



Opinion of farmers regarding organic farming

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Abstract

Organic farming is gaining popularity all over the world, as it can diversify agricultural production systems towards attaining improved productivity, farm income and food, as well as environmental safety. The aim of this study was therefore to know the opinion of farmers regarding organic farming and issues associated with it. The present study was conducted in Utranchal state in India. Interview schedule was used to find out the opinion of farmers regarding organic farming, wherein convenient and purposive sampling technique was used to select 40 respondents from Shantipuri and Nagla district of Uttaranchal region. Descriptive statistics were used to present the findings of the study. The findings from the survey revealed that nearly one-half of respondents had a positive opinion towards organic farming. There were significant relationships ($p \leq 0.05$) between respondents' type of family and years of experience in farming and opinion of farmers regarding organic farming. Furthermore, the survey also brought forth that the type of manure that the farmers used were also significantly related to their educational level and years of experience in farming.

Keywords: Organic Farming, Opinion of farmers.

Introduction

Agriculture, which was once a mode of life, has now become a mode of production¹. The development in farming practices has rendered the traditional values of life pointless. The side-effects of the modern agricultural technologies foster serious question about it's the overall benefits. The use of chemical fertilisers and pesticides pollute the air and water. The use of chemicals, including hormones and antibiotics results in residue in food which causes cancer or genetic damage. Therefore, soil and energy resources are being exhausted. Instead of recycling wastes back onto land as fertiliser, it is allowed to pollute water². The unsustainable modern agricultural practices leads look for other alternative. The majority of these alternatives agricultural practices are derived from traditional, eco-friendly practices; organic farming is one among them. Organic farming over the last few decades has proved to be successful; but the differences in culture, ecology and geographical factors compel adoption of situation-specific principles and techniques³.

Pretty have summarized the adverse environmental and social impacts of modern agriculture are universal⁴. They are as follows: i. Contamination of water by pesticides, nitrates, soil and livestock wastes, causing harm to wildlife, disruption of ecosystems and possible health problems in drinking water. ii. Contamination of food and fodder by residues of pesticides, nitrates and antibiotics. iii. Damage to farm and natural resources by pesticides, causing harm to farm workers and public, disruption of ecosystems and harm to wildlife. iv. Contamination of the atmosphere by ammonia, nitrous oxide, methane and the products of burning, which play a role in ozone

depletion, global warming and atmospheric pollution. v. Overuse of natural resources, causing depletion of groundwater and loss of wild foods and habitats and their capacity to absorb wastes causing water-logging and increased salinity. vi. The tendency in agriculture to standardise and specialise by focusing on modern varieties, causing the displacement of traditional varieties and breeds. vii. New health hazards for workers in the agrochemical and food -processing industries.

Organic farming is a part of traditional agriculture practices of India which has a past and where traditions still endure. However, a change to organic farming cannot mean a return to the traditional way of life³. Many techniques used in organic farming like inter-cropping, mulching and integration of crops and livestock are not alien to various agriculture systems including the traditional agriculture practiced in old countries like India. However, organic farming is based on various laws and certification programs, which prohibit the use of almost all synthetic inputs, and health of the soil is recognized as the central theme of the method⁵.

The principles of organic farming includes the recycling of agricultural wastes, maintenance of soil fertility through careful husbandry, avoidance or reduction of external inputs and the use of natural forms of pest management and weed control⁶.

Given the plethora of types of organic farming, various authorities had defined organic farming in their own way. According to Lampkin "Organic farming is a production system which avoids or largely excludes the use of synthetically compounded fertilisers, pesticides, growth regulators and

livestock feed additions. To the maximum extent feasible, organic farming systems rely on crop rotations, crop residues, animal manures, legumes, green manures, off-farm organic wastes and aspects of biological pest control to maintain soil productivity and tilth, to supply plant nutrients and to control insects, weeds and other pests⁷.

The farmers face or experience several barriers in adopting organic farming. This has been proved through several researches conducted throughout the world. Hattam⁸, Schneeberger, Darnhofer and Eder⁹ in their research revealed the factors that influenced the non-organic farmers' attitude towards adoption of organic farming practices were possible economic, health, and technical barriers. Non-organic farmers did not consider organic production as economically feasible¹⁰⁻¹². Their study reflected that Austrian farmers, did not adopted organic farming practices due to no compensation payments for organics and no willingness to forego net income for benefits of environmentally friendly farming¹⁰.

The loss of return on organic products would have affected British farmers' caused their inability to pay mortgages¹¹. Economic factors such as large-scale, non-organic farmers in South Africa considered fewer marketing opportunities, no premium prices, and the lack of subsidies as factors which kept them from adopting organic farming practices¹². In New Zealand, 54 out of 62 farmers were not interested in organic farming because presence of chemicals in food was not their concern. Another health barrier was that neither farmers nor their family members have personally experienced illness from the use of such chemicals¹¹.

Problems with weeds, diseases and insects and increased labour request were the factors due to which Austrian cash crop producers were reluctant in adopting organic farming⁹. A study conducted in South Africa, revealed that large scale non-organic farmers faced problems of yield reductions, higher weed and pest infestations, and more disease damage on crops when they adopted organic farming¹². The non-organic farmers of New York face one technical problem with their preference of pest and disease resistant crop varieties as compared to natural seeds¹³. Lack of information on organic farming especially in reference to crop diseases when farming organically¹⁴.

On one hand the farmers experience various barriers in adopting organic farming, but there are many factors that motivate farmers to embrace the technique due to willingness of consumers to purchase organic food. Interest in organically grown food has increased opportunities for farmers and has lead to a transformation in the organic foods market¹⁵. Farming-related motivations included problems with non-organic farming, particularly soil erosion and deteriorating animal health. Some farmers also viewed organic farming as an incentive to sell products for a premium and thus changed their farming practices. Other economic motivations related to the desire to acquire experience in low-input production and to

decrease the need for chemicals¹⁶. Farmers also expressed concern with personal health risks associated with handling chemicals during application.

In June 2001, the Government of India announced the National Programme for Organic Production (NPOP), which aims to promote sustainable production, environmental conservation, reduction in the use and import of agrochemicals, the promotion of export and rural development¹⁷. The Indian Standards are modelled on the IFOAM Basic Standards and the seal "India Organic" has been established. In October 2001, the export of organic products was brought under government regulation, while imports and the domestic market were not¹⁸.

Therefore, the objective of this study was to determine the opinion of the farmers regarding organic farming.

Objectives of the study: i. To study the demographic characteristics of the farmers. ii. To identify the fertilizers/chemicals/manure used by them. iii. To identify the farming pattern used by the farmers. iv. To find out the opinion of the farmers regarding organic farming.

Methodology

The research design for the present investigation was descriptive in nature conducted on 40 farmers selected purposively from two hilly region viz. Nagla and Shantipuri of Udham Singh Nagar district of Utranchal state. The tool to collect data was an interview schedule which contained a summated rating scale to find out the opinion of farmers regarding organic farming. The responses on the scale were subjected to scores. The response structure was in terms of "Agree", "Neutral" or "Disagree". The scores from 3 through 1 were ascribed to the responses. The possible maximum and minimum scores was divided in three categories having equal intervals. Higher the scores indicated most favourable opinion of farmers regarding organic farming. The scale was subjected to establishment of content validity and reliability. The tool prepared was validated from panel of 11 experts from different departments, faculty and the Universities. The reliability coefficient derived for the scale was 0.93 through split half method.

Major findings: The findings of the study obtained through the analysis of the data supported discussion and interpretations are presented here.

Personal information of the farmers: This section consisted of the personal information viz. age, educational level and occupation about the selected farmers. The age of the farmers ranged from 30-60 years with the mean of 41.72 years. One half of the farmers belonged to 41-50 years of age (Figure-1). Less than one half of the farmers had primary education while only 12.50 per cent of them had completed their high school. More than one half of them were full time farmers while rest of them were part time farmers.

Family information of the farmers: This section consisted of family information of the farmers such as type and size of the family, size of land holding, and total monthly income of the farmers from all sources. It was found that majority the farmers had joint family. The family consisted of 1 to 16 members with the mean of 9.8. One half of the farmers belonged to a large family having more than 10 members (Figure-2). Most of them were marginal farmers having less than one acres of land holding. The mean size of land holding was 2.15 acres. The mean monthly income of the family from all sources was Rs. 3646.25/-.

Situational characteristics of the farmers: Involvement in farming and years of experience in farming were included under

this section. More than three fourth of the farmers were involved in farming through ancestors. Years of experience in farming ranged from 1 to 30 years with the mean of 10.65 years (Figure-3). Less than one half of the farmers had experience in farming since 1 to 8 years.

Crops produced by the farmers: It was observed that all the farmers were producing different crops and vegetables throughout the year. In Kharif season all the farmers were producing paddy, soyabean, maize, onion, tomato, ginger while in rabi season all the farmers were producing wheat, lentle, chana, cabbage etc. All the farmers produce these crops seasonally (Figure-4).

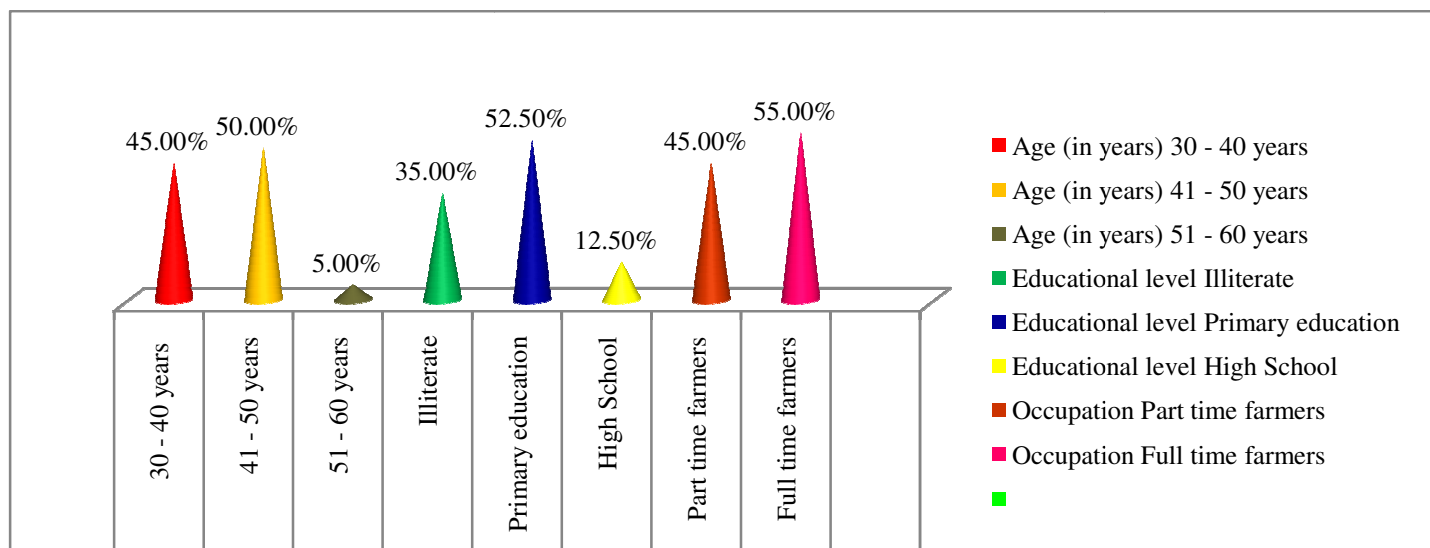


Figure-1: Distribution of respondents according to their Personal characteristics (n=40).

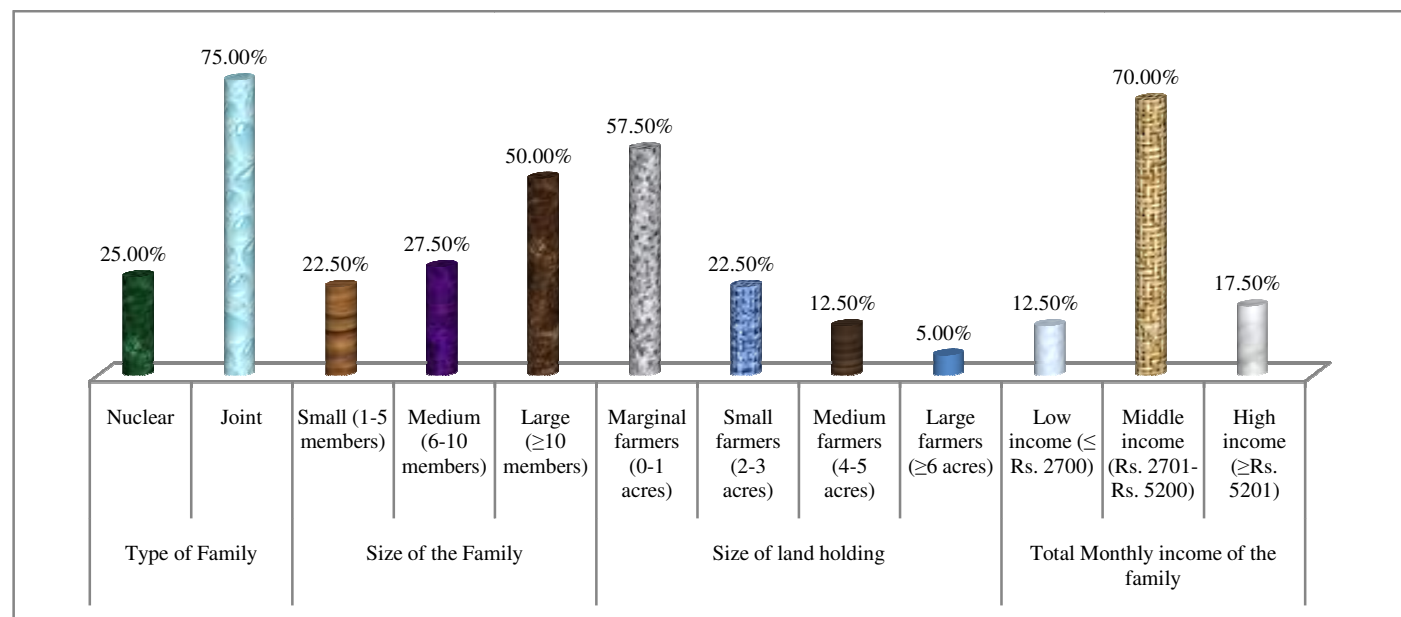


Figure-2: Distribution of respondents according to their Family characteristics (n=40).

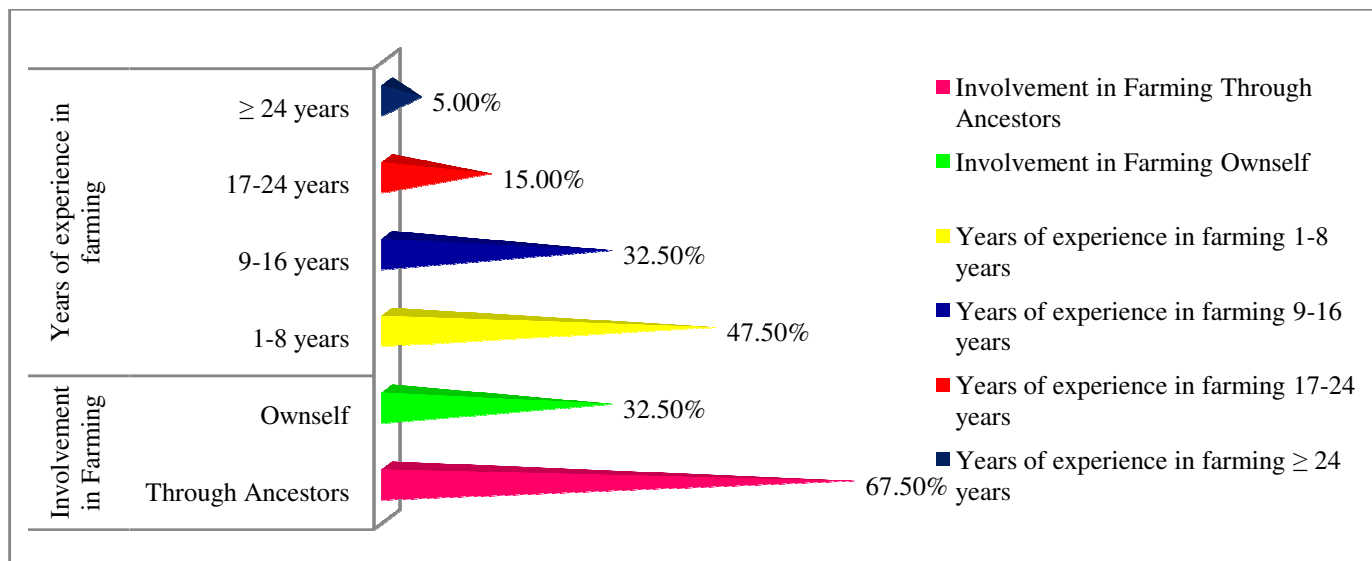


Figure-3: Distribution of respondents according to their Situational characteristics (n=40).

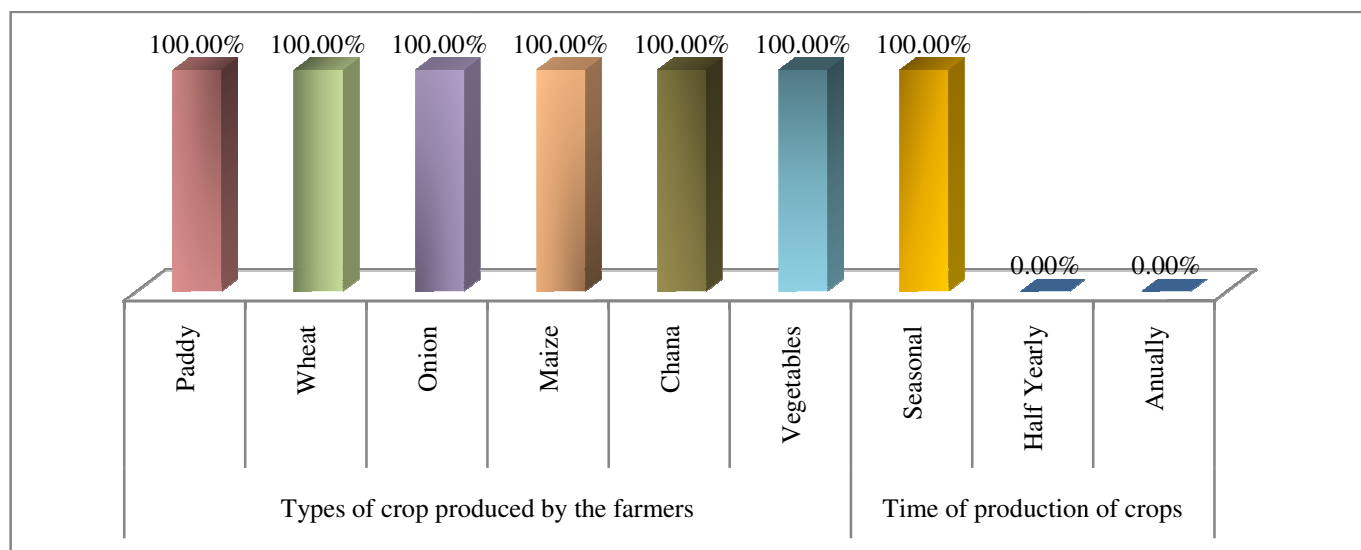


Figure-4: Distribution of respondents according to crops produced by the farmers (n=40).

Manure/Chemicals/Fertilizers used by the farmers in the fields: It was found that less than three fourth of the farmers were using both organic manure and chemicals. Majority of the farmers purchased manure from market. It was observed from the findings that less than one half of the farmers applied manure many times per crop. The amount of money spent in purchasing of manure ranged from Rs. 500 to Rs. 1500 with the mean Rs. 848.75. Less than one half of the farmers spent Rs. 801 to Rs. 1100 in purchasing manure (Figure-5). Less than three fourth of the farmers selected manure on the basis of its availability.

Pesticides used by the farmers in the fields: It was found through findings that all the farmers were using pesticides. Majority of them were applying it twice in a year (Figure-6).

Opinion of farmers regarding organic farming: It was found through analysis that majority of the farmers agreed that “for optimum requirement of organic manure it is essential to keep the number of livestock”. More than one half of the farmers agreed that “use of organic manure (like cow dung, agricultural waste) is best practice for India”, “organic manure help in maintenance of soil fertility and soil structure” and “use of organic manure reduce the environmental pollution”. More than one-half of the farmers disagreed that use of organic manure increase the yield of crops. More than one half of the farmers were neutral that organic manure enhance the quality of environment and conserve the natural resources. The computed mean weighted scores for each statement/ item supported the findings. It can also be concluded from the data that the less than one half of the farmers had most favourable opinion regarding organic farming (Figure-7).

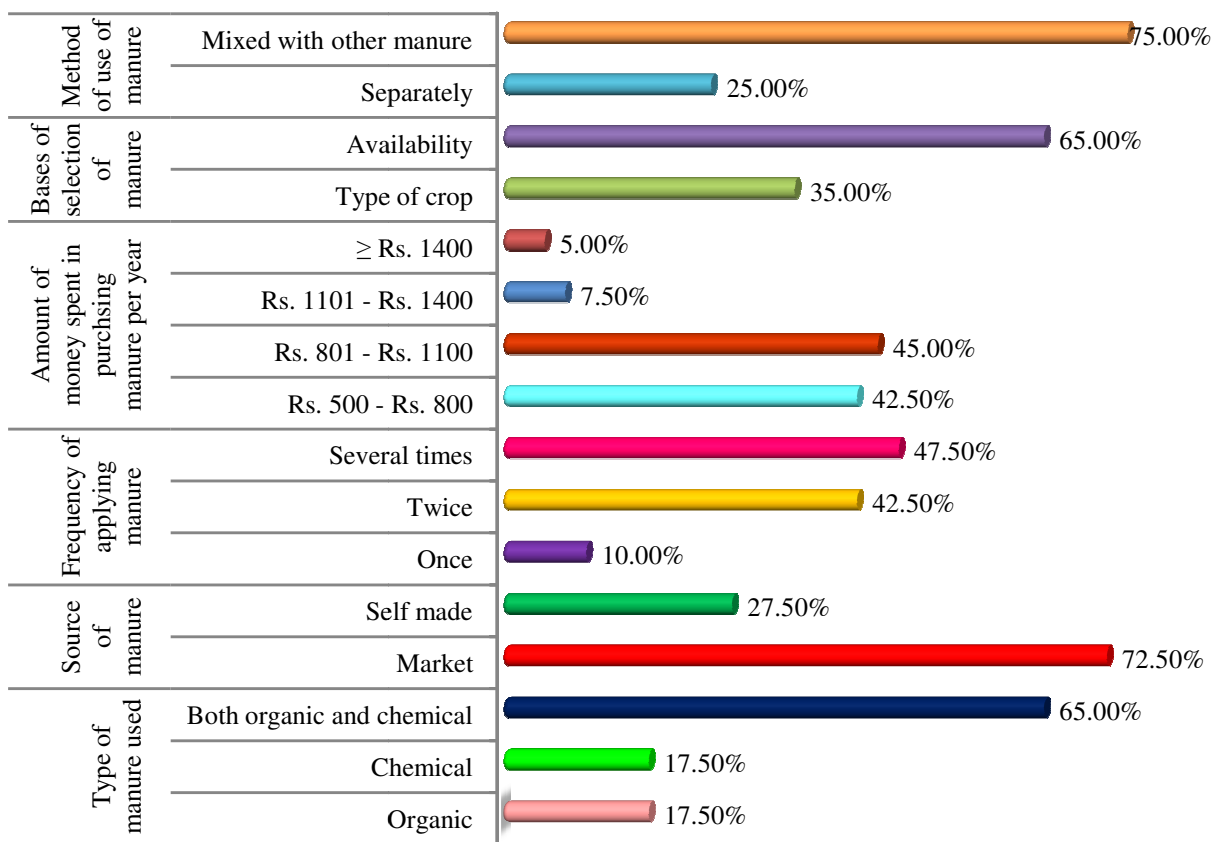


Figure-5: Distribution of respondents according to manure used by the farmers (n=40).

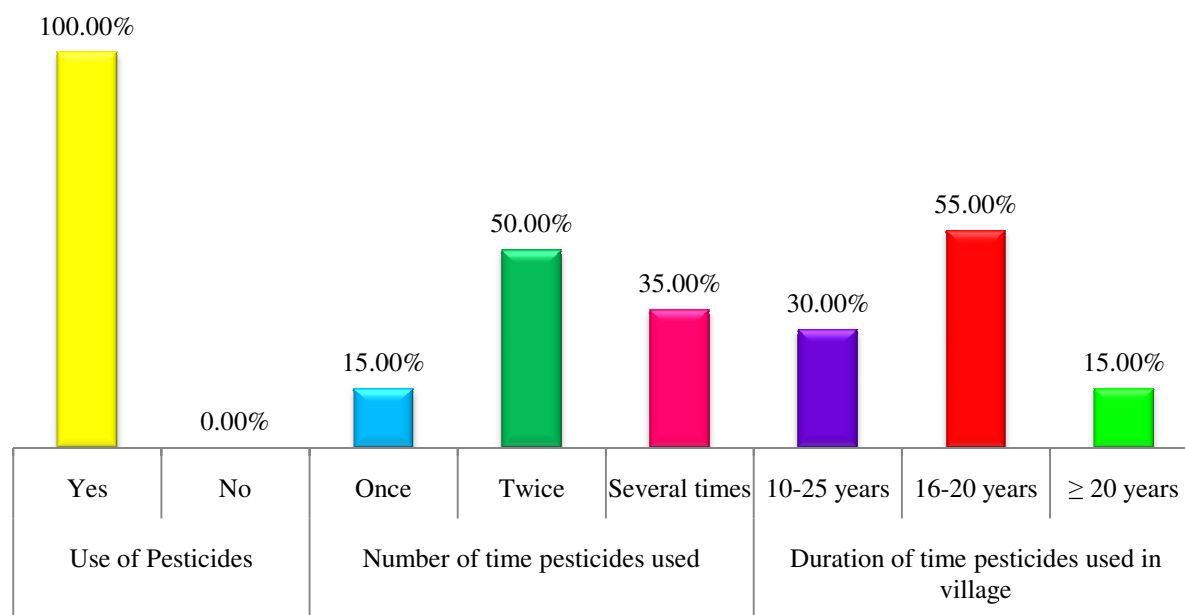


Figure-6: Distribution of respondents according to pesticides used by the farmers (n=40).

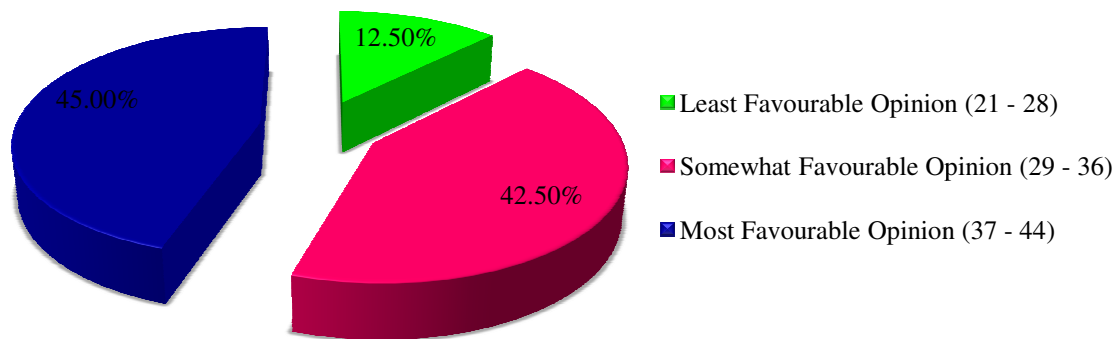


Figure-7: Distribution of respondents according to their extent of opinion regarding organic farming (n=40).

Testing of Hypotheses: A number of hypotheses were formulated on the basis of objectives of the study. For the purpose of statistical analysis, the hypotheses were formulated in null form. The results are presented in this section.

Ho₁: There exists no relationship between the opinion of farmers regarding organic farming and their selected personal, family and situational variables.

Table-1: Co-efficient of Correlation showing relationship between opinion of farmers regarding organic farming and their selected personal, family and situational variables.

Selected variables	n	r-value	Level of Sig.
Opinion of farmers regarding organic farming	40	0.053	*N.S.
Age of the farmer			
Opinion of farmers regarding organic farming	40	0.041	*N.S.
Educational level			
Opinion of farmers regarding organic farming	40	0.339	0.05
Type of family of the farmers			
Opinion of farmers regarding organic farming	40	0.189	*N.S.
Size of land holding			
Opinion of farmers regarding organic farming	40	0.098	*N.S.
Total monthly income of the family			
Opinion of farmers regarding organic farming	40	0.364	0.05
Year of experience in farming			

Note: *N.S. =Not Significant.

The computation of co-efficient of correlation reflected no significant relationship between the opinion of farmers regarding organic farming and their age, educational level, size of land holding and total monthly income of the family (Table-1). But a significant relationship was found between the opinion of farmers regarding organic farming and their type of family and years of experience in farming. Hence the null hypothesis was partially accepted.

Ho₂: There exists no relationship between the type of manure and selected personal, family and situational variables of the farmers.

Table-2: Co-efficient of Correlation showing relationship between the type of manure and selected personal, family and situational variables of the farmers.

Selected variables	n	r-value	Level of Sig.
Type of manure used	40	0.136	*N.S.
Age of the farmer			
Type of manure used	40	0.314	0.05
Educational level			
Type of manure used	40	0.232	*N.S.
Type of family of the farmers			
Type of manure used	40	0.019	*N.S.
Size of land holding			
Type of manure used	40	0.195	*N.S.
Total monthly income of the family			
Type of manure used	40	0.089	0.05
Year of experience in farming			

Note: *N.S. =Not Significant

The computation of co-efficient of correlation reflected no significant relationship between the type of manure used and age, type of family, size of land holding and total monthly income of the family (Table-2). But a significant relationship was found between the type of manure used and their educational level and year of experience in farming. Hence the null hypothesis was partially accepted.

Conclusion

Based on the findings of the study it can be concluded that majority of the farmers were using both organic manure and chemicals. Most of them purchased manure from market and used it on the basis of availability. All the farmers were using pesticides and were applying it many times in crops. Since 16 to 20 years they were using pesticides in their village. The farmers had most favourable opinion regarding organic farming. The opinion of farmers regarding organic farming was significantly related to the type of family and years of experience of the farmers in farming. The type of manure used was significantly related to their educational level and years of experience of the farmers in farming.

The findings of the study brought number of implications for policy formulations and action programmes for different public and private organisations, government functionaries, educationist who are concerned about environmental issues and challenges. The government and social organisations should take interest in spreading awareness about the health and environmental hazards of using chemical fertilizers and pesticides. The awareness should be created about the subsidies financial schemes regarding organic farming offered by rural banks, financial institutions and government and also should be made easily accessible to them.

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