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## “A Study on A Consumer Behavior of Pesticide Users in Buldhana Area”

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### ABSTRACT

Chemical pesticides are an integral part of modern agriculture and can have serious adverse effects on human health and the environment. Assessing the impact of pesticides on potential environmental problems requires studies on the ecotoxicological aspects of crop protection products, as well as studies on the behavioral variables of the pesticide user, which can be essential for an accurate risk assessment but are often neglected. The study of human behavior, that is, an individual's actions or responses to external or internal stimuli, is an essential requirement for improving environmental safety in the use of pesticides. Farmer awareness and knowledge of pesticide risks is vital to improving safety in all aspects of pesticide handling, but knowledge implies a deep understanding and perception of concepts, while awareness does not necessarily imply deep understanding. Health and safety research shows that farmers' safety behaviors can depend on many factors, with perceptions, attitudes and self-efficacy playing an important role.

## INTRODUCTION

Ultramodern fungicides have helped make husbandry far more productive. But they have also caused innumerable accidental poisonings. Now, a study suggests that indeed the routine use of fungicides can pose serious health pitfalls in the long run. Any substance or admixture of substances intended for precluding, destroying, or controlling any pest, including vectors of mortal or beast complaint, unwanted species of shops or creatures, causing detriment during or else snooping with the product, processing, storehouse, transport, or marketing of food, agrarian goods, wood and wood products or beast feedstuffs, or substances that may be administered to creatures for the control of insects, arachnids, or other pests in or on their bodies. The term includes substances intended for use as a factory growth controller, defoliant, desiccant, or agent for thinning fruit or precluding the unseasonable fall of fruit. Also used as substances applied to crops either before or after crop to cover the commodity from deterioration during storehouse and transport. By target organism (e.g., dressings, germicides, pesticides, rodenticides, and pediculicides chemical structure (e.g., organic, inorganic, synthetic, or natural (bio pesticide), although the distinction can occasionally blur), and physical state (e.g., gassy (fumigant)). Bio pesticides include microbial fungicides and biochemical fungicides. Factory- deduced fungicides, or "botanicals", have been developing snappily. These include the pyrethroids, retinoid, nicotinamides, and a fourth group that includes strychnine and schillerised.

### Objective

To know about the farmer buying pattern for purchasing Pesticide\_Buyer decision making

To know which Pesticide are more demanded in market. Farmer's perception about Pesticides.

To find the factors affects farmers buying behavior.

On what basis farmer's make decisions to buy the particular Pesticide.

To determine the perception of farmers towards the pesticides in Buldhana area.

To determine the competitive analysis of the Pesticide industry.

To explore the awareness and acceptance level of pesticide among farmers.

## Literature Review:

**Lee (2005)** Lee (2005) carried out study to learn the five stages of consumer decision making process in the example of China. The researcher focuses on the facts that affect the consumer decision making process on purchasing imported health food products, in particular demographic effects such as gender, education, income and marital status. The author employed questionnaire method in order to reach the objectives of the research. Analysis of five stages of consumer decision making process indicate that impact of family members on the consumer decision making process of purchasing imported health food products was significant.

**According to Variola (2010)** analyzed the influence of packaging on consumer decision making process for Fast Moving Consumer Goods. The aim of the research was to analyse the impact of packaging for decision making processes of low-income consumers in retail shopping. A survey method has been used in order to reach the research objectives. In a survey conducted in Star Hyper in the town of Centerville 250 respondents participated. The findings of the research indicate that low-income consumers have more preferences towards premium packaging as this can also be re-used after the product has been consumed. Although the findings indicate that there is a weak relationship between the product packaging and brand experience. However, it has been proven by the findings of the research that low-income consumers have greater brand experience from the purchase of 'premium' products when compared to their experience from purchasing 'cheap' brand products.

**(Gupta, 2004; Sodavy et al, 2000; Antle et al, 1998)**. Frequent exposure to pesticides results in ill-health, both in the short and long term. Deaths are also not uncommon. In fact, ill-health resulting from such exposure is a major health hazard in the agricultural sector in developing countries and the problem shows no signs of abatement

**(Maumbe and Swinton, 2003; Roberts et al, 2003)**. Recent estimates cited by Food and Agriculture Organization (2000) from Pesticide Action Network (PAN) show that approximately three million people are poisoned and 200,000 dies from pesticide poisoning every year. The largest number of poisonings and deaths occur in developing countries. In finding a solution to minimize the incidence of ill-health it is important to determine whether farmers take adequate precautions and what factors influence the level of precautions taken.

**Carl C. Malone and Lucile Holyday Malone**, *Decision Making and Management for Farm and Home* (Ames: The Iowa State College Press, 1958), **Brim, et al.**, outlined six phases customarily linked into a sequence of the decision process;

- 1) identification of the problem;
  - 2) obtaining necessary information;
  - 3) production of possible solutions;
  - 4) evaluation of such solutions;
  - 5) selection of a strategy for performance; and
  - 6) actual performance of an action or actions, and subsequent learning and revision.
- Brim, et al.**, points out that this sequence is reported in various research findings. He reports that a review of some three dozen studies of the adoption of new farming practices reveals: In the situations described by these studies, a farming practice such as the planting of a new crop or the use of a new insecticide or fertilizer in place of the old is recommended to farmers as a course of action different from their current practices. These studies are analyzed to show the phases which occur in the decision to accept or reject the new practice. The data indicated that the informants in the various studies do distinguish one phase from another, and can designate the points in time when they went through each phase

**Kohls, Stucky and Gifford** In their study of the farmers' selection of farm machinery dealers divides the decision-making period into two parts; the period of contemplation and the period of active discussion and shopping. They consider the dividing point between the two periods when an individual ceases merely to think about buying and begins to discuss the purchase with someone's. **Brim Jr.** and others, *Personality and Decision Processes* (Stanford: Stanford University Press, 1962).

**R. L. Kohls, R. L. Stucky, and J. Gifford**, "Farmers' Selection of Farm Machinery Dealers," *The Journal of Marketing*, XXI (April, 1957), 446. **Dean, Auerbach, and Marsh**, consider variables of farming important in decision making. They wrote: It is possible to conceptualize these variables or processes as impinging upon a variety of decision-making processes involved in farm management. Indeed, such a conception is often implicit in the diffusion literature. It is possible, furthermore, to view these variables as affecting in some manner, the rationality of decision making as an intervening variable

**Beal and Bohlen** The fertilizer dealer played an important role in the farmer's decision-making process regarding fertilizer use. For instance, 96 percent of the farmers expected the dealer to be a reliable source of information about fertilizer.6 Decision-making in agriculture is not limited just to the farmer. Weakening and Bharadwaj pointed out the wife involvement: The wife who is involved in major decisions affecting the farm is frequently involved in the operational types of decisions. However, decision-making across farm and home areas tends to be independent in that those involved in major farm decisions are not necessarily involved in household decisions.

**Alfred Dean, Herbert A. Auerbach, and C. Paul Marsh**, "Some Factors Related to Rationality in Decision Making Among Farm Operators," *Rural Sociology*, XXIII, (June, 1958), 126.

**George M. Beal and Joe M. Bohlen**, "The Dealer's Role in Fertilizer Sales" (Paper presented at the Annual Meeting of National Plant Food Institute, June, 1960, White Sulphur Springs, West Virginia). Eugene A. Weakening and Lakshmi K. Bharadwaj, "Dimensions of Aspirations, Work Roles, and Decision Making of Farm Husbands and Wives.

## RESEARCH METHODOLOGY

### (1) Types of research design: -

- A) Exploratory Research
- &
- B) Conclusive Research

### (A) Exploratory Research: -

- Secondary data - External

### (B) Conclusive Research: -

- Descriptive Research - Cross Sectional – Multiple Sectional design

### (3) Source of data

Survey

### (4) Data collection Method: -

- Survey Method - Personal - On field

### (5) Sampling Method: -

#### a) Target Population Definition:

- **Population** - All farmer those who are using pesticides.
- **Sampling element** - A farmer who is using pesticides.
- **Sampling unit** - pesticides.
- **Size** - 113
- **Extent**- Buldhana Maharashtra India

## b) Sampling Frame:

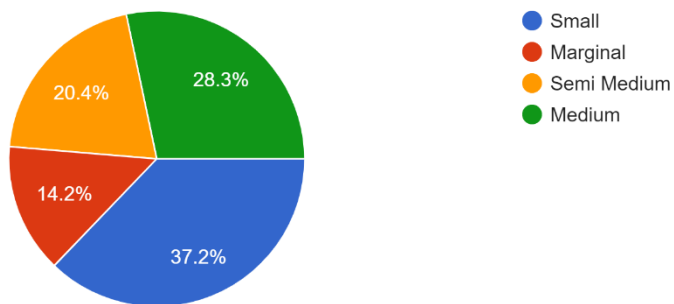
**Non-Probability:** Convenience sampling

## Data Collection and Interpretation

### Q1. Types of Farmers (on the basis of land holding pattern)

Types of Farmers

113 responses

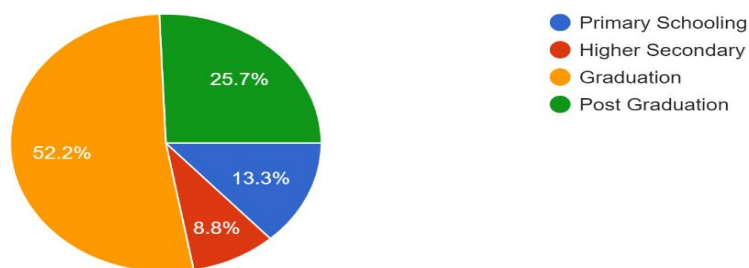


**Interpretation:** In these study we find that 37.2% farmers are small, 28.3% farmers are medium, 14.2 % farmers are marginal and 20.4% farmers are semi medium type of farmers on the basis of land holding pattern.

### Q2. Education level of the Farmer

Education level of the farmers

113 responses

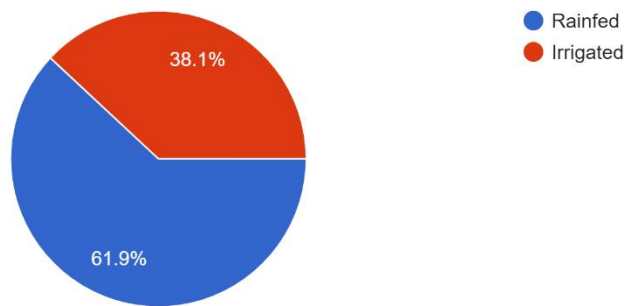


**Interpretation:** These graph shows that education level of the farmer. On the basis of results, we can conclude that 52.2% farmers are completed the graduation. 25.7% farmers are completed post-graduation. 13.3% farmers completed primary schooling and 8.8 % farmers are completed primary schooling.

### Q3. What are the types of agriculture land used by the farmers?

What are the types of agriculture land use by farmers

113 responses

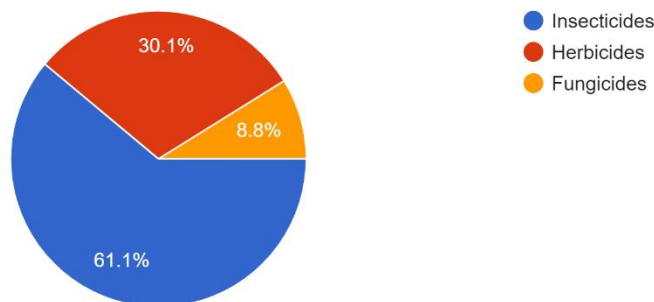


**Interpretation:** These graph shows that 61.9%farmers are depend on the Rainfed agriculture land and 38.1% farmers are depending on irrigated land. These study shows that the irrigated landholder farmers have the more purchasing power than rainfed landholder farmer.

### Q4. Which types of pesticide prefer by the consumer?

Which types pesticides prefer by the consumer

113 responses

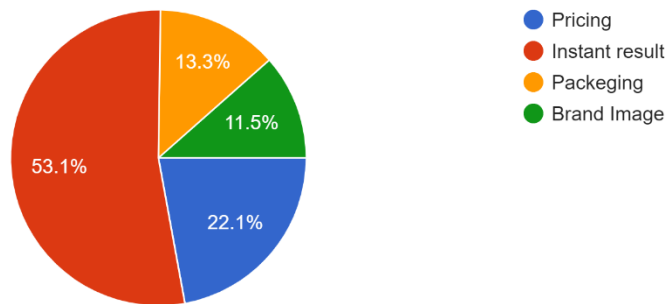


**Interpretation:** These graph shows that farmers use which type of pesticides.61.1% farmers use insecticide, 30.1% farmers are use herbicide and 8.8 % farmers are used fungicide.

### Q5. Mention the feature that prefer about pesticide product?

Mention the feature that you prefer about pesticides product

113 responses

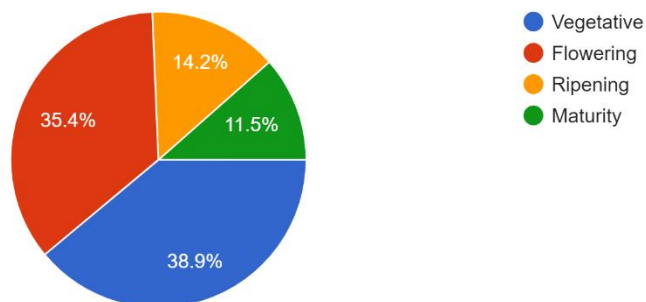


**Interpretation:** This graph shows that which feature that prefer by farmers while purchasing pesticide products. On the basis of data we can conclude that 53.1% farmer consider instant result, 22.1% farmers consider pricing, 13.3% farmer consider packeging and 11.5% farmer consider brand image.

### Q6. In which stage consumption rate of pesticide usage is high?

In which stage consumption rate of pesticides is high

113 responses



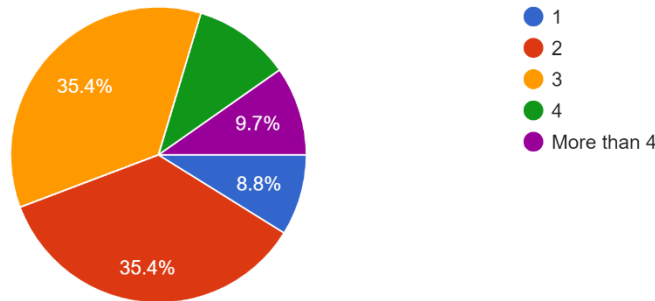
**Interpretation:** This graph shows that consumption rate of pesticide usage. In flowering stages 35.4 % pesticides products are consumed, 38.9 % pesticide products used in vegetative stage and 14.2% products used in ripening and 11.5 % products is consumed in maturity stage.



## Q7. How many times foliar spray are taken by farmer?

How many times foliar spray are taken by you

113 responses



**Interpretation:** This graph shows that how many times farmer take the foliar spray application. 35.4% farmer take two spray, 35.4% farmer take three spray. 9.7% farmer take more than four foliar spray application, 8.8% farmer take only one spray.

### Suggestions: -

In this study we find that, price are the main factors while purchasing the pesticide products. The study suggest that the pesticide companies should focus on the price. Also, study suggest that the Cash crop like cotton required the higher consumption of the pesticide products.

### Reference: -

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