



STUDY ON MARKETING OF AMPLIGO (INSECTICIDE) SYNGENTA PRODUCT IN NAGPUR DISTRICT OF MAHARASHTRA

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ABSTRACT

This article focuses on "Market Analysis of Ampligo (Insecticide) Syngenta Products in Nagpur District, Maharashtra". The aim of this study is to examine farmers' knowledge about Syngenta, pest control methods and content of chemical pesticides, identify existing and expanded markets, reveal Syngenta's pesticide development in Satna region, learn different products of Syngenta such as strategies to find competitors. in field research and business strategies. Syngenta's customer alerts discuss increased costs, variable costs and production risks. At the beginning of 2011, the company solved these problems by combining seed and plant protection. This study focuses on farmers' views on Syngenta India Private Limited's Ampligo product. Ampligo is an insecticide manufactured by Syngenta India Private Limited and is used by farmers to control various pests such as whiteflies, Spodoptera Frugiperda, half-inch caterpillars, spider mites, leaf miners, whiteflies, aphids and other insects that damage plants. The active ingredients are 10% chlorantraniprole and 5% high potency cyhalothrin and the recommended dosage is 70-100 ml per acre or 10 ml per pump. Ampligo is a yellow insecticide known for its low toxicity and low risk to humans and animals, but caution is still advised. Provides plant protection lasting 20-25 days. Ampligo is widely used due to its good results, no side effects and long duration of protection.

Keywords: Company, Challenge, Insecticide, Protection

INTRODUCTION

Agriculture forms the backbone of the Indian economy and accounts for approximately 16.5% of India's GDP. Bas India's agricultural industry is valued at US\$ 435.9. By 2022, it expected to grow at a CAGR of approximately 4.9% from 2023-28, reaching \$580.82 Bill in 2028. It is open to development in many aspects. The pace of adoption and digitalization is slow. Today, agricultural technologies have become a promise for investors, entrepreneurs,

agricultural communities and all stakeholders. According to NASCOM data, there will be approximately 450 agricultural technology projects in India by 2022 and this number will increase by 25% every year. Additionally, a report estimates that Agri-tech start-ups in India represent a \$24 billion opportunity with huge business potential. So, what exactly do aggrotech platforms do that makes them popular in the industry? Simply put, they are pioneers in using the latest innovations to improve their

communities. Pesticides are substances or compounds used to prevent, destroy, destroy or reduce pests. Pesticides are the end product in agriculture and are used to prevent insects, fungi, plants and other pests from rotting crops, thereby increasing agricultural productivity. The importance of pesticides has increased over the past few decades due to the need to increase agricultural productivity and the need to ensure adequate food security for the farm's population growth. In India, bacteria and viruses consume an average of 20-25% of the total food. Survey the health status of participants in the study area. Determine the

current supply chain, market value, and profit in the study area. To assess consumer awareness of Ampligo insecticide. Assess the limitations of the Ampligo insecticide business and prepare appropriate measures.

Company Profile

Syngenta Pvt. Ltd. is a global agricultural company that specializes in crop protection products, seeds, and digital agriculture solutions. It is a leading player in the agribusiness sector, serving farmers and agricultural communities worldwide. Here's an introduction to Syngenta Pvt. Ltd.

Table 1 Company Profile

Company Profile	Subsidiary
Founded	13 November, 2000
Head Quarter	Basil, Switzerland
Area serves	Worldwide area
Key people	Jeff Rowe (CEO)
Product's	Flower, Pesticides, seeds, Fungicide
Revenue's	US\$ 12.64 Bil.
Net income	US\$ 96 Mil.
Total employee	28,704
Company website	www.syngenta.com

RESEARCH METHODOLOGY

The present study aims to provide a detailed account of the sample design, nature, mode of data collection, and analytical tools employed. According to the study design, Nagpur district in Maharashtra has been purposively selected due to its extensive area under cotton cultivation. To narrow

down the scope of the study, Umred block has been chosen from the 13 blocks in Nagpur district. Furthermore, to ensure an adequate representation of the population, 5% of the 192 villages in Umred block will be selected for this study.

ANALYTICAL TOOLS AND TECHNIQUES

For achieving the study objective, the following analytical tools will be adopted

Chi-square test

The Chi-square test measures independence and proportionality between variables, analyzing how their distribution differs from expected over time using the chi-square model.

χ^2 = chi-square test statistic

Σ = summation operator

O = observed frequency

E = expected frequency

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

Likert Scale

Likert scale is a rating scale used to measure a respondent's attitude, attitude, or behavior. Likert scales allow us to easily study positive attitudes or emotions. For data, you ask participants Likert-type questions or statements and multiple possible answers, usually consisting of 5 or 7 items. Each product is assigned a serial number so that data can be measured.

RESULT'S AND DISCUSSION

The name of the research is now "Study on marketing of Ampligo (Insecticides) in Nagpur, District of Maharashtra".

Table 2. Description of Size of the farm's group

Serial Number	Particular's	Size of Farm's Group's			Average Sample
		Small	Medium	Large	
1.	Size of Farm's Group (in members)	50	40	30	120 (100%)
2.	Average size of cultivated land Holding in Hectare	0.60	1.68	2.80	1.34
3.	Land utilization in different crops (sown area in ha)	Kharif			
I	Cotton	0.18	0.69	1.20	0.69
	Soybean	0.19	0.52	0.90	0.53
	Maize	0.23	0.47	0.70	0.46
II	Rabi				
	Wheat	0.22	0.66	0.96	0.61
	Gram	0.20	0.56	0.93	0.56
III	Mustard	0.18	0.46	0.91	0.51
	Zaid (summer)				
	Cucumber	0.13	0.36	0.52	0.33
4.	Vegetables	0.11	0.32	0.35	0.26
	Total sown area	1.44	4.04	6.47	3.95
5.	Cropping intensity	240.00	240.47	231.07	237.18

The average cultivated area per hectare in the region is 1.34 hectares, with crops like cotton, soybeans, sugar cane, and corn. During the Rahi and Zaid season, rice, barley, gram, potatoes, mustard, cucumbers, and vegetables are grown in paddy fields. The average crop standards used for different agricultural groups are 237.18%.

Table 3: Description of households/families.

Serial Number	Particular's	Size of Farms Groups			Average Sample
		Small	Medium	Large	
1.	Average size of farm families	5.98 (100)	6.76 (100)	7.56 (100)	6.76 (100)
	Male	3.19 (53.34)	3.68 (54.43)	3.98 (52.64)	3.61 (53.40)
	Female	2.79 (46.65)	3.08 (45.56)	3.58 (47.35)	3.15 (46.59)
2.	Age composition				
I.	Below 15 years	1.99 (33.27)	2.81 (41.56)	2.92 (38.62)	2.57 (38.06)
	15-60 years	3.09 (51.67)	3.05 (45.11)	3.74 (49.47)	3.29 (48.71)
	60 years and above	0.90 (15.05)	0.90 (13.31)	0.90 (11.90)	0.90 (13.31)

The distribution of the average number of farmers by gender and age is shown in Table. The difference of men and women in the respective farmer groups is 53.40% and 46.59%, respectively. The table also shows the age composition of farm groups at different levels. The average proportion of farms of various sizes is highest in the group under the age of 15-60 (48.71%), followed by those under the age of 15 (38.06%) and over the age of 50 (13.31%).

Table 4: Description of literacy

Serial Number	Particular's	Size of Farms Groups			Average Sample
		Small	Medium	Large	
1.	Average size of farm families	5.98 (100)	6.76 (100)	7.56 (100)	6.76 (100)
2.	Educational Status				
	Primary	0.52 (8.69)	0.76 (11.24)	0.92 (12.16)	0.73 (10.79)
	Middle/High School	0.46 (7.69)	0.68 (10.05)	0.73 (9.65)	0.62 (9.17)
	Intermediate	2.04 (34.11)	2.32 (34.31)	2.60 (34.39)	2.32 (34.31)
	Graduation and above	1.01 (16.88)	1.30 (19.23)	1.75 (23.14)	1.35 (19.97)
3.	Total Literacy	4.03 (67.39)	5.06 (74.85)	6.00 (79.36)	5.03 (74.70)
4.	Total Illiteracy	1.95 (32.60)	1.70 (25.14)	1.56 (20.63)	1.73 (25.59)

Table 4 reveals different farm groups' schooling rates, with large farms having the highest at 79.36%, followed by medium-sized farms at 74.85% and small farms at 67.39%. The average schooling rate is 74.70%. However, only 19.97% of farms completed surveys, indicating high illiteracy rates.

Table 5: Description of occupational

Serial Number	Particular's	Size of Farms Groups			Average Sample
		Small	Medium	Large	
I.	Size of farm group (in numbers)	50 (100)	40 (100)	30 (100)	120 (100)
II.	One Occupation (Primary Occupation)	12 (24.00)	11 (27.50)	9 (30.00)	32 (26.66)
III.	Two Occupation (Secondary Occupation)	18 (36.00)	14 (35.00)	10 (33.33)	42 (35.00)
IV.	Three Occupation (Tertiary Occupation)	20 (40.00)	15 (37.50)	11 (36.66)	46 (38.33)

The study reveals that small, medium, and large agricultural groups have the highest main occupations at 24.00%, 27.50%, and 30.00% respectively, with secondary occupations at 36.00%, 35.00%, and 33.33%, with small farms ranking third at 40.00%.

Table 6: Description of Asset position.

Serial Number	Particular's	Size of Farms Groups			Average Sample
		Small	Medium	Large	
1.	Land	4,50,350 (78.11)	9,36,000 (86.30)	14,75,150 (90.88)	8,37,786.40 (85.53)
2.	Farm buildings	12,000 (2.08)	25,300 (2.33)	36,800 (4.93)	21,868.18 (2.24)
3.	Beginning value of farm machinery and equipment	65,300 (11.32)	72,500 (6.69)	80,000 (4.93)	70,963.64 (7.27)
4.	Livestock	48,200 (8.49)	50,730 (4.68)	31,300 (1.92)	45,456.36 (4.65)
	Total value	5,76,550 (100)	10,84,630 (100)	16,23,150 (100)	9,75,074 (100)
5.	Depreciation on farm machinery and equipment	4630.00	4,650.00	4,800.00	4,678.18
6.	Current value on farm machinery and equipment	19,000	26,000	32,000	24,181.82

Table 6 shows agricultural assets, including land, farm buildings, machinery, equipment, and livestock, are valued at Rs. 8,37,786.40 across different farm groups. Average costs for land, buildings, machinery, and livestock are 85.83%, 2.24%, 7.27%, and 4.65% respectively.

CONCLUSION

The consumption of insecticides is increasing, making it a promising industry for the future. Farmers rely on insecticides to increase crop yields, along with Plant Growth Regulators (PGRs). In Nagpur, a top district in cotton production, farmers use

agrochemicals from various companies. Although Syngenta has a good reputation, it needs to focus more on effective promotional activities to capture the market and increase sales in Nagpur.

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