



Research Article

STUDY ON FARMERS' PERCEPTION TOWARDS ORGANIC INPUTS IN SELECTED DISTRICTS OF GUJARAT

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Abstract- Organic farming in India is practiced from ancient time. India is bestowed with different agro climatic zones which makes it possible to produce varieties of organic products. The study entitled "A study on farmer's perception towards organic inputs in selected districts of Gujarat" was carried out to know farmers' perception toward organic input and to find out awareness level & satisfaction level about organic input. Another objective of study was to know the major market competitors of Bharat Krushi care Pvt, Ltd and to study the purchasing pattern of organic Input. The present study was conducted in Gujarat, India. Through purposive sampling technique 320 respondents from 8 districts and from each district four talukas and from each taluka 10 farmers were selected. Descriptive statistics was used to present the findings. It was found that most of the farmers were highly aware about the bio product. Majority of farmers use organic input because of their satisfaction towards availability and accessibility of Organic inputs. The satisfaction level was less towards price and productivity. So, organic input industry needs to focus more on price, quality of product and its productivity. Organic fertilizer and crop enhancer were used by most of the farmers. Low level of awareness and their slow impact were the main reasons for not using other bio-products. The use of bio-fertilizer ranges from one to three times in the selected crops. Further, as dealers are the main source of information for farmers, so there is a need to strengthen a trustworthy relationship with dealers. The familiarity of the organic inputs among farmers depends on the promotional efforts of the marketers. So, demonstrations at larger level and use of promotional activities were suggested for improving the customer base of bio-products, which can be done with the help of dealers.

Key words- Organic, Perception, Awareness level.

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Introduction

The scenario of agriculture has changed dramatically. Use of chemicals throughout the globe for years has not only increased the productivity of crops but also has made it difficult for the upcoming generations to fulfill their need. Sustainable agriculture is the only way through which we can fulfill the need of present without comprising on the ability of the future generations to meet their need. The three main goals of sustainable agriculture is to make environment healthy, to gain economic profit and to maintain social and economic equity [1,4]. The transition of present way of agriculture to sustainable agriculture can be done through various ways. One of the ways is to use organic inputs. In this backdrop following objectives were taken for this study:

1. To study the farmers perception towards organic input
2. To know the awareness level & satisfaction level of organic input
3. To know the major market competitors of Bharat Krushi Care Pvt, Ltd
4. To study the purchasing pattern of organic input

Research Methodology

Source of the data- Primary as well as secondary was collected to meet the stipulated objectives of the study.

Sampling method- Non-probability sampling method.

Research instrument- Semi structured schedule

Area- Selected districts of Gujarat state.

Sample size- 320 farmers from the selected districts in Gujarat state. (Anand, Kheda, Vadodara, Mehsana, Banakantha, Sabarkantha, Kutch and Navsari).

Analysis of data- Tabulated analysis and graphical presentations have been used to meet the objectives of the project.

Results and Discussion

Land Holding of Farmers

Table-1 Land Holding of Farmers

Land holding	Frequency	Percentage
0 to 1 Ha	127	40
2 to 3 ha	109	34
4 to 5 ha	38	12
6 to 10 ha	24	7
> 10 ha	22	7

It was observed during the survey that the total land holding was evenly distributed. 127 farmers were having land holding between 0 to 1 ha, 34% (109) farmers have 2 to 3 ha land, 12 % (38) farmers have 4 to 5 ha land, 7% (24) farmers have 6 to 10 ha, 7 % (22) farmers have > 10 ha land.

Annual Income of farmers**Table-2 Income**

Income	Frequency	Percentage
0 to 50 k	97	30
51k to 1 lakh	103	32
1.1 lakh to 2 lakh	67	21
2.1 lakh to 4 lakh	33	10
4.1 lakh to 10 lakh	12	4
More than 10 lakh	8	3

It was observed that 32% (103) of farmers' income 51 K to 2 lakh, 30%(97) income 0 K to 50 k and 21 % (67) farmers have income 1.1 lakh to 2 lakh, 10% (33) farmers have 2.1 lakh to 4 lakh income, 4 % farmers have 4.1 lakh to 10 lakh income per annum, 3% (8) farmers have more than 10 lakh income.

Crop Grown**Table-3 Crop Grown**

Crop grown	Frequency	Percentage (%)
Tobacco	60	12
Paddy	50	10
Cotton	85	17
Castor	47	9
Potato	65	13
Pomegranate	40	8
Date palm	26	5
Banana	68	14
Sugarcane	19	4
Vegetables	38	8

It was observed during the survey that the cotton was the main crop grown by 17% of the farmers followed by banana (15%) & Potato (13%). Others crop grown in region are Tobacco, Paddy, Pomegranate, castors, date palm, sugarcane.

Have you used any company's Organic-product?**Table-4 Have you used any company's Organic-product?**

Response	Frequency	Percentage (%)
YES	182	57
NO	138	43

According to survey it was observed that from 320 farmers 57%(182) farmers were using private company's organic product, 43% (138) farmers were not using company's bio product but they were using homemade bio product like Jivamurat and panchamurt.

Reason for not using Organic input**Table-5 Reason for not using**

Reasons	Frequency	Percentage
Use homemade Organic inputs	94	68
less productivity/ not Fast Result	26	19
High Price	12	9
Not available in Local market	6	4
Lack of awareness	0	0

It was observed that 68%(94) Farmers do not use company's Organic product because they use Homemade Organic Inputs while 19%(26) farmers do not use because Organic input Productivity is less and does not give fast result, 9% (12) farmers did not use organic input because of its high price, 4%(6). Non availability of input in local market was the reason for not using the product.

Organic product use**Table-6 Organic product use**

Bio-products	Frequency	Percentage (%)
bio-fertilizer	173	72
bio-pesticide	16	7
bio-fungicide	7	3
crop enhancer	43	18

It was found during the survey that the most of the farmers 72% were using bio fertilizer, 7% farmers were using bio pesticide, only 3% using bio fungicide, 18% using crop enhancer and many farmers were using two to three bio products. The reason for less use of bio pesticide and bio fungicide was low level of awareness about the product and their slow impact after application.

Why do you use Organic product?**Table-7 Why use Organic products**

Reasons	Frequency	Percentage (%)
enhance soil health	63	35
minimize chemical use	56	31
better quality yield	46	25
Faster growth of plant	17	9

According to survey, it was found that 35% farmers were using Organic products because it enhances soil health, 31% farmers said that they use organic product because it minimizes the use of chemical fertilizer, 25% farmers were of the opinion that organic product gives better quality yield and 9% farmers said that it ensures faster growth of plant.

**Major Market Competitors of Bharat Krushi Care Pvt. Ltd in study area
Major competitors****Table-8 Major competitors**

Company	Frequency	Percentage
Nico Organic	19	10
GSFC	15	8
Agriland	13	7
Agrojaivika	12	7
Net surf	11	6
IFFCO	10	6
MBK	10	5
GNFC	9	5
Vedikorgaic	9	5
Vadodara organics	7	4
Biostadt	5	3
others	62	34

From the survey it was observed that, regarding competitors product usage preference by farmers, 10% farmers used product of Nico organic, 8% farmers used product of GSFC, 7% farmers used product of Agriland, 7 % farmers used product of Agro jaivika, 6% farmers used product of IFFCO, 6% farmers used product of Net surf, 5% farmers used product of GNFC, 5% farmers used product of MBK, 5% farmers used product of Vedik organic, 4% farmers used product of Vadodara organics, 3% of farmers used product of Biostadt, 34% of farmers used several small company product, its include in others

**Perception of farmers towards Organic product
Perception of farmer****Table-9 Perception of farmer**

Rank	5 (Fully Satisfied)	4 (Satisfied)	3 (Indifferent)	2 (Dissatisfied)	1 (Fully Dissatisfied)	Total	WAM
Brand	51	134	32	64	39	320	3.29
Quality	45	112	64	57	42	320	3.19
Quantity	64	121	48	64	23	320	3.43
Price	23	70	55	128	44	320	2.69
Design	29	64	13	156	58	320	2.53
Availability	64	185	19	45	7	320	3.79
Accessibility	70	171	32	26	21	320	3.76
Mode of payment	43	139	31	82	25	320	3.29

Likert scale was used to know the perception of farmer towards organic product. Respondents were recorded on 1= fully dissatisfied and 5=fully satisfied. The

weighted average mean was determined by adding values of scale whose is multiplied by weight from 1 to 5 and divided by number of respondents.

According to the survey it was found that majority of the farmer's had more favorable perception towards availability and accessibility of Organic products whereas it was less positive for price and design.

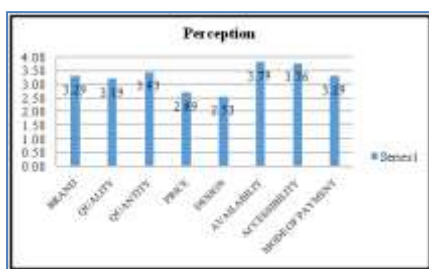


Chart-1 perception of farmer

Awareness level and Satisfaction of farmers toward Organic Inputs

Awareness level of Organic inputs

Table-10 Awareness level

Awareness	Frequency	Percentage
yes	320	100
no	00	00

It was observed that 100 % (320) of the sampled farmers were aware about organic inputs.

Satisfaction towards Organic Inputs

Table-11 Satisfaction level

	5 (Fully Satisfied)	4 (Satisfied)	3 (Indifferent)	2 (Dissatisfied)	1 (Fully Dissatisfied)	TOTAL	WAM
Brand	32	65	25	39	21	182	3.26
Quality	16	36	78	42	10	182	3.03
Quantity	21	53	28	62	18	182	2.98
Price	12	32	50	73	15	182	2.74
Availability	45	68	42	16	11	182	3.66
Accessibility	39	63	38	24	18	182	3.45
Productivity	8	42	52	61	19	182	2.77

Likert scale was used to know the level satisfaction of farmers towards different attributes of organic input. Respondents were recorded on 1= fully dissatisfied and 5=fully satisfied. The weighted average mean was determined by adding values of scale whose is multiplied by weight from 1 to 5 and divided by number of respondents According to the survey it was found that majority of the farmers were

satisfied with availability and accessibility attributes of Organic products whereas less satisfaction was observed towards price and productivity.

Purchasing pattern

Frequency of Purchase of Organic product

Table-12 Frequency of Purchase

Frequency	Tobacco	Paddy	Cotton	Castor	Potato	Pomegranate	Date palm	Banana	Sugarcane	Vegetables
Once in a year	34	18	46	14	25	3	16	23	11	4
Twice in a year	19	26	23	26	19	11	8	29	5	8
Thrice in a year	4	6	14	6	15	19	2	12	3	17
>3times in a year	3	0	2	1	6	7	0	4	0	9
Total farmers	60	50	85	47	65	40	26	68	19	38

It was observed that out of 60 surveyed Tobacco farmers 34 were purchasing Organic input once in a year while 3 farmers were purchasing thrice in a year, Out of 50 farmers of paddy 26 were purchasing twice in a year while 6 were purchasing thrice in a year, in cotton crop out of 85 farmers 46 farmers were purchasing once in a year while 2 farmers were purchasing thrice in a year, in castor out of 47 farmers 26 farmers purchasing twice a year while 1 farmer using thrice in a year, in potato out of 65 farmers 25 Farmers were purchasing once in a year while 6 farmers purchasing thrice in a year, in Pomegranate out of 40 farmers

19 farmers were purchasing thrice in a year while 3 farmers purchasing once in a year, in date palm out of 26 farmers 16 farmers were purchasing once in a year while 2 farmers were purchasing thrice in a year, in Banana out of 68 farmers 29 farmers were purchasing twice in a year while 4 numbers of farmers were purchasing thrice a year, in sugarcane out of 19 farmers 11 farmers were purchasing once in a year while 3 farmers were purchasing thrice in a year and in vegetables out of 38 farmers 17 farmers were purchasing thrice in a year while 4 farmer were purchasing once in a year.

Application of Organic product

Table-13 Application of Organic product

	Tobacco	Paddy	Cotton	Castor	Potato	Pomegranate	Date palm	Banana	Sugarcane	Vegetables
< 2times	37	28	30	14	28	5	16	27	11	4
2-4times	19	16	48	26	22	16	8	29	5	15
5-6 times	4	6	9	6	15	19	2	12	3	19
>6 times	0	0	0	0	0	0	0	0	0	0
Total farmers	60	50	85	47	65	40	26	68	19	38

It was observed that out of 60 surveyed Tobacco farmers 37 were using Organic inputs <2 in a season while 4 farmers were using 5-6 in a season and out of 50 farmers of paddy 28 were using <2 times in a season while 6 were using 5-6 times in a season In cotton crop out of 85 farmers 48 farmers using <2 time in season a while 9 farmers were using 4-6 times in a season. In castor out of 47 farmers 26

farmers using 2-4 times in a season while 6 famer using 5-6 times in season, in potato out of 65 farmers 28 Farmers were using <2 times in a season while 15 farmers using 5-6 times in a season, in Pomegranate out of 40 farmers 19 farmers were using 5-6 times in a season while 5 farmers using <2 times in a season, in date palm out of 26 farmers 16 framers were using 2-4 time in a season while 2

farmers were using 5-6 times in a season ,in Banana out of 68 farmers 29 farmers were using 2-4 times in season while 12 numbers of farmers were using 5-6 times a season, in sugarcane out of 19 farmers 11 farmers were using <2 time in a season while 3 farmers were using 5-6 times in a season and in vegetables out of 38 farmers 19 farmers were using 5-6 times in a season while 4 farmer were using

<2 times in a season.

Credit Availability for Transaction

Credit availability

Table-14 Credit availability

	Tobacco	Paddy	Cotton	Castor	Potato	Pomegranate	Date palm	Banana	Sugarcane	Vegetables
Cash	39	32	42	29	35	22	18	39	11	23
1 up to month Credit	4	7	6	3	12	6	8	11	5	5
Credit up to season	17	16	17	11	15	19	0	18	3	10
Credit up to selling	0	5	20	4	3	0	0	0	0	0
Total	60	50	85	47	65	47	26	68	19	38

According to survey it was observed that out of 60 surveyed tobacco farmers 39 directly pay through cash mode while 17 farmers buy through credit whose for a period of one season. And out of 50 farmers of paddy 32 were directly pay through cash mode while 7 were farmers buy through credit whose period is one season., in cotton crop out of 85 farmers 42 farmers directly pay through cash mode while 6 farmers were buy through credit whose period is one season or in castor out of 47 farmers 29 farmers directly pay through cash mode while 3 famer buy through credit whose period is one season and in potato out of 65 farmers 35 Farmers were directly pay through cash mode while 3 farmers credit up to selling, in Pomegranate out of 40 farmers 22 farmers were directly pay through cash mode while 6 farmers buy through credit whose period is one season. ,in date palm out of 26 farmers 18farmers were directly pay through cash mode while 8 farmers were directly pay through cash mode ,in Banana out of 68 farmers 39 farmers were directly pay through cash mode while 11 numbers of farmers were directly pay through cash mode, in sugarcane out of 19 farmers 11 farmers were directly pay through cash mode while 3 farmers were credit up to season and in vegetables out of 38 farmers 11 farmers were directly pay through cash mode while 5 farmer were buy through credit whose period is one season.

According to survey it was observed that in each crop farmers were using either Granular Organic inputs or Liquid Organic inputs. In case of granule fertilizer, in Tobacco out of18 farmers 8 using 46-50 bags in one season, in Paddy out of 38 farmers 22 Farmers using 41-50 Bags in a season, in cotton out of 58 farmers 24 farmers using 46-50 bags in season, in castor out of 19 farmers 9 farmers using 46-50 bags, in potato out of 38 farmer 13 farmers using 41-45 bags, in pomegranate out of 12 farmers 4 farmers using < 40 bags ,in date palm out of 22 farmers 12 farmers using 41-45 bags, in banana out of 6 farmers 2, 2 farmers using 41-45, 46-50 respectively, in Sugarcane out of 19 farmers 8 farmers using 56-60 bags and in vegetables out of 10 farmers 6 farmers used < 40 bags in a one season.

Quantity Purchase for Liquid

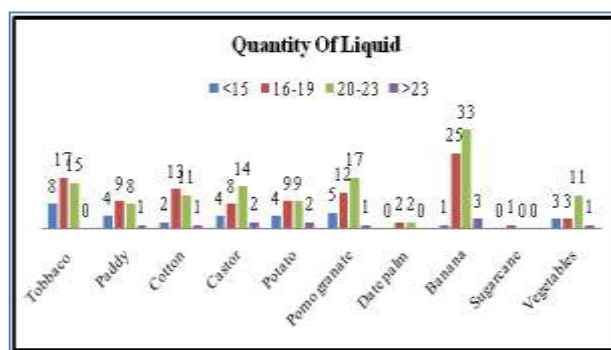


Chart-3 Quantity of liquid

During survey it was observed that in each crop some farmers were using Granule Organic inputs and some were using Liquid Organic inputs. In case of Liquid, in Tobacco, out of 42 Farmers 17 Farmers using 16-19 liters in a one season, in Paddy Out of 22 Farmers 9 farmers using 16-19 liters in a season, in cotton out of 27 farmers 13 farmers using 16-19 liters in a season, in castor out of 28 farmers 14 farmers using 20-23 liters , in potato out of 24 farmer 9 farmers using 20-23, 16-19 liters, in pomegranate out of 35 farmers 17 farmers using 20-23 liters, in date palm out of 4 farmers 2 farmers using 16-19 liters, in banana out of 62 farmers 33 farmers using 20-23 liters, in Sugarcane out of 19 farmers 8 farmers using 56-60 bags and in vegetables out of 26 farmers11 farmers using 20-23 liters in a one season.

Conclusion

From the survey it was found that most of the farmers in the study area were highly aware about the bio product. Majority of farmers use organic input because of their satisfaction towards availability and accessibility of Organic inputs. Whereas satisfaction was less towards price and productivity. So, organic input industry needs to focus more on price, quality of product and its productivity. Organic fertilizer and crop enhancer were used by most of the farmers. Low level of awareness and their slow impact were the main reasons for not using other bio-products [3]. The use of bio-fertilizer ranges from one to three times in the selected crops. As far as the application of organic product is concerned for the

Source of information for Organic input?

Table-15 Source of information

References	Frequency	percentage
Dealer	160	50
Fellow farmer	83	26
Pamphlet /posters	7	2
Field demonstrations	64	20
Radio/TV advertisement	6	2
Newspaper	0	0

It was observed that 50% of farmer knows about the organic input from dealers, 26% of farmer from fellow farmers, 20% know from Field demonstrations, 2% know from Pamphlet/poster, 2% through Radio/TV Advertisements. No one received information about organic product through newspaper.

Quantity Purchase for One Ha Land

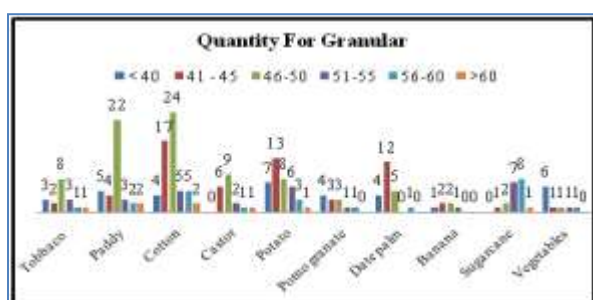


Chart-2 Quantity for Granular

Tobacco, paddy potato and banana, sugarcane and date palm crop most of the farmers use less than two times in a season. Likewise, in cotton and castor two to four times in a season. In pomogranate and vegetables it was five to six times. Accordingly, the company should ensure the availability of bio fertilizer in the study area. Further, as dealers are the main source of information for farmers, so there is a need to strengthen a trustworthy relationship with dealers. The dealers should provide sample product to the farmers and give demonstration of the use of product. Granular form of bio-fertilizer was used by more number of farmers in larger quantities so company should ensure its availability at the time of requirement.

Suggestions:

The following are the suggestions made, based on the results of the study.

- The familiarity of the organic inputs among farmers depends on the promotional efforts of the marketers. The availability of organic inputs need wider demonstrations and promotional activities which can be done with the help of dealers.
- Most of farmers said that they are ready to pay more but they want good quality result, hence company needs to take care of the quality standards for its product range [1].
- Other minor observation is that the organic inputs selling shops are limited in the city, therefore company needs to expand its reach by opening more retail outlets. The organic inputs are not properly certified from any organic certified agency or authority. Hence due efforts should be made for ensuring proper certification [2].

Application of research: The research and the techniques employed will be useful in studying the behavioral pattern of the respondents, more specifically of customers, towards any product.

Research Category: Agribusiness, organic inputs

Abbreviations:

GSFC: Gujarat State Fertilizer & Chemicals

GNFC: Gujarat Narmada Valley Fertilizers & Chemicals

IFFCO: Indian Farmers Fertilizer Cooperative

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