



ISSN (E): 2277-7695
ISSN (P): 2349-8242
NAAS Rating: 5.23
TPI 2023; 12(6): 3692-3695
© 2023 TPI

www.thepharmajournal.com

Received: 05-04-2023

Accepted: 13-05-2023

Bodapati Ravi Kiran

PG Student, International
Agribusiness Management
Institute, Anand Agricultural
University, Anand, Gujarat,
India

Dr. Chetan R Dudhagara

Assistant Professor and Head,
Department of Communication
and IT, International
Agribusiness Management
Institute, Anand Agricultural
University, Anand, Gujarat,
India

Corresponding Author:

Dr. Chetan R Dudhagara

Assistant Professor and Head,
Department of Communication
and IT, International
Agribusiness Management
Institute, Anand Agricultural
University, Anand, Gujarat,
India

Study of factors influencing farmer's decision to adopt organic practices

Bodapati Ravi Kiran and Dr. Chetan R Dudhagara

Abstract

This study was conducted to understand the factors that influence the decision of farmers to adopt organic farming practices in Pulivendula region of YSR Kadapa district of Andhra Pradesh. To achieve the objectives, primary data was collected from 140 farmers out of which 70 were conventional and 70 organic farmers using the purposive sampling method. The study shows that the majority of the farmer respondents were aged between 40 to 50 years, with males representing a higher percentage than females and having an education level up to the SSC, and a majority were illiterate. The respondents in the study had varying annual incomes, with a notable portion earning between 5 to 10 lakhs. The majority of the farmers owned land holdings of up to 2 hectares, and a significant number of them had more than two decades of experience in farming. The primary factors that influenced organic farmers to adopt organic practices were their personal interest and belief in the concept of organic farming, the desire to farm without chemicals, and the support they received from government and agencies. On the other hand, influence from other farmers and continuing from parent were found to be the least influential reasons for adopting organic practices. Organic farmers generally agreed that organic farming was beneficial for the environment and more profitable compared to conventional farming. They also acknowledged the challenges they face in weed and pest control, high production costs, labor intensity, market competition, and lower yields compared to conventional farming

Keywords: Organic farming, environmental principle, labor intensive, market competition, profile, organic standards

1. Introduction

Organic agriculture is a unique production management system that promotes and enhances agro - ecosystem health, including biodiversity, biological cycles and soil biological activity, and this is accomplished by using on farm agronomic, biological and mechanical methods in exclusion of all synthetic off-farm inputs. (According to FAO).

Organic agriculture is practiced in 190 countries, and 74.9 million hectares of agricultural land were managed organically by at least 3.4 million farmers. With the most organic agricultural land in Australia (35.69 m hectares) followed by Argentina (4.45 m hectares) and Uruguay (2.74 m hectares). The global sales of organic food and drink reached over 120.6 billion euros in 2020. (FIBL, 2022).

According to International Fund for Agriculture and Development (IFAD), India has more than 15,000 authorized organic farms. Organic farms are generally more profitable and ecologically friendly, as it uses less chemicals and the residue are comparatively less chemical-intensive. It provides several ecological benefits and delivers healthy food.

There were 3.1 million reported organic producers in 2019. As of March 2019, over 2.30 million hectares of cropland were being farmed organically. This amounts to 2% of the nation's total net sown area of 140.1 million ha. With 0.76 million acres of land under organic cultivation, Madhya Pradesh tops the list and accounts for almost 27% of all organic agricultural land in India. About half of the land was used for organic farming, with Madhya Pradesh, Rajasthan, and Maharashtra being the top three states. 3.49 million MT (2020–2021) of certified organic products were produced in India, including all types of food products such as oil seeds, fibre, sugar, cereals & millets, spices & condiments, pulses, medicinal plant products, fresh fruits & vegetables, tea, coffee, flowers, dry fruits, fodder, others, on farm processed food. Due to liberalization, privatization and globalization the agricultural products are being marketed at international market. To get remunerative price in this competitive market the farmers should have knowledge on producing chemical residue free products which can very well satisfy the international quarantine laws for export purpose.

(Prasanth and Reddy, 2012) [12]. The study was carried out with the following objectives:

- To study the socio-economic profile of farmers
- To identify the factors that affect farmers' decisions to adopt organic farming
- To know the farmers behaviour towards organic farming practices
- To identify the problems faced by farmers in adoption of organic farming

2. Research methodology: The sample unit was farmers in

this study. The total sample size was 140 (70 organic and 70 conventional) farmers. Non-probability sampling method was used for the sample selection. The samples were collected purposively from both organic and conventional farmers. The study was conducted in Pulivendula region of YSR Kadapa District of Andhra Pradesh. Analytical tools used in the study were Percentage, weighted average mean and Henry Garrett ranking.

3. Results and Discussion

3.1 Socio-Economic Profile of Farmer Respondents

Table 1: Demographic Characteristics of the Respondents

Factors	Frequency	Percentage
Age		
≤30 Years	12	8.57%
>30-40 Years	37	26.43%
>40-50 Years	64	45.71%
>50 Years	27	19.29%
Gender		
Male	106	75.71%
Female	34	24.29%
Education		
Illiterate	64	45.71%
Up to SSC	49	35.00%
Intermediate	19	13.57%
Graduation & above	8	5.71%
Annual Income		
≤ 1 lakh	2	1.42%
>1-5 lakhs	17	12.14%
>5-10 lakhs	68	48.57%
≥10 lakhs	53	37.85%
Land Holding		
1 ha and less	16	11.42%
1-2 ha	71	50.71%
2-4 ha	35	25.00%
4-10 ha	18	12.85%
10 ha and above	0	0
Farming Experience		
≤ 5 years	9	6.42%
>5-10 years	31	22.14%
>10-20 years	43	30.71%
>20 years	57	40.71%

From Table 1, Out of 140 respondents it was found that 8.57% of respondents were aged ≤30 years, 26.43% were between 30 to 40 years, 45.71% were aged between 40 to 50 years and 19.29% of respondents were above the age of 50 years. Out of 140 respondents majority i.e., 75.71% were male and 24.29% were female and 45.71% of respondents were illiterate, 35.00% were up to the SSC, 13.57% of respondents were up to intermediate only, 5.71% were graduate level education, and above. 1.42% of the respondents have a family income of less than one lakh, 12.14% of respondents have 1 to 5 lakhs, 48.57% of respondent have 5 to 10 lakhs, and 37.85% of the respondents have a family income of more than 10 lakhs.

Out of 140 respondents, it was found that there was a major percentage of Small and Marginal farmers i.e. 62.13% have land up to 2 ha., followed by medium farmers with 25.00% having land between 2-4 ha., 12.85% of semi-medium

farmers and none of the farmers were large farmers in the study. In the survey, it was observed that the majority of farmers i.e., 40.71% of respondents have more than 20 years in farming. 30.71% of respondents have experience of >10-20 years, 22.14% of respondents have experience of >5-10 years and 6.42% of respondents have experience of less than or equal to 5 years.

3.2 Factors that affect farmers' decisions to adopt organic farming

Out of 140 farmers, 70 organic farmers were asked about the reasons for their initial conversion to organic methods and 70 conventional farmers were asked what might influence them to shift from conventional to organic farming. A five point Likert scale was used with different questions asked for organic and conventional farmers in the study area.

Table 2: Why organic farmers converted to organic production

Factors	Very Unimportant	Unimportant	Neutral	Important	Very Important	Mean
Support from government & agencies	4.3	8.3	26.7	24.5	36.2	3.94
Consumer health awareness	1.0	1.2	5.3	58.6	33.9	3.89
Influence of other farmers	0	47.3	12.4	36.9	3.4	2.93
Farming without chemicals	7.1	13.6	2.8	27.3	49.2	3.99
Reduced production costs (e.g. saving on fertilizer costs)	1.5	23.6	20.5	44.9	9.5	3.51
Environmental Principle	0	6.9	3.2	56.5	33.4	3.77
Unhappy with conventional farming	8.8	45.9	8.3	26.3	10.8	2.99
Interested/believe in organic concept	0	0	3.9	55.4	40.7	4.01
Producer and family health	10	1.2	20	45.6	23.2	3.68
Marketing strategy	0	20.5	17.3	34.9	27.3	3.49
Continue from parent	0	47.1	34.3	13.0	5.7	2.64

From Table 2, it was observed that the most important reason for adopting organic farming was interest/believe in organic concept with mean 4.01 followed by Farming without chemicals with a mean score 3.99 and Support from government and agencies with a mean score of 3.94 followed by consumer health awareness with mean score of 3.89. The moderately influential factors were environmental principle with mean score 3.77 and reduced production costs with mean

score 3.51. The least influential reasons for organic farmers adopting organic practices were the influence of other farmers with mean score 2.93 and continue from parent with mean score 2.64. In the study area, the farmers who were following organic farming were getting good support from Government and other agencies. The NGOs were educating the farmers regarding the benefits of organic farming, how it helps to improve soil health condition without using chemicals.

Table 3: Why conventional farmers might convert to organic farming

Factors	Very Unimportant	Unimportant	Neutral	Important	Very Important	Mean
Support from government & agencies	0	0	57.8	8.5	33.7	3.86
Consumer health awareness	0	0	1.1	73	25.9	3.92
Influence of other farmers	2.1	21.5	12.4	52.8	11.2	3.42
Farming without chemicals	0	34	15.8	37.8	12.5	3.25
Reduced production costs (e.g. saving on fertilizer costs)	1.3	33.8	44.6	12.6	7.7	2.95
Environmental principle	0	1.8	2.3	77.2	18.7	2.71
Unhappy with conventional farming	6.2	77.5	11.2	3.7	1.4	2.15
Interested/believe in organic concept	0	8.1	37.6	40.8	13.5	3.69
Producer and family health	0	0	4.4	56.7	38.9	3.69
Marketing strategy	2.3	46.9	21.7	18	11.1	2.82
Continue from parent	3.8	60.1	26	9.2	1.7	2.68

From Table 3, it was clear that the most influential reason that might help the conventional farmer to convert to organic farming was consumer health awareness with a mean score of 3.92 followed by support from government and other agencies with mean score 3.86 and interest in organic concept with mean score 3.69 and producer and family health with mean score 3.69 were the moderately important factors that might help the conversion of conventional farmer into organic farming. The least important factor for organic conversion as given by respondents was unhappy with conventional farming with mean score 2.15. Conventional farmers might convert to organic farming as there was premium price for the organic produce. They were not ready to convert to organic farming

as there was a fear of getting less yields in the initial years of organic adoption. It takes time to convert them to organic farmers with the support of the government and agencies. Training sessions were conducted in the study area by the NGOs to educate conventional farmers about the importance of Organic farming and its benefits.

3.3 Farmers behaviour towards organic farming

Out of 140 farmers, 70 organic farmers were asked about their perception of organic farming. A five-point Likert scale was used with different questions asked for organic farmers in the study area.

Table 4: Behaviour of organic farmers towards organic farming

Statements	Strongly Disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly Agree (%)
Organic farming is better for the environment	0	0	0	42.24	57.76
Organic farming can't control weeds, pests & diseases	0	14.51	0	55.05	30.44
More profitable than conventional farming	2.5	2.8	0	60.46	34.24
Profits on organic products are high	0	6.41	0	49.65	43.94
Organic farming is popular among local farmers	0	9.81	0	68.57	21.62
Organic standards are too restrictive to be practical	0	3.23	0	61.32	35.45
Changing to organic farming is an exciting new challenge	0	11.18	0	52.39	36.43
Organic farming gives a chance to make good use of skills	0	0	12	55.67	32.33
High cost of production	2.45	15.36	24.85	52.12	5.22
Labor intensive	3.47	25	15	50	6.53
Market competition is high	3.56	24.06	4.01	62	6.37
Lower yields	0	0	2	72.43	25.57

Table 4. Distribution of responses for Likert scales (1 = strongly disagree, to 5 = strongly agree); share of farmers (%). From Table 4 it was found that all the farmers agreed or strongly agreed with the statement “organic farming is better for the environment”. Weeds and insect control were cited by the majority of farmers (85.49%) as the biggest production obstacles for organic crops, while 14.51% disagreed. Organic farming was more profitable than conventional farming, according to 94.7% of farmers. Almost 94% of farmers concurred that the profits from organic products are larger than those from conventional farming. Over 90% of farmers agreed or strongly agreed that organic farming was popular among local farmers. Nearly 98% of farmers agreed or strongly agreed that adopting organic farming gets lower yields compared to conventional farming. The majority of farmers acknowledged the challenges of managing weeds and insect pests, but they also agreed on the advantages of organic farming. A majority of respondents nearly half agreed that organic farming requires a lot of labor. Nearly everyone concurred that product from organic farms has a shorter shelf life and poorer yields.

3.4 Problems faced by farmers in adoption of organic farming: Out of 140 farmers, 70 organic farmers were asked about their problems in adopting organic farming. Respondents were asked to rank the most important challenges from a list of a nine potential problems.

Table 5: Problems faced by organic farmers

Problems	Garrett score	Rank
Could not sell the produce	82.56	1
Problem hiring labor	76.53	2
Drop in volume of production	71.25	3
Drop in quality of produce	64.34	4
Complex certification process	58.03	5
Lack of support from government/ related agencies	46.57	6
Lack of training & extension services	31.48	7
Could not obtain the inputs	24.08	8
Facing problems with land ownership	15.85	9

From Table 5, it was found that Marketing was the main problem for organic farmers. They could not sell their produce effectively like conventional farm products as there was no separate marketing channel for organic products in this study area. The second most ranked problem by respondents was the problem of hiring labor as organic farming was more labor intensive. The problem of weeds and diseases was more compared to conventional fields. Drop in volume of produce and drop in quality of produce have been the next most important problems ranked by the respondents. As in the transitional stage of organic farming, the farmers have experienced a significant drop in the volume and quality of produce. Finally land ownership problem has been ranked least by the farmers as most of the farmers have their own land.

4. Conclusion

The majority of farmer respondents were middle-aged between 40 to 50 years, with a significant portion of respondents having no education or with up to SSC, education level up to SSC, and a majority were illiterate. The annual income of the respondents varied, with a significant portion earning between 5 to 10 lakhs. The majority of the farmers

had land holdings up to 2 hectares, and a significant number of them had more than 20 years of farming experience. So more awareness programs were required to create the chances to adopt organic agriculture. The most influential factors for organic farmers to adopt organic practices were their interest and belief in the organic concept, farming without chemicals, and support from the government and agencies. Influence from other farmers and continuing from parents were found to be the least influential reasons for adopting organic practices. Organic farmers generally agreed that organic farming was better for the environment and that it was more profitable than conventional farming. However, they acknowledged challenges related to weed and pest control, high production costs, labor intensity, market competition, and lower yields compared to conventional farming. While organic farmers showed a strong belief in the benefits of organic farming for the environment and perceived it as more profitable, they faced several challenges such as marketing, labor, and production issues. Addressing these challenges and providing support in terms of marketing infrastructure, labor availability, and training could help encourage more farmers to adopt organic farming practices.

5. References

1. Anjana RA, Sidhu K. Socio- economic Profile of the Farmers in Five Agro- Climatic Zones of Punjab, India. *Asian Journal of Agricultural Extension, Economics & Sociology*. 2022;40(9):8-16.
2. Haris NBM, Garrod G, Gkartzios M, Proctor A. Factors influencing the decision to farm organic practices in Malaysia: A Mix-method Approach. In *Proceedings of the 92 Annual Conference*, Coventry, UK, 16-18 April 2018-2019.
3. Łuczka W, Kalinowski S. Barriers to the Development of Organic Farming: A Polish Case Study. *Agriculture*. 2020;10(11):536.
4. Nandwani D, Jamarkattel D, Dahal KR, Poudel R, Giri S, Joshi TN. Attitudes of Fruit and Vegetable Farmers towards Organic Farming in Kathmandu Valley, Nepal. *Sustainability*. 2021;13(7):3888.
5. Pradhan M, Tripura B, Mondal TK, Darnel RR, Murasing J. Factors influencing the adoption of organic farming by the farmers of North District of Sikkim. *Int. J Adv. Sci. Res. Dev*. 2017;4(2):1-7.
6. Singh A. Understanding the Perception, Constraints and Reasons for the Adoption of Organic Farming. *Indian Research Journal of Extension Education*. 2022;22(5):110-117.
7. Meena BS. Socio-economic study of organic farming in irrigated north western plain zone of Rajasthan. *Agricultural Science Digest*. 2010;30(2):94-97.
8. Bello WB. Problems and Prospect of Organic Farming in Developing Countries. *Ethiopian Journal of Environmental Studies and Management*. 2008;1(1).
9. Mohan DJ, Helen S. Attitude of farmers towards organic vegetable cultivation. *Agriculture Update*. 2014;9(3):364-367.
10. Azam MS, Banumathi M. The role of demographic factors in adopting organic farming: A logistic model approach. *International Journal of Advanced Research*. 2015;3(8):713-720.
11. Prashanth P, Reddy MJ. Study on the profile of organic cotton farmers of Karimnagar district of Andhra Pradesh. *International Journal of Farm Sciences*. 2012;2(2):134-140.