for Insecticides. Farmers don't want to spend time in the field. They want easy solutions to any problem in the field. Therefore, they effectively use the Insecticides. The use of Insecticides and PGR helps the farmers to produce more crops. Therefore, they continue to use the Insecticides & PGR. The effectiveness of the Insecticides is due to the fact that they kill the target weed in less time. Maximum farmers are using the excessive amount of Insecticides. Some farmers claim that excessive insecticide use harms the field and they only use it when it is absolutely necessary for the crop. According to

farmers, Insecticides are essential for the growth of the crop because without Insecticides, the crop cannot grow effectively. All stages of the plant, including leaves and stems, are attacked by Insecticides. Therefore, Insecticides are necessary for farming purposes. Every farmer wants to get high yield for low investment. To get high yield, PGR is used. PGR provides all micro nutrients to chilli and controls the growth of the relevant plant. Barabanki is one of the chilli producing district. chilli growers use agrochemicals from various companies like Syngenta, Dow, Bayer, Sumitomo, Dhanuka, UPL etc. On the whole, Syngenta is performing well. However, we need to implement better promotion. In barabanki area, syngenta has good chances of capturing market share. We need to increase our promotion activities in barabanki area and focus on novel products. Syngenta has

a good brand image and reputation in the barabanki region. We need to use these strengths to increase our market share and sales.

#### DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of manuscripts.

#### COMPETING INTERESTS

Authors have declared that they have no known competing financial interests or non-financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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