

## CONSUMER AWARENESS FOR PESTICIDES IN – BANANA CROP

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### ABSTRACT

Consumer Awareness is the one of the main factors in purchasing the products. Awareness is the process by attaining awareness or understanding of the environment by organizing and interpreting sensory information. New pesticides (molecules) are introduced in Indian agriculture market by several agrochemical companies. The adaption for these new molecules on large scale is perceived to be on negative side by the farmers. Although the new molecules are safe for entire environment n species which are placed in Blue and Green triangles. Farmers in India still on large scale depend on yellow and red triangle pesticides. The study defines the consumer Awareness for adaption of the new pesticides in Banana crop. This is mainly an outcome of externally caused behaviour rather than the internally caused behaviour, primarily influenced by the distributors and retailers.

**Keywords :** Awareness, Pesticides, Agrochemical Market, Banana crop.

#### Introduction

#### Industry Structure

The Indian agrochemicals market is characterized by low capacity utilization. The total installed capacity in FY18 was 156,000 tons and total production was 95,000 tons leading to a low capacity utilization of 58%. The industry suffers from high inventory (owing to seasonal & irregular demand on account of monsoons) and long credit periods to farmers, thus making operations 'working capital' intensive. India due to its inherent strength of low-cost manufacturing and qualified low-cost manpower is a net exporter of pesticides to countries such as USA and some European & African countries. Exports formed ~50% of total industry turnover.

#### Key Segments

Insecticides, Fungicides, Herbicides, Bio-pesticides:

Worldwide, about 10,000 species of insects are important as pest, out of 750,000 identified species.

\* Over 50,000 species of fungi are responsible for some 1,500 plant diseases;

\* Over 1,800 species of weeds out of the known

30,000 cause serious economic loss.

\* About 15,000 species of nematodes produce more than 1,500 serious deleterious effects on plants.

The agrochemical market in India has grown over the decade, with the farmer having been inclining towards adoption of agrochemical to protect their crops. Agrochemicals defend crops against insect, pest, diseases, and weed before and after harvesting. They play a major role to improving soil fertility, protection crop produce and rising productivity. Agronomy revolved around the optimum application of agrochemical leads to increase in crop production.

#### Growth Forecast & Drivers

Since the Indian agricultural sector is highly dependent on monsoons, the market for agrochemicals is expected to grow at a conservative growth rate of 7.5% to reach ~USD 45.5 Bn by FY21.

#### OBJECTIVES AND NEED OF THE STUDY

**The objectives of the study are as follow:**

To study the Consumer Behaviour & Consumer Awareness of the Banana growing Farmers.

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**NEED OF THE STUDY**

It has been observed that per capita consumption of crops in India is very low as compared with other developed countries. This is because of low productivity and there by low production it happens because of improper cultivation of crops, most of the crops get destroyed because of insects and pest attack. Having more than 130 crore of population On the other hand productivity of crops is less and prices offered to the producers are very low. In short, there are no sizable incentives to the crop producers. It is therefore, necessary to undertake an independent study for throwing a light on the various aspects of Agrochemicals i.e. marketing, pricing, various marketing medium, whether the adoption of new technology is the key factor which will decide the growth of industry. Are the bananas growing farmers aware about the modern technology in the agribusiness? Here lies the main question, indiscriminate use of pesticides, especially more sprays of fungicides are nowadays undertaken by the farmers, ripening chemicals is another grey area which has to be studied in this sector.

**Description of the problems**

The changing global market environment, farmer's awareness and knowledge, significant development in research and development, and role

played by government has greatly affected the agrochemical industry. There are various problem associate with the agrochemical company can be summarized as follow ;

- 1. It is necessary to increase awareness among farmers regarding agrochemicals, especially fungicides and herbicides.
- 2. It is necessary to highlight technology aspects of application of chemical in banana crop as it is one of the main fruit consumed in India.

**DESCRIPTION OF THE RESEARCH**

This research is the type of Survey research which includes Random sampling farmers. It begins with problem identification, and to arrive at a conclusion, which includes secondary data as well as information from primary data from survey.

**SAMPLE SIZE**

I have chosen **Random Sampling** method as a part of Sampling from Bharuch District. The sample surveyed is drawn from Jhagadis taluka in Bharuch district covering important cash crops grown in Jhagadia taluka i.e., Banana . List of major cash crops grown was accomplished and then a sample from population was taken selecting only the progressive farmers for survey. Therefore, the study was undertaken on representative sample of farmers to make it more manageable. A survey of 40 farmers was carried on in Jhagadia taluka of Bharuch district.

**DATA ANALYSIS & INTERPRETATION**

1) Which crops are grown by you?

Graph :

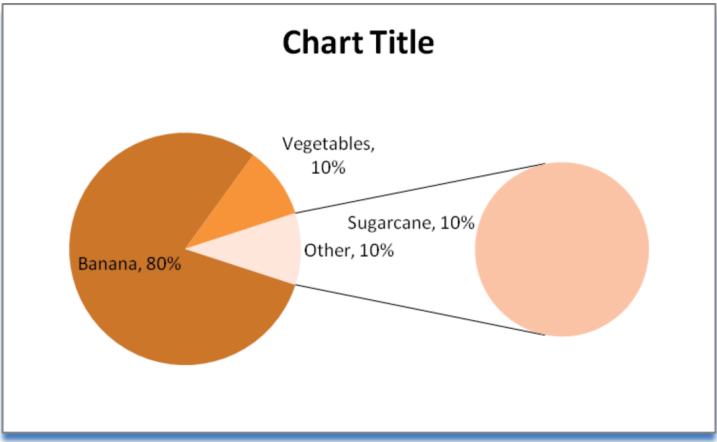


Figure 1- Crops Grown By Farmers in%

**Analysis :** Crops vary in accordance with change in seasons. At the time of survey, major crop surveyed was Banana.

2) What is the total expenditure for sprays for a year?

Graph :

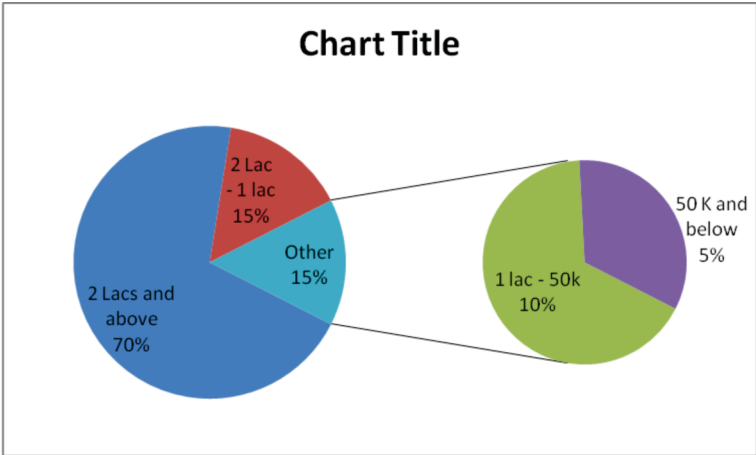


Figure -Total expenditure for sprays for a year

**Analysis :** It is observed that in the total expenditure for sprays for a year 70 % of farmers spend above 2 Lacs of their expenditure over spray for a year. Likewise 15% of farmers spend 2 –lacs to 1 lac, 10% of farmers spend 1lac- 50 k and 5% of farmers' spend 50K and below.

3) Which is the preferred company from which you purchase the agrochemicals? Why?

Graph

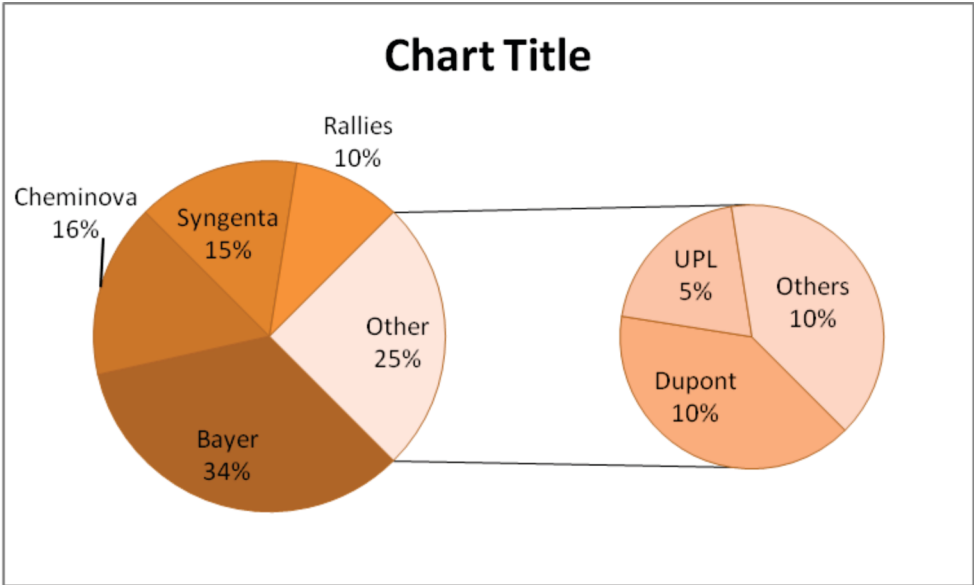


Figure -Preference of the company at the time of purchasing agrochemicals

**Analysis :** It is observed that majority of farmer's i.e. 34% prefer Bayer at the time of purchasing agrochemicals. Likewise 16 % of farmers go for Cheminova , 15% of farmers go for Syngenta 10% of farmers go for Dupont and 10% of farmers go for Rallies, 5 % for UPL and 10% for other companies. Their choice depends upon many factors like their loyalty to the company because of their quality of products which help to increase their farm's yield.

4) How do you know about the new launches of the company?  
 Graph :

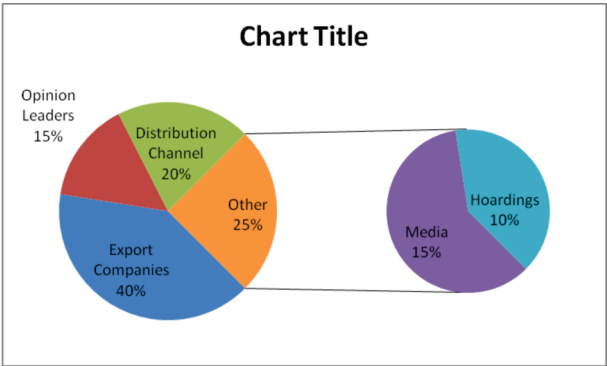


Figure -Awareness of New launches of Company

**Analysis :** Critical success factors that help farmers to increase their awareness in new launches of companies were identified, viz; through Distributors, advertisements, company representatives and other farmers. The companies involved in export of horticulture produce play a major role in influencing buying behaviour and Awareness of Farmers.

5) How do you come across the advertisement of the company?  
 Graph :

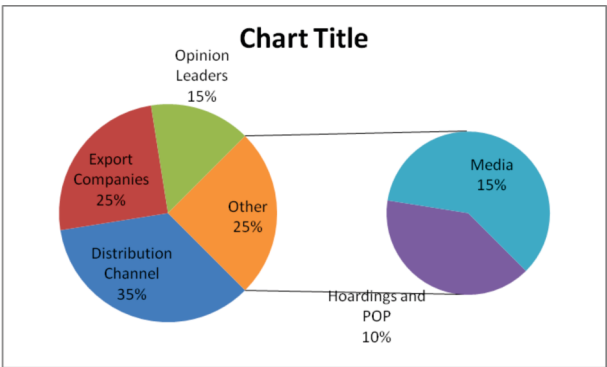


Figure -Channel influence buying

**Analysis :** Critical success factors in determining the choice of the product was identified, viz; Distributors, the Horticulture export companies Newspaper, T.V., Hoardings. Distribution Channel plays major role in influencing buying behaviour and Awareness of Farmers. Opinion Leaders in Bharuch district too play a major role in influencing the buying decision.

6) Who explains you about the company's products?  
 Graph :

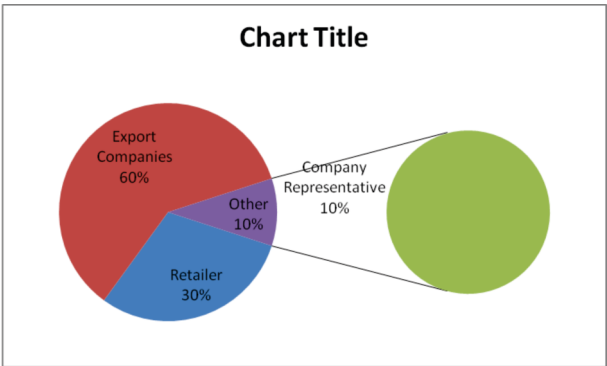


Figure -Explanation about company's product

**Analysis :** From the farmers responses it is observed that the export companies and retailers provides information about the various product offerings, their constituents and benefits; the accessories; and the side effects and results of using such chemicals. They also educate them on the issues of safe usage and disposal.

- 7) At the time of purchase of two identical chemicals where do you give preference?
- A) Brand
  - B) Advertisement
  - C) Money

Graph :

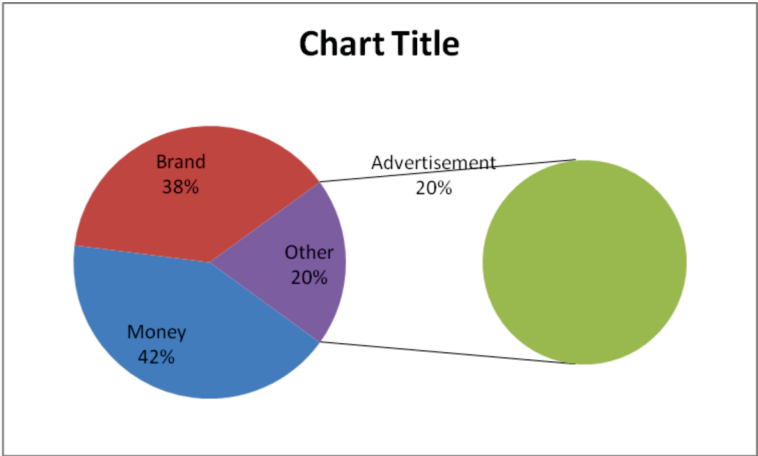


Figure -Preferences given by farmers at the time of purchasing two identical chemicals

**Analysis :** The factor determining the farmer's expectation from the Quality, viz; Brand Name, Money, advertisements. The figure despite the parameters which were rated in order of importance by the customer's choice. It is found that maximum Farmers wants good Quality of Pesticide from company and prefers brand name of company.42% farmers go for Money and very few farmers i.e. 20 % go for advertisements to use pesticide which helps them proper utilization of chemicals in their field. Brand image if build positively definitely acts to be key factor in propelling the Awareness.(38 %).

- 8) Do you buy same chemicals of same company again and again even though new chemicals are in the market? Why?
- Graph :

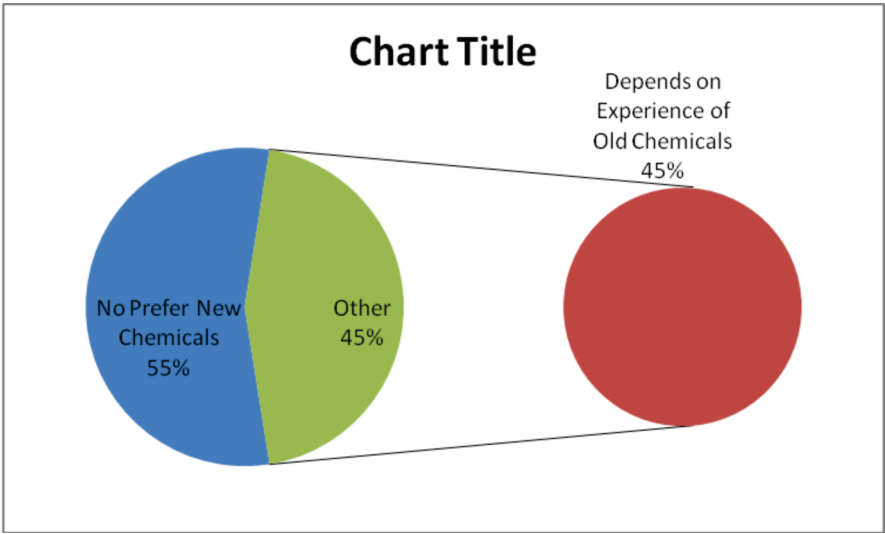


Figure -Buy same chemicals even new chemicals in the market

**Analysis :** When asked to the farmers are they buy same chemicals of same company again and again even though new chemicals are in the market, then it is observed that majority of farmers prefer new chemicals. And 45% farmers said that it depends upon their experience with

old chemicals. If old ones are giving more productivity then they prefers that only, the experiences prove a major criteria to define the Awarenesss for purchase of the product

9) Which of the following are the Critical success factors in determining your expectation from the better product knowledge?

Graph :

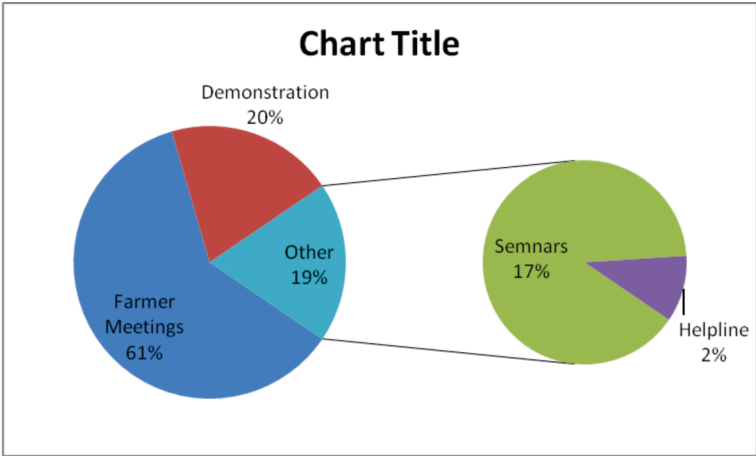


Figure -Farmer's expectations in terms of improving their Product knowledge

**Analysis :** Critical success factors in determining the farmers expectation in terms of improving their Product Knowledge from Help Line, farmer's Meeting, Demonstration, and seminar. It is found that maximum

people wants to farmers meeting which helps them proper utilization of chemicals in their field. Farmer meeting can prove as key influence factor to chane the Awarenesss.

10) To increase customer satisfaction for which of the following points you give your preferences? Give numbers from 1 to 4

1=Most Preferable

4=Less Preferable

Graph :

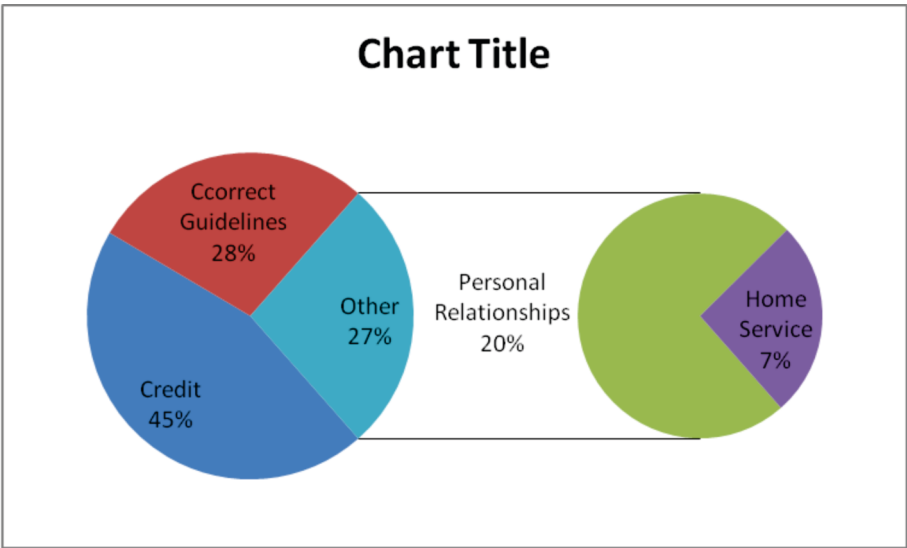


Figure -Need served by Dealer

**Analysis :** The main reason for farmer's adoption of agrochemicals amongst the farmers is protection of crop. The dealer provides information about the various product offerings, their constituents and benefits; the accessories; and the side effects and results of using such chemicals. They also educate them on the issues of safe usage and disposal. Apart from this, the major role played by the dealer was facilities of credit and development of long term relationships. The dealers provide credit facilities, often through mutually agreed upon terms and conditions whereby the farmers are allowed to pay in instalments or sometimes even after harvest. The long term relationship that developed between the two, on basis of trust was an important factor affecting both product and store loyalty.

### FINDINGS AND CONCLUSIONS

1. Dealers had a high degree of influence on farmers' selection and use of pesticides.
2. The price charged by a dealer for a pesticide was not an important factor in the farmer's selection of his pesticide dealer.
3. Farmers choose their pesticide dealer because of honest and fair dealing with the dealer in the past.
4. The single most important reason the interviewed farmers gave answers for using a pesticide was because they expected a possible increase in yield.
5. The companies engaged in Export of banana, banana seeds and allied products have a very great impact on the farmers of Jhagadia district. The awareness of chemicals and the buying behaviour does get influenced by their word.
6. Banana growing farmers also seek for the Brand when purchasing the agrochemicals, especially when asked about herbicides the unanimous answer was Basta of Bayer Crops Science.

### FARMER BEHAVIOR IN PURCHASING

- ❖ Farmers have a Strong "propensity to nearness" in buying habits.
- ❖ The majority of farmers 'actively compare very few alternative potential sources of supply in selecting a place of purchase.
- ❖ A small group of farmers do actively compare and shop around before buying, and this group

generally was more informed concerning the nature of the potential market and believed there were greater differences among alternatives than did the "non-shopping" group.

- ❖ The most effective channels of information to the farmer about particular products vary from product to product.
- ❖ The farm market is made up of a heterogeneous group of consumers who base their decision of where to purchase on broad and varied considerations. The rationale for seller "Selection differs from product to product as farmers seek to satisfy their desires.
- ❖ Farmers do not necessarily associate the buying of all supplies with a particular place, but instead the purchasing decisions for different supplies and services are considered somewhat separately
- ❖ Changes will occur in the farmer as a buyer which may bring about a change in factors which farmers consider important in selecting their sources of supply.
- ❖ Consumer Awareness for acceptance of new Pesticides was moderate and good as compared to other crops and there was inclination towards acceptance of traditional Pesticides as well.
- ❖ The Adaption of new technology in Agriculture totally depends on how the companies or the stakeholders educate the farmers of the innovation, or else the traditional products are going to rule the industry.
- ❖ Consumers perceive old technology as the key aspect when they decide about purchasing the Agrochemicals as they are not open for easy adaption of new technology, though it was found in favourable scenario in banana farmers.

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