Marketing Perception and Consumer Buying Behaviour of Adama Fungicide (Macoban C) in Kaushambi District of Uttar Pradesh

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Abstract:- **During the study it has been revealed that in landholding category the maximum farmer were under marginal category followed by small farmer, medium farmer, semi-medium farmer and large farmer. In age category it was found that maximum farmer were in middle age group followed by young age group and old age group. In education category it was found that maximum of respondents were literate and less were illiterate. In gender category it was found that maximum were male followed by female. In category of respondent it was found that maximum of respondents in General category followed by OBC category and SC/ST category. In family type category it was found that maximum of respondents were living in nuclear family and less were living in joint family. In religion category it was found that maximum were Hindu followed by Muslim and then Christian. In the study it has been revealed the consumer buying behaviour towards macoban c over the categories of price, availability, packaging and quality of Macoban C. The market share of Macoban C is higher than any other fungicide in the study area. Study reveals the constraint in marketing Macoban C fungicide with High cost of transportation with 35 respondents response ranked I, followed by Storage Problems with 26 respondents response ranked II, followed by High prices with 20 respondents response ranked III, followed by Shortage of trading with 18 respondents response ranked IV, followed by delayed sale with 16 respondents response ranked V, followed by price fluctuation with 5 respondents response ranked VI.**

Keyword:- *Socio-Economic, Marketing Perception, Consumer Buying Behaviour, Market Share, Constraints.*

I. INTRODUCTION

Modern agriculture and industry depend on a wide variety of synthetically produced chemicals. including insecticides, fungicides. herbicides and other pesticides There are more than 234 registered fungicide in India and the Indian fungicide industry includes more than 125 large and medium scale producers of more than 500 fungicide products. Among the various fungicide formulations produced, dust formulations constitute about 85% of the total followed by water-soluble dispersible powder (12%) and dispersible powder (2%. A fungicide is a type of pesticide used to control or kill fungi that can cause diseases in plants, animals, or humans. Fungi can cause a wide range of problems, including plant diseases, food spoilage, and human infections. Fungicides are designed to prevent the growth and spread of fungi, and they come in various forms, including liquids, powders, and granules.

There are many different types of fungicides, each with its mode of action, target fungi, and application method. Some fungicides work by preventing the fungi from growing or reproducing, while others kill the fungi directly. Some are applied to the soil, while others are sprayed on the plant or used as a seed treatment. Macoban C is a combination product of carbendazim, a benzimidazole and mancozeb dithiocarbonate group of fungicides. Macoban C is available in the pack sizes of 100g, 250g, 500gms and 1kg. Versatile use as fungicide. Blend of carbendazim, benzimidazole & mancozeb.

II. RESEARCH METHODOLOGY

➢ *Selection of the District:*
There are 75 District and 18 division in Uttar Pradesh state Out of these Kaushambi district of Uttar Pradesh was selected purposively for the present study on the basis of maximum area under paddy cultivation.

➢ *Selection of Block:-*
There are 8 block in the district. Out of these Kaushambi was selected purposively for the study.

➢ *Selection of Villages:*
There are total 111 villages in Kaushambi block obtained from the block development office. Thereafter these villages was arranged in order on the basis of area of land holding. Thus out of total villages 5% villages was selected randomly for the present study.

➢ *Selection of Respondents*
From the selected village list of all vegetable cultivating farmers was obtained from the block development office in each selected villages. Ascending order on the basis of size

of their landholding the selection of cultivators from families was listed and 10% farmers was randomly selected from all of the villages.

Table 1: Classification of Respondents in Kaushambi Block.

District	Block	Villages	Respondents					Total
			Marginal	Small	Semi-medium	Medium	Large	
Kaushambi	Kaushambi	Dharampur	6	5	5	2	1	19
		Dhekahai	7	5	5	4	2	23
		Diya Kachhar	3	5	6	5	1	20
		Diya Uparhar	7	5	3	6	1	22
		Faizullapur	5	6	4	5	1	21
		Faridanpur	5	3	2	4	1	15
TOTAL			33	29	25	26	7	120

➢ *Analytical Tools:*

● *Standard deviation:*

$$\sigma = \sqrt{\frac{\sum(x_i - \mu)^2}{N}}$$

● *Likert Scale:*

The Likert scale is a standard classification format for studies. The respondents provide their opinion (data) about the quality of a product/service from high to low or better to worse using two, four, five, or seven levels.

● *Garrett Ranking:*

$$\text{Percent position} = \frac{100\,(R_{ij} - 0.5)}{N_j}$$

III.   RESULT AND DISCUSSION

Table 2: Distribution of farmer according to farm size

S. No.	Categories(members)	Respondent	
		Frequency	Percentage
1.	Marginal Farmers (< 1 hectare)	33	27.5%
2.	Small Farmers (1-2 hectare)	29	24.16%
3.	Semi Medium Farmers (2-4)	25	20.83%
4.	Medium Farmers (4-10hectare)	26	21.66%
5.	Large Farmers (Above 10 hectare)	7	5.84%
Total		120	100%

Table 2. reveals Farm size is one of the prime socio-demographic variables in this study. As farm size affects the buying decision, it has an essential association in market-related research. Due to the distinction in their perception and socialization, farm size tend to have distinct conclusions while buying. Out of the total, 120 respondents 33 respondents were having marginal size farm, 29 were having small size farm, 25 were having semi medium size farm, 26 were having medium size farm and remaining 7 were having large size farm.

Table 3: Distribution of respondents based on their age.

S. No.	Categories	Respondent Number	Respondents					
			Marginal	Small	Semi medium	Medium	Large	Percentage
1.	Young age group	36	10	10	5	7	4	30%

	(20-35 years)							
2.	**Middle age group (36-50 years)**	64	14	15	17	16	2	53.34%
3.	**Old age group (above 50 years)**	20	9	4	3	3	1	16.66%
	Total	**120**	**33**	**29**	**25**	**26**	**7**	**100%**

Table 3. reveals that One of the critical socio-demographic factors in this study is Age. Age is given such importance in market-related research, because it affects the physical and psychological aspect of the consumer, which, in turn, affects his/her buying behavior. From this Table it can be concluded that 36(30%) respondents are in the young age group of 20-35, 64(53.34%) respondents are in the middle age group of 36-50, 20 (16.66%) respondent are in old age of above 50. Therefore, the majority of respondents are in the middle age group of 36-50.

Table 4: Distribution of respondents based on their Education

S. No.	Categories	Respondents Number	Respondents					
			Marginal	**Small**	**Semi medium**	**Medium**	**Large**	**percentage**
1	**Primary School**	23	6	6	5	5	1	19.16%
2	**Junior High School**	14	4	3	3	3	1	11.66%
3	**High School**	14	5	4	2	2	1	11.66%
4	**Intermediate**	9	2	1	1	4	1	7.5%
5	**Graduate**	6	1	1	1	2	1	6%
A	**Total Literate**	**66**	**18**	**15**	**12**	**16**	**5**	**55%**
6	**Illiterate**	**54**	**15**	**14**	**13**	**10**	**2**	**45%**
	Total	**120**	**33**	**29**	**25**	**26**	**7**	**100%**

Table 4: Reveals that another socio-demographic factor considered in this consumer behavior study is education. From the table below among 120 respondents, 54(45%) respondents found to be illiterate. The highest number of respondents were found that had studied till primary school that is 23(19.16%), followed by 14(11.66%) respondents were studied till junior high school, followed by 14(11.66%) had studied till high school, followed by 9(7.5%) had studies till intermediate, followed by 6(6%) had studied till graduation. Thus it can be concluded that total literate found during the study is 66(55%).

Table 5: Distribution of respondents according to their gender.

S. No.	Category	Respondents number	Respondents					
			marginal	**small**	**Semi medium**	**medium**	**large**	**Percentage**
1	Male	95	28	24	20	20	3	79.16%
2	Female	25	5	5	5	6	4	20.83%
	Total	**120**	**33**	**29**	**25**	**26**	**7**	**100%**

Table 5: represents Gender is one of the prime socio-demographic variables in this study. As gender affects the buying decision, it has an essential association in market-related research. Due to the distinction in their perception and socialization, men and females tend to have distinct conclusions while buying. Out of the total, 120 respondents 95 respondents were male, that is 79.16% while the remaining 25 were female that is 20.83% of total sample.

Table 6: Distribution of respondents according to their Caste Category.

S. No.	Category	Respondents number	Respondents					
			Marginal	**Small**	**Semi Medium**	**Medium**	**Large**	**Percentage**
1	General	58	15	13	11	15	4	48.33%
2	OBC	40	9	12	10	7	2	33.33%
3	SC/ST	22	9	4	4	4	1	18.33%
	Total	**120**	**33**	**29**	**25**	**26**	**7**	**100%**

Table 6 : reveals that Caste Category is one of the prime socio-demographic variables in this study. As caste affects the buying decision, it has an essential association in market-related research. Due to the distinction in their perception and socialization, Caste Category tend to have distinct conclusions while buying. Out of the total, 120 respondents 58 respondents were belonging to general category that is 48.33%, followed by 40 where OBC that is 33.33% while the remaining 22 were

SC/ST that is 28.33% of total sample.

Table 7: Distribution of respondents according to their Family type.

S. No.	Category	Respondents number	Respondents				
			Marginal	Small	Semi Medium	Medium	Large
1	Joint	25	10	5	5	3	2
2	Nuclear	95	23	24	20	23	5
Total		120	33	29	25	26	7

Table 7: reveals that is one of the Family type socio-demographic variables in this study. As family affects the buying decision, it has an essential association in market-related research. Due to the distinction in their perception and socialization, joint family and nuclear family tend to have distinct conclusions while buying. Out of the total, 120 respondents 25 were living in joint family and 95 were living in nuclear family

Table 8: Distribution of respondents according to their religion.

S. No.	Category	Respondents number	Respondents					
			Marginal	Small	Semi Medium	Medium	Large	Percentage
1	Hindu	60	15	12	16	13	4	50%
2	Muslim	50	15	14	7	12	2	41.66%
3	Christian	10	3	3	2	1	1	8.34%
Total		120	33	29	25	26	7	100%

Table 8: Reveals that Religion is one of the prime socio-demographic variables in this study. As religion affects the buying decision, it has an essential association in market-related research. Due to the distinction in their perception and socialization, relation tend to have distinct conclusions while buying. Out of the total, 120 respondents 60 respondents were Hindu , that is 50%, 50 of them belongs to Muslim that is 41.66 % while the remaining 10 were Christian that is 8.34% of total sample.

Table 9: Market perception of Macoban C.

Parameter	No. of farmers	Farmers%
Quality	25	20.83%
Price	20	16.67%
Packaging	04	3.33%
Relation with Dealer	35	29.17%
Brand image	20	16.67%
Promotional Strategies	10	8.33%
Source of Information	6	5%

Table 9: It is founded that about 20.83% farmers prefer to buy a product according to its quality, about 16.67% farmers prefers the price of product, about 03.33% farmers prefers the attractiveness of the packaging, 29.17% farmers but agrochemicals only because of the relationship with the distributor, 16.67% of the farmers buy agro-product on the basis of Brand Image, about 8.33% farmers buys agro products by convinced through promotional strategies, and 05% farmers take information about products from their friends and neighbours or any other person.

Table 10: Distribution of respondents according to availability of availability of Macoban C.

General	Categories	Respondents Number	Percentage
Availability of Macoban C	**Wholesaler**	35	29.17%
	Retailer	70	58.33%
	Online	15	12.5%
Total		**120**	**100%**

Table 10: It has been revealed during the study that there is availability factor which are affecting buying behavior of Macoban C by different categories of respondents are availability at wholesaler shop (29.17%), availability at retailer shop (58.33%) and availability on online platform (12.50%) respectively.

Table 11: Distribution of respondents according to quality of Macoban C.

General	Categories	Respondents Number	Percentage
Quality of Macoban C	Preventive	40	33.33%
	Curative	45	37.5%
	Safe to Applicator	35	29.17%

Total	120	100%

Table 11: It has been revealed during the study that there is quality factor which are affecting buying behavior of Macoban C by different categories of respondents are preventive (33,33%), curative (37.50%) and Safe to applicator (29.17%) respectively.

Table 12: Distribution of respondents according to Price of Macoban C.

General	Categories	Respondents Number	Percentage
Price of Macoban C	Low	55	45.83%
	Medium	50	41.67%
	High	15	12.5%
Total		120	100%

Table 12: It has been revealed during the study that there is price factor which are affecting buying behavior of MACOBAN C by different categories of respondents are low price (45.83%) , medium price (41.66%) and high price (12.50%) respectively.

Table 13: Distribution of respondents according to Packaging of Macoban C.

General	Categories	Respondents Number	Percentage
Packaging of Macoban C	Small pack	55	45.84%
	Large pack	10	8.33%
	Packet Quality	45	37.5%
	Packaging quality	10	8.33%
Total		120	100%

Table 13: It has been revealed during the study that there is packaging factor which are affecting buying behavior of Macoban C by different categories of respondents are availability in small pack (45.84%) ,availability at large pack (8.33%), packet quality(37.50%) and packaging quality (8.33%)respectively.

Table 14: Market Share of Macoban C in Segment in study area.

Sr. No.	Particulars	Frequency			
		ADAMA MACOBAN C	UPL SAAF	Bayer SECTIN	M-45 INDOFIL
1	Preventive	10	5	8	7
2	Safe to user	20	13	11	9
3.	Price	15	13	12	10
4.	Curative	20	14	11	9
5.	Availability in small packs	40	35	33	25
		95	80	75	60

Table 14: Reveals that during the study, we found various other fungicide which was being used by the respondents in the study area. Reveals the market share of ADAMA Macoban C fungicide in segment in the study area. In above table it has been revealed that market share of Macoban C is higher as compared to other fungicide which were being used. In the study area total 95 respondents out of 120 under various category preventive 10, safe to user 20, price 15, curative 20 and availability in small pack 40. In UPL SAAF, the total response of respondents is 80 out of 120 under various category preventive 5, safe to user 13, price 13, curative 14, availability in small pack 35. In Bayer Sectin , the total response was 75 out of 120 under various categories which was preventive 8, safe to use 11, price 12, curative 11 and availability in small packs 33 and in M-45 Indofil the total response was 60 out of total sample taken in the study area under various categories preventive 7, safe to user 9, price 10, curative 9, availability in small pack 25. Thus, it can be concluded that market share of ADAMA Macoban C is higher in segment of other fungicide which were being used by respondents in the study area.

Table 15: Constraints to Macoban C marketing.

Sr. No.	Constraints	Frequency	Ranking
1.	High cost of transportation	35	I
2.	Price fluctuation	5	VI
3.	Delayed sales	16	V
4.	Shortage of trading	18	IV
5.	High prices	20	III
6.	Storage problems	26	II

Table 15: Above table reveals the constraint in marketing Macoban C fungicide with High cost of transportation with 35 respondents response ranked I, followed by Storage Problems with 26 respondents response ranked II, followed by High prices with 20 respondents response ranked III, followed by Shortage of trading with 18 respondents response ranked IV, followed by delayed sale with 16 respondents response ranked V, followed by price fluctuation with 5 respondents response ranked VI.

IV. CONCLUSION

Reveals Farm size is one of the prime socio-demographic variables in this study. As farm size affects the buying decision, it has an essential association in market-related research. Due to the distinction in their perception and socialization, farm size tend to have distinct conclusions while buying. Out of the total, 120 respondents 33 respondents were having marginal size farm, 29 were having small size farm, 25 were having semi medium size farm, 26 were having medium size farm and remaining 7 were having large size farm. Reveals that One of the critical socio-demographic factors in this study is Age. Age is given such importance in market-related research, because it affects the physical and psychological aspect of the consumer, which, in turn, affects his/her buying behavior. From this Table it can be concluded that 36(30%) respondents are in the young age group of 20-35, 64(53.34%) respondents are in the middle age group of 36-50, 20 (16.67%) respondent are in old age of above 50. Therefore, the majority of respondents are in the middle age group of 36-50. Reveals that another socio-demographic factor considered in this consumer behavior study is education. From the table below among 120 respondents, 54(45%) respondents found to be illiterate. The highest number of respondents were found that had studied till primary school that is 23(19.16%), followed by 14(11.66%) respondents were studied till junior high school, followed by 14(11.66%) had studied till high school, followed by 9(7.5%) had studies till intermediate, followed by 6(6%) had studied till graduation.

Thus it can be concluded that total literate found during the study is 66(55%). Represents Gender is one of the prime socio-demographic variables in this study. As gender affects the buying decision, it has an essential association in market-related research. Due to the distinction in their perception and socialization, men and females tend to have distinct conclusions while buying. Out of the total, 120 respondents 95 respondents were male, that is 79.16% while the remaining 25 were female that is 20.83% of total sample. Reveals that Category is one of the prime socio-demographic variables in this study. As caste affects the buying decision, it has an essential association in market-related research. Due to the distinction in their perception and socialization, Category tend to have distinct conclusions while buying. Out of the total, 120 respondents 58 respondents were belonging to general category that is 48.33%, followed by 4O where OBC that is 33.33% while the remaining 22 were SC/ST that is 28.33% of total sample. Reveals that is one of the Family type socio-demographic variables in this study. As family affects the

buying decision, it has an essential association in market-related research. Due to the distinction in their perception and socialization, joint family and nuclear family tend to have distinct conclusions while buying. Out of the total, 120 respondents 25 were living in joint family and 95 were living in nuclear family. Reveals that Religion is one of the prime socio-demographic variables in this study. As religion affects the buying decision, it has an essential association in market-related research. Due to the distinction in their perception and socialization, relation tend to have distinct conclusions while buying. Out of the total, 120 respondents 60 respondents were Hindu , that is 50%, 50 of them belongs to Muslim that is 41.66 % while the remaining 10 were Christian that is 8.34% of total sample. It is founded that about 20.83% farmers prefer to buy a product according to its quality, about 16.67% farmers prefers the price of product, about 03.33% farmers prefers the attractiveness of the packaging, 29.17% farmers but agrochemicals only because of the relationship with the distributor, 16.67% of the farmers buy agro-product on the basis of Brand Image, about 8.33% farmers buys agro products by convinced through promotional strategies, and 05% farmers take information about products from their friends and neighbours or any other person.

It has been revealed during the study that there is availability factor which are affecting buying behavior of Macoban C by different categories of respondents are availability at wholesaler shop (29.17%) , availability at retailer shop (58.33%) and availability on online platform (12.50%) respectively. It has been revealed during the study that there is quality factor which are affecting buying behavior of Macoban C by different categories of respondents are preventive (33,33%), curative (37.50%) and Safe to applicator (29.17%) respectively. It has been revealed during the study that there is price factor which are affecting buying behavior of MACOBAN C by different categories of respondents are low price (45.83%) , medium price (41.66%) and high price (12.50%) respectively. It has been revealed during the study that there is packaging factor which are affecting buying behavior of Macoban C by different categories of respondents are availability in small pack (45.84%) ,availability at large pack (8.33%), packet quality(37.50%) and packaging quality (8.33%)respectively Reveals that during the study, we found various other fungicide which was being used by the respondents in the study area. Reveals the market share of ADAMA Macoban C fungicide in segment in the study area. In above table it has been revealed that market share of Macoban C is higher as compared to other fungicide which were being used. In the study area total 95 respondents out of 120 under various category preventive 10, safe to user 20, price 15, curative 20 and availability in small pack 40. In UPL SAAF, the total response of respondents is 80 out of 120 under various category preventive 5, safe to user 13, price 13, curative 14, availability in small pack 35. In Bayer Sectin , the total response was 75 out of 120 under various categories which was preventive 8, safe to use 11, price 12, curative 11 and availability in small packs 33 and in M-45 Indofil the total response was 60 out of total sample taken in the study area under various categories preventive 7, safe to user 9, price

10, curative 9, availability in small pack 25. Thus, it can be concluded that market share of ADAMA Macoban C is higher in segment of other fungicide which were being used by respondents in the study area. Reveals the constraint in marketing Macoban C fungicide with High cost of transportation with 35 respondents response ranked I, followed by Storage Problems with 26 respondents response ranked II, followed by High prices with 20 respondents response ranked III, followed by Shortage of trading with 18 respondents response ranked IV, followed by delayed sale with 16 respondents response ranked V, followed by price fluctuation with 5 respondents response ranked VI.

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