

CHAPTER V
SUMMARY, CONCLUSION
AND
RECOMMENDATION

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Nature is a gift of God. Everyone should follow the laws of nature to have socially, culturally, economically and healthy life as "health is wealth". But to meet demands of increasing population in the world, exploitation of natural resources started. Agriculture is a system of harnessing nature for the sustenance of human being. In pre-independence era of India, having low population, agriculture was by and large organic and nearer to nature. Post independent era was posed with great population pressure on land, huge demands for food grain leading to increased use of fertilizers and pesticides to boost the production. To satisfy the need of more food during last 4-5 decades, campaign of "grow more food or green revolution" with technological interventions in agriculture was widely adopted by farmers to exploit the nature for maximizing agriculture production.

At the global level considerable progress has been done in the field of agricultural activities. Among all developing countries India has made much progress by increasing the production of food grains. The use of chemical fertilizers for agriculture gradually increased and spread slowly to the developing and under developing countries.

The Green revolution launched in the mid sixties became a landmark in transformation of agriculture in India. The seed, fertilizer, plant protection, irrigation and other allied technologies of intensive nature promoted since then, made the way for a substantial increase in food production, leading to self sufficiency and even surplus for export (Ramnathan 2006).

Excess of use of chemicals have deteriorated soil and its water holding capacity and infiltration. Conventional farming techniques not only reduce the water holding capacity of the soil but also accelerate the rate of soil erosion and run of. Thus, with the use of chemical fertilizers and pesticides in the agriculture, though food production has increased initially, the negative side

effect of over exploitation of land and water resources have led to serious implication ultimately spoiling the quality of soil. As with the use of pesticides and fertilizer the quality of soil deteriorates and that leads to reduction in the production. Most pesticides are highly toxic and many remain in the environment for long period and become concentrated as they go up the food chain and can spread thousands of kilometers from the point of emissions.

Pesticides cause death, disability, organ dysfunction, incapacitation and much other illness. Immediate effects may include dizziness, headache, nausea and vomiting, abdominal pain, difficulty of breathing, weakness and many other symptoms, which are often, may not readily be recognized as pesticides poisoning. The health effects may be mild, moderate or severe depending on the degree and circumstances of exposure.

The people on the earth must prevent the imbalance in ecosystem so as to get safe and healthy life. The task is to nurture the land and to regenerate the soil. This is possible through sustainable farming system. Sustainability means continuous soil fertility and productivity. The organic farming is one of the most important steps of sustainable agriculture that uses methods respectful of the environment from the production stages through the handling and processing. It minimizes the use of man-made external inputs especially chemical, synthetic materials and pesticides to produce uncontaminated food of high nutritional quality and in sufficient quantity. It is an important way to stop degradation of land and soil erosion.

India is not in a position to completely stop the use of synthetic agro-chemicals, especially inorganic fertilizers in view of the large demands of the increasing population for food commodities.

People are still not aware about organic food. The production of organic food is also very low and there are few outlets selling organic food, which is another hindrance in this area. Whatever food items are available at these outlets, all are not certified as organic. Moreover the certification process is very expensive which poor farmers can not afford. In such cases, while

buying organic food which is not certified, consumer may have feeling of being cheated by the shopkeeper. Therefore they sometimes avoid to buy organic food.

Due to less production and high market price of organic food, it is not very popular among the people. Also the availability of organic food is uncertain which influences the buying practices of homemaker. It is the responsibility of the homemakers to provide food items, which are enhancing the health of the family members. As it is believed that organic food products may be safer for the health than the conventional food products, she should buy organic food to a greater extent.

There is a need to create awareness about the advantages of organic food among people and promote its use. There is also a need to find out the problems people face in obtaining the organic food items, so that remedial measures can be taken up. A survey of the satisfaction experienced by the consumers of organic food would reveal the aspects of with which consumers are not satisfied. This can act as a feedback to the organic food growers and providers.

The producers and sellers of organic food as well face difficulties. There is also a need to find out their problems so that suitable solutions can be found out. This may help them to continue producing and selling organic food. Hence the present research was planned to survey the consumers, producers and sellers of organic food on various aspects covering their problems and satisfaction at the same time assessing the food quality of organic food and conventional food. An educational package was also prepared for the future homemakers to disseminate knowledge regarding organic food and motivate them to adopt organic food in their daily diet.

Such a study, intergrading various people associated from production to consumption of organic food and assessing the quality of organic food, was difficult to find in the literature surveyed. The present study would provide a

very useful feedback to all the concerned people/ organizations/ institutions to promote the use of organic food

Objectives of the study

1. To find out various organic food items available in the market of Vadodara city.
2. To study the problems faced by the shopkeepers selling organic food.
3. To assess the extent of utilization of organic food by the consumers.
4. To study the extent of influence of various reasons to buy organic food.
5. To study extent of problems faced and extent of satisfaction felt by the consumers on using organic food.
6. To undertake case study of selected farmers growing organic food.
7. To assess the quality of selected organic food and non-organic food.
8. To disseminate knowledge to young women of Vadodara city regarding organic food.

Delimitation of the study

1. The study was limited to the Vadodara city only.
2. The quality assessment of organic food and conventional (non-organic) food was done on selected bio-chemical, sensory parameters, cooking time and shelf life.
3. The quality assessment was limited to one item from each of the following food groups viz. Cereals, Pulses, Roots & tubers, Vegetables, Fruits and Jaggery.

Limitation of the study

The present research had the limitation of selecting organic food for quality assessment from the farms which were doing organic farming since past 4 to 8 years from the time of data collection (February 2008). Since converting land in to organic farming requires long time, samples were selected from the existing farm where organic farming was done. Environmental factors like rain, heavy wind etc. may bring the pesticides and fertilizer content from the nearby farms where pesticides were used.

Methodology

The study was conducted in various phases. **Phase I** was study of shops selling organic food. An interview schedule comprising of relevant questions and scales to find out extent of influence of reasons to sell organic food and problems faced by them were developed by the researcher. 7 shops selling organic food and one street side restaurant selling food items prepared by using only organically grown raw materials were the sample for the present study.

Phase II comprised of study of consumers buying organic food. 150 such consumers were contacted personally by the investigator, who purchased at least 4 items in a month from any of the shops selling organic food. Thus convenience sampling technique was followed for this phase. Through interview schedule necessary information about extent of utilization of organic food, problems faced while using organic food and satisfaction felt on using organic food.

In **phase III** case study were undertaken for 5 farmers who were doing organic farming and supplying their farm products to Vadodara city market. The

Phase IV comprised of food quality assessment. Samples for all the different tests for experimental study were selected directly from the farm which were doing organic farming since last 5 years. The sample for conventional (non-organic) food items were selected from the neighbouring farms so that the factors like soil condition, climate, irrigation method etc would remain constant. The samples were collected during winter season, in the month of January, 2008. The food quality assessment was done on vegetables, fruits, cereals, pulses and jaggery grown through organic and conventional (non-organic) farming method.

a) Food quality assessment: The sample of organic and conventional Cabbage (one from each), Yam Elephant (one from each) , Chiku (200 gm),

Rice (500 gm), Red gram Dal (500 gm) and Jaggery (1 kg) were labeled and taken to the Food and Drugs Laboratory, Vadodara, where the test for biochemical parameters, microbial content, nutrient content and moisture content were carried out by them.

b) Sensory evaluation test: For this test only those items were selected which can be judged without adding any extra spices and masala. i.e pure taste of food item was tasted. These Organic and non-organic food items were just boiled and kept for the evaluation. Quantity and cooking time was constant for both the items. These items were kept in two different bowls. Judges were asked to indicate whether they found any differences in those two same items. The responses were sought in terms of "No difference", "Some difference" and "Completely different". The score of 1 to 3 were ascribed to each of the responses respectively. Food items selected were Rice, Red gram dal, Yam elephant and Sapota.

c) Cooking time: Food grown organically and non-organic food were taken in equal quantity and cooked on medium flame on gas burner. From each food group one item was selected. Equal amount of (150grams) Rice, Dal and Yam elephant were cooked separately in the same pressure cooker using equal amount of water(150ml). Equal amount of water (200ml) was used in the bottom of the pressure cooker. Time was noted when the gas turn on/off.

d) Shelf life: For the assessment of shelf life the samples of food items were selected directly from the farm and were kept at room temperature in the month of February, 2008. The food items selected were Cabbage, Fenugreek leaves, Spinach, Coriander leaves, Yam Elephant, Chiku and Papaya. Everyday all the samples were observed and photographs were taken at some interval. Shelf life test was carried out just to check the freshness of the food items. Physiological loss or moisture content was not measured before and after the test.

In **phase V** an educational package was prepared to disseminate knowledge regarding organic food. It was consisted of lecture supported by PowerPoint presentation and a booklet which included information regarding various aspects related to organic food to female students of Faculty of Family and Community Sciences. The knowledge test administered before and after the

exposure to educational package helped to establish the efficacy of the package.

Major Findings

Major findings of the study are presented here.

1. Shopkeepers selling organic food

In Vadodara city 7 retail outlets were selling organic food situated in different areas. All the shops were considered in present study. Information collected about the organic food that they sold in different season, the reasons that influenced them to sell organic food, the problems that they faced while selling organic food and suggestions given by them to government, farmers, consumers, manufacturers and NGOs with reference to organic food.

Section I Background information regarding shops selling organic food

There were 7 shops selling organic food and one "organic food dhaba" roadside food outlet in Vadodara city. The oldest shop in Vadodara city was "Amidhara", situated at Pashabhai park, Race course, run by Jatan trust since 2001. It sold only organic food. Another shop was situated at Alkapuri and was run by a trust called "OASIS" started in 2004. It sold organic food items and other healthy food items. Taza maza (Ellora Park) was started in the year 2004. There was one more branch at Old Padra Road which started in 2006. They sold organic food items along with some non organic food items. "Herbal Concept" was a shop started in 2004 situated at Akota Stadium. It kept all organic food items and in one section of the shop they sold some household chemicals and detergents. "Eco world", which was started in 2006, was situated at Sama road. They had started a new concept of giving dustbin to consumers to collect their kitchen waste. They gave special discount on organic food items to those consumers who were members of this kitchen waste segregation programme. "FabIndia" was a chain store which kept many varieties of organic cereals, pulses and other ready to eat items like jam, pickle, sauce etc. They did not keep vegetables they sold some clothing items, furniture and furnishings in their shop.

Section II Organic food items available in the shop in different seasons.

It was observed from the results that fruits and vegetables available in various shops were not certified organic food. Some of them reported that the farmers were under process of obtaining certification. It was found that majority of the shops kept all certified organic cereals and pulses in their shop. Only Taza Maza and Oasis kept some non-organic food items (Cereals and pulses) along with the organic food items.

Nearly half of the shops kept all common condiments and spices in their shop throughout all the seasons which were certified also. Only one shop kept some varieties like yellow chilly powder, special masala, tej patta (Bay leaf) etc. More than half of the shops kept organic sugar and jaggery for the entire year. One of the shop kept some snacks varieties which was not organic but were healthy (Low fat, home made). Two shops kept certified organic Tea/Coffee for the entire year in their shop and there was one shop which kept many varieties of certified organic food items like chutney mix, butter, jam, pickles, macaroni, pasta etc. One of the shops kept non certified organic cow milk in their shop. But the supply was not constant.

Section III Sources of obtaining organic food for selling

It was found that majority of the shops bought vegetables from farms located around Vadodara. Only Fabindia brought their products from various parts of India.

Section IV Reasons for selling organic food

All the shopkeepers were influenced to a great extent to sell organic food by the reason that "Organic food is good for health". A wide majority of shopkeepers were least influenced by the reason that "Organic food is easily available from the farmers/suppliers". On the whole, it was observed that more than half of the respondents were influenced by various reasons for selling organic food at moderate extent whereas little more than one-third of respondents were influenced to a high extent by various reasons for selling organic food.

Section V Problems faced by the shopkeepers while selling organic food

While selling organic food, shopkeepers faced certain problems related with supply, storage, price, profit margin etc. The result indicated that three-fourth of the shopkeepers “always” faced problems that consumers didn’t buy organic food regularly as the “whole range of organic food items were not available in market”. Half of the shopkeepers “always” faced but half faced “sometimes” the problem that “organic items were not available as per consumers demand, hence consumers did not buy organic food”. More than half of the shopkeepers “never” faced problem of consumers not buying organic food as it was not attractive in appearance like conventional food. More than one-third of shopkeepers “always” faced problem that “due to absence of certificate, it became difficult to convince the consumers that the product is really organic food”. Half of the shopkeepers always faced problem that “the profit margin is very low in organic food as compared to conventional food”. Overall, it was found that half of the shopkeepers faced problems at moderate extent and half of the shopkeepers faced problems at high extent while selling organic food.

Section VI Suggestions given by the shopkeepers

One-fourth of the shopkeepers had given suggestions to the Government to make certification compulsory and to encourage farmers for organic farming by giving various incentives. They also suggested to the farmers to be competitive in terms of packaging, quality and grading. Shopkeepers also suggested to manufacturers to provide all range of processed products in the market. Half of the shopkeepers had given suggestions to NGO’s to create awareness among consumers about organic food and one-fourth suggested to start more and more outlets selling organic food in the city for the benefit of people.

2. Consumers buying organic food from Vadodara

For the present research 150 consumers were selected directly from the shops selling organic food. Only those consumers were selected were buying some or the other organic food product minimum four times in a month since last one year from the time of data collection.

Section I Background information of consumers of organic food

The mean age of consumers was 45.79 years, more than half of the respondents were graduates and little more than one-fourth of them were post graduate. A little more than half of the consumers were employed. The mean income of the family was found to be Rs. 33,998. Three-fourth of the consumers belonged to high income group. The mean number of family members was found to be 3.9. Majority of the consumers belonged to nuclear family. Majority of the consumers reported that they had shops selling organic food near to their residence or office.

More than half of the consumers came to know about organic food through word of mouth. It was found that majority of consumers used various sources to collect information about organic food to low extent. Results indicated that a little more than one-third of consumers had been using organic food since last 2 to 3 years. However, majority of them were not aware of any organization which is working to promote organic food and farming.

Section II Reasons for buying organic food.

The most influencing reason for consumers to buy organic food was "Organic food is good for health". More than 92 per cent consumers said that this influenced them to a great extent for buying organic food. Only a little more than half of consumers were influenced to a great extent by the reasons that "Organic food does not have residues of chemical fertilizers" and "have less amount of residues of pesticides". Majority of the consumers were influenced "to a great extent" by the reason "Organic food is considered to be nutritious" (88%), "the taste of organic food was better than conventional food" (86%). Overall it was found that majority of consumers were influenced to a medium extent by the given reasons for buying organic food.

Section III Extent of utilization of organic food

The consumers were asked to inform that whether they purchased the listed items "only organic", "only conventional" or "sometimes organic-sometimes conventional". About three-fourth of the consumers bought vegetable

"sometimes organic and sometimes conventional", as per the availability. Little more than three-fourth of consumers had medium extent of use of organic vegetables, fruits and organically processed sugar and jaggery. Majority of the consumers had low extent of use of "Nuts which were grown organically" and "organic ready to eat items". It was observed that little less than half (46.7%) of consumers had high extent of use of organically grown cereals and little more than half of consumers had high extent of use of organic pulses and legumes. For overall extent of use of organic food items, it was observed that three-fourth of consumers had medium extent of use of organic food items.

Section IV Problems faced by consumers while using organic food

The respondents were asked to indicate the farmers with which they faced problems regarding organic food. The problems identified were in relation to price, appearance, quality, availability, certification etc. More than three-fourth of consumers reported that "organic food was available in particular season only". Nearly three-fourth of consumers reported that they faced problem as the "vegetables were supplied in less quantity" whereas little more than half of consumers reported that organic products with certification mark was not available and therefore they faced problem in identifying genuine organic products from the shop. It was observed that more than half of consumers found the price of organic food is higher than conventional food items. Majority of the consumers reported that they did not face problem with shopkeeper selling organic food as they never found "Shopkeepers intentionally increased price of organically grown food as per their wish". Also they reported that they did not face any problem with the taste of organic food, smaller size of organic food and freshness of organic food. Overall, majority of the consumers faced problems at medium extent while using organic food.

Section V Satisfaction felt on using organic food

The consumers were asked to express the level of their satisfaction with various aspects of organic food. Majority of consumers were satisfied for all aspects of appearance of organic food, though they were small in size, location of shop, taste and price of organic food. Little more than half of consumers reported that they were satisfied with the price of organic food.

About one-third of or a little less than that were not satisfied with the availability of listed items of organic food throughout the year. In case of quality of organic food little less than half of consumers were undecided about the nutritional content and half of consumers were undecided about the certification of organic food but it was found that one-fourth of consumers were satisfied with the genuineness of organic food items. Overall it was found that little less than three-fourth of the consumers had high extent of satisfaction regarding organic food.

Testing of hypotheses

To analyse relationship between selected variables t- test, Co efficient of correlation and Analysis of Variance were computed.

- There existed no variation in the extent of influence of various reasons for buying organic food with personal, family and situational variables of consumers except family income.
- There existed no variation in the extent of utilization of organic food due to personal, family and situational variables of consumers except their education.
- There existed no variation in the extent of problem faced while using organic food due to personal, family and situational variables.
- There existed no variation in the extent of satisfaction felt on using organic food due to personal, family and situational variables of consumers except their type of family.
- A positive relationship was found in case of the extent of utilization of organically grown vegetables and fruits and the influence of reasons for buying organic food.
- A positive relationship was found in case of extent of utilization of organic food and extent of satisfaction felt on using organic food.
- A negative relationship was found in case of the extent of problem faced while using organic food and extent of satisfaction felt on using organic food. Negative relationship indicated that higher the extent of problems faced, lower was the extent of satisfaction experienced.

- There existed a difference in the extent of knowledge of young women regarding organic food before and after the exposure to educational programme.

3. Case study:

Five farmers engaged in organic farming were selected for case study. The researcher visited their farms and talked at length about various aspects. Some of the general information is summarized here.

- The Motivational factor for starting organic farming were training programmes organized by Anand Krishi University, camp organized by NGO and Swadhyay activities.
- Farmers faced difficulty in marketing of food products grown organically.
- Farmers found certification process for organic farm was expensive. They were waiting for some local agency to start giving certificate.
- Farmers were satisfied with the quality of crop after starting organic farming and they found that the quality of soil had improved.
- It was found that farmers were not satisfied with the government as it was not providing any support to the poor farmers who had started organic farming.
- Farmers gained knowledge about various methods of making organic manure. They also gained profit as the production increased eventually.

4. Food Quality Assessment:

An attempt was made in present study to assess food quality of organic food, to find out whether there was any difference between organically grown food items and those grown with conventional (non-organic) farming methods. An attempt was made to obtain selected food items from adjoining/neighbouring farms, so that soil quality could be controlled to some extent. The result of food quality assessed in the laboratory condition on the following parameters are presented here.

- Biochemical Parameters:** The tests were conducted in Food and Drugs Laboratory, Vadodara. The samples were cabbage, yam elephant, rice, red gram dal, chiku and jaggery.

- Some traces of urea found in non organic rice. But in case of Red gram dal, Chiku and Jaggery no difference between organic and conventional food item was found with reference to fertilizers and pesticide content.
- In case of Cabbage it was observed that traces of Chlorpyrifos and in Yam elephant, traces of Lindane (which is type of organochlorine pesticide) were found in both organic and non organic categories. Some traces of urea were also found in non organic rice, yam elephant and cabbage.

b) Sensory Evaluation Test:

- In case of raw rice, more than half of the judges found some differences in size of grain and shape. More than half of the judges found that the Aroma of organic rice was better than the non organic rice.
- Cooked organic rice was better in taste, aroma, colour and healthy appearance. It was more soft than the non organic rice.
- In case of raw red gram dal all the judges reported that the shape, colour, healthy appearance and feeling on touch was better in non organic dal. They also reported that the aroma of organic dal was better than non organic dal.
- Judges found that organic dal was cooked properly and its aroma was also better than the conventional one.
- The judges found that the visual texture, aroma and healthy appearance and colour was better in organic yam elephant as compared to non organic yam elephant.
- No difference was found in aroma and colour in both the samples of boiled yam elephant. Organic yam elephant was more juicy, sweet and soft than non organic yam elephant.
- The judges found complete difference in firmness, texture and aroma among both the samples of chiku. Organic chiku had better aroma, firmness and texture. They reported some difference in the colour of both the samples of chiku. All the judges reported that the taste was completely different. The organic chiku tasted better (Sweet) than non organic "chiku".

c) Cooking time:

It was found that non organic rice took less time to cook. Whereas it was observed that non organic dal and yam elephant took more time to cook. All the products were assessed by the panel of judges and it was reported that the texture of cooked organic rice and red gram dal was found softer than the non organic rice. The texture was found smooth in organic yam elephant than the non organic yam elephant.

d) Shelf life:

The vegetables (Fenugreek leaves, Coriander leaves, Spinach, Cabbage) and fruits (papaya and chik) were kept for 192 hours at room temperature. Thus shelf life of organically grown fruits and vegetables were more than the non organic fruits and leafy vegetables.

5. Educational package:

An educational package consisted of a lecture supported with PowerPoint presentation, and a Booklet was developed to disseminate knowledge about organic food among young women. The package was introduced to the female students of Faculty Of Family and Community Sciences. It was observed that for almost all the aspects related to organic food, the extent of knowledge was found high after the administration of educational programme. There was a net gain in their extent of knowledge. This educational programme can be used on other target group to create awareness regarding organic food.

Conclusion

An integrated approach of the present study encompassing various people associated with organic food could draw some conclusion. The consumers expressed a problem and lack of satisfaction with the availability of organic food products in the shops. Farmers stated that though they had enough supply, they could not send it to the market on time due to lack of transportation facility. Shopkeepers reported that the supply of organic food was not constant from the farmers however there was a constant demand

from the consumers. This reflect a need to improve a distribution channel of organic food from the producers to the consumers

The sensory evaluation test revealed the organic food was better in aroma, texture and taste. The shelf life of organic food was also found to be more than the conventional food hence, the consumer's desire to utilize organic food. It becomes, thus essential that the supply of organic food should be maintained constant throughout the year in the shops.

The farmers, shopkeepers and consumers expressed the need for a certification mark so as to differentiate a genuinely organic food product from the conventional one. This would enhance the production, sell and consumption of organic food. The government must take some measures in this direction.

Food quality assessed in the laboratory reflected either no difference between organic and conventional food items or showed traces of chemicals in both. It is possible that the samples collected from the adjoining farm doing organic and conventional farming might have had the influence of chemicals in the soil or due to contamination in the water. Hence there is a need to carry out such experiments on a larger basis by controlling the factors which might influence the chemical penetration in the organic food items.

The farmers and sellers expressed that more people should be made aware of the organic food. The knowledge test conducted in the present research reflected low level of knowledge amongst young women. Their knowledge was enhanced through an educational programme on organic food. This indicate that a need to conduct such programmes widely may be by the educational institutions.

Implications of the study

The findings of the study brought out a number of implications for the field of Home Management, educational institutions, Government and non government organizations.

For the field of Home Management

The field of Home management is concerned with the management of resources not only at household level but also at global level. Environment education is a part of core curriculum of the field. The present investigation undertaken reflected a need for enhancing knowledge of the women, the present and/or future homemakers. So that they can purchase the organic food which is good for the health of family members and at the same time which promotes environmental protection. The field of Home Management can successfully do that through formal as well as non formal education.

For the Educational Institution

1. The study of knowledge about organic food conducted along with exposure to educational package reflected poor knowledge about organic food and farming. This showed that there is a need to take measures to improve knowledge level of people.
2. Educational institution can strengthen their curriculum by incorporating concept of organic food and farming in the curriculum for improving knowledge of environment and create awareness about the various aspects of organic food. At present Environment education is an integral part of curriculum of Family and Community sciences, but students from other discipline can also be made aware of this aspect.
3. Education institutes can carry more research in this field.
4. Educational institution (Agriculture universities) can start training centres for farmers.

For the Government

It is true that India can not adopt organic farming in totality as it needs more crops to meet the needs of its population, but the Government can support and encourage people to adopt organic farming.

1. As expressed by the farmers, through the case study it was found that no training had been given by the government and therefore government should make an effort to provide proper training for organic farming and promote organic farming.
2. Government can start outlet to sell organic food at various locations of the city with reasonable rate This will help to remove the impression among the people that of organic food is "Premium food" or "Status food". Consumers found that the price of organic is more than the non organic food (Wide Section – 2.4.2/ Table- 48).
3. It was expressed by the farmers that though they had sufficient amount of crops at farm but had no transportation facility to send it to the city for sell (Wide Section- III). Government can provide transport facility to the farmers to deliver their products from farm to shop.
4. Government can give incentives and frame suitable policies and legislation so that the farmers themselves change their farming method from conventional farming in to organic farming.
5. Government must give subsidy to the farmers for buying organic manure. It was expensive to buy organic manure from other farmers as expressed by the farmers(wide section – III). Instead of giving subsidy on Urea, government should provide subsidy on organic manure.

For the Non Government organization

1. It was mentioned by the farmers that they were motivated by the training organized by "Jatan" (wide section –III) which is an N.G.O working and promoting organic farming. More such voluntary organization can start training and guiding centers on organic farming for those farmers who want start organic farming. The NGOs can organize camps in different area of Vadodara city wherein the various methods of making organic manure, various organic farming practices, myths, problems, advantages

of organic farming, health benefits of organic food, benefits of organic food to land and environment could be discussed in a simple local language. Such camps would be useful to consumers and shopkeepers. It was reported by the consumers that One-fourth of the consumers came to know about organic food through camps organized by NGO (wide section 2.1.3/ Table-20). Hence such camps should be promoted.

2. The NGOs can organize "Organic food exhibition" to promote organic food among consumers to motivate farmers doing organic farming.
3. The NGOs can start small organic food "dhaba" (road side small restaurant) at different location to create awareness among consumers and to support farmers doing organic farming.

Recommendation for future studies

1. A longitudinal study can be carried out on the organic food to assess the effect of fertilizers/ pesticides on farm products by controlling farming methods in a selected land area.
2. An investigation in other areas than Vadodara can be carried out to understand the dynamics of problems and support system provided by farmers to government and government to farmers.
3. Study of similar nature can be carried out on consumers from different socio economic strata, from various states and even from rural or urban areas.
4. A comparative experimental study can be carried out to assess the health effect on a person eating organic food and non-organic food.
5. A similar study can be conducted on the non users of organic food.
6. A study can be conducted to find out myths and misconceptions about organic food held by non users of organic food.