

International Journal of Agriculture Extension and Social Development

Volume 7; SP-Issue 9; September 2024; Page No. 268-270

Received: 12-06-2024
Accepted: 23-07-2024

Indexed Journal
Peer Reviewed Journal

Adoption of organic farming practices of coffee plantation in the Dindigul district of Tamil Nadu

¹Dr. R Priyanka, ²Somdutt Tripathi, ³Jaya Verma and ⁴Anjali Pandey

¹Guest Faculty, School of Agriculture and Animal Science, Gandhigram Rural Institute, Gandhigram, Dindigul, Tamil Nadu, India

²Research Scholar, Department of Agricultural Extension, Banda University of Agriculture and Technology, Banda, Uttar Pradesh, India

³Teaching Associate C.S.A. University of Agriculture and Technology, Kanpur, Uttar Pradesh, India

⁴Research Scholar, Department of Agricultural Extension Education, SVPUAT, Meerut, Uttar Pradesh, India

DOI: <https://doi.org/10.33545/26180723.2024.v7.i9Sd.1156>

Corresponding Author: Somdutt Tripathi

Abstract

The purpose of the study was to ascertain how farmers on coffee plantations adopted organic farming methods. One of the most consumed drinks in the world is coffee. Traditionally, Karnataka, Kerala, and Tamil Nadu are home to the Western Ghats, where it is grown. The 120 farmers were chosen at random from one block and eight villages in order to assess the organic farming methods used on coffee plantations. The research findings showed that 50.00 percent of respondents had a medium level of adoption, followed by 34.17% who had a high level of adoption and the remaining 15.83 percent of growers who had a high level of adoption. The adoption of organic farming practices in coffee plantations is influenced by socioeconomic factors and knowledge. Factors such as age, education, family size, income, land holding, household materials, social participation, extension contact, innovativeness, decision making, and adopters' knowledge showed a significant relationship on the level of adoption, while factors like caste, family type, and occupation showed a non-significant relationship.

Keywords: Adoption, coffee plantation, organic farming

1. Introduction

Coffee is one of the world's most popular beverages. Some claim it is the most widely consumed liquid in the world aside from water. Coffee is more than a beverage, however. It is a memory, anticipation, a lifetime of consoling moments of modest pleasure woven into our lives. Coffee's success as a beverage undoubtedly owes both to the caffeine it harbors and to its sensory pleasure. Coffee lovers come to associate the energizing lift of the caffeine with the richness and aroma of the beverage that delivers it. Coffee is produced from the seeds of a small red (sometimes yellow) fruit that grows on plants halfway in size between shrub and tree. The process that turns these seeds into beverage is a long and complex process, perhaps the most complex process associated with any major beverage.

Over the years through intensive farming practices in coffee, the nutrient needs are being met by application of chemical fertilizers (Meskerem Million *et al.* 2020) [5]. Though inorganic fertilizers along with improved and hybrid varieties increase the productivity, initially, yield levels are not sustained over years. In most of the coffee growing areas yields are either stagnant or declined due to decrease in organic matter content of soils (Kumar *et al.* 2018) [4]. Adding or replacing with organic manures to supply 50 per

cent of the total nutrient requirement otherwise, normally applied as inorganic fertilizers reduces the total cost of fertilizers applied to coffee. (Ankit Malviya *et al.* 2020) [2] Long run increased use of inorganic fertilizers and pesticides in cultivation of coffee has adversely affected the environment and caused serious ill effects to man, animal, plant and soil health. Farmers and scientists all over the world have recognized the limitations of modern agriculture (Nemes 2009) [8]. Efforts are being made to identifying alternative farming methods that are ecologically sound, viable and sustainable. In recent, past gradual efforts are made in organic farming by some section of farming population due to various reasons (Md Sikandar Azam and Musarrat Shaheen 2018) [6]. Efforts are also made to evolve organic farming practices for field and horticultural crops and also farmers are following their own methods of organic farming practices (Asadollahpour *et al.* 2014) [1]. The rate of acceptance depends on the socio-economic characteristics of the farmers. A scientific investigation may reveal as to what extent these and such other factors are responsible for the farmer to farmer variation in adoption of improved agricultural practices keeping these stated facts in view the present investigation was undertaken (Nandi *et al.* 2015) [7].

2. Methodology

The present investigation was carried out in one block and eight purposively selected villages of Dindigul district, Tamil Nadu. The name of selected villages were, Kodaikanal, Poombarai, Thandikudi, Periyur, Pachalur, Vilpatti, Kamanur and Mannavanur. The data was collected with the structured interview schedule from randomly selected 120 farmers. Frequency and percentage were used to study the adoption level. The level of adoption of respondents were classified into three categories viz, low, medium and high on the basis of mean +S.D. Correlation coefficient is used to identify the relationship between the selected independent variables and with the adoption level of adopters towards organic farming practices of coffee plantation.

3. Results and Discussion

Based on the objectives of the study, the results are driven in the below tables.

3.1. Overall adoption level of Organic coffee farming practices

Table 1: Overall adoption level of Organic coffee farming practices

S. No.	Category	Frequency	Percentage
1	Low level	19	15.83
2	Medium level	60	50.00
3	High level	41	34.17
	Total	120	100.00

From the above table it is evident that majority of the respondents (50.00 per cent) of the respondents had medium level of adoption, followed by 34.17 per cent belonged to high level of adoption and remaining 15.83 per cent of growers belonged to low level of the adoption. It is concluded that majority of respondents were found to have had medium level of adoption (Priyanka *et al.* 2018) [3].

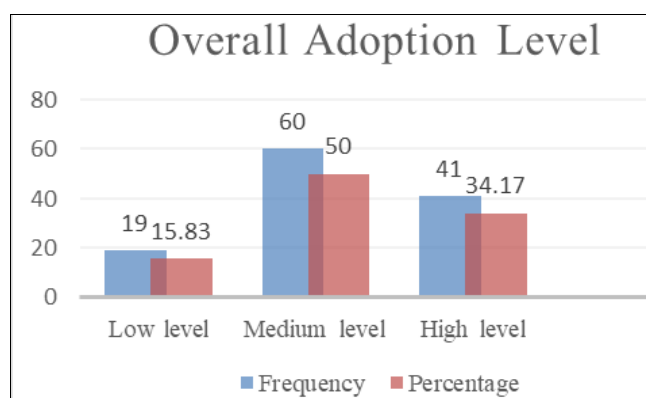


Fig 1: Overall adoption level of Organic coffee farming practices

3.2. Factors influencing the level of adoption of organic farming practices in coffee plantation.

Socio-economic characteristics of respondents play very important role in exhibiting level of adoption. With this in view efforts were made to find out the co-relation between selected socio-economic characteristics of adopters and their level of adoption. To examine the relationships, correlation co-efficient ('r') was computed, the results was presented in

the table.

3.3. Relationship between the selected independent variables and with the adoption level of adopters towards organic farming practices of coffee plantation.

It is well known fact that an individual's behaviour dependent upon their socio-economic background. Past researchers have shown that those who know new things have well defined socio-economic characteristics so it was thought appropriate to include some socio-economic variables in the present study. The correlation coefficients of each of the socio-economic with adoption of respondents have been furnished in the following table.

Table 2: Relationship between the selected independent variables and with the adoption level of adopters about organic farming practices of coffee plantation. n = 120

S. No.	Independent variables	Correlation coefficient 'r' value
1	Age	0.52189*
2	Education	0.42366*
3	Caste	0.02163NS
4	Family type	0.03672NS
5	Family size	0.21864*
6	Occupation	0.02598NS
7	Income	0.23472*
8	Land holding	0.26127*
9	Household materials	0.29658*
10	Social participation	0.24716*
11	Extension contact	0.32536*
12	Innovativeness	0.42353*
13	Decision making	0.46095*

The following table 2 communicates that there was positive and significant correlation between the age and adoption level of respondents regarding organic farming practices of coffee plantation. It may be due to majority of the adopters were from young to medium age group, it is natural for them to acquire new adoption by mutual help, personal experience and interaction with other sources in relation to organic farming practices of coffee. Thus it indicates that age has positive bearing on the adoption level, as the age increases, their adoption also increases. Hence the null hypothesis was rejected and alternate hypothesis was accepted. Meaning there by that advancing in age has direct bearing in enhancing of adoption level of organic farming practices in coffee plantation.

Education level of the adopters has been found to be positively and significantly correlated with adoption level. Education level of adopters has high relationship with their adoption regarding organic farming practices, hence the null hypothesis was rejected and alternate hypothesis was accepted. Meaning there by as the education increases adoption also increases.

There was no significant correlation between caste and adoption level of respondents about the organic farming practices of coffee plantation. It means the caste of any respondents did not facilitate to acquire and know the adoption level. It seems that caste is no decisive factor, therefore the null hypothesis was accepted and research hypothesis was rejected. Caste is other factor, which stimulate and enhance the ability and capability to learn to know the information.

There was no significant correlation between family type

and adoption level of respondents about the organic farming practices of coffee plantation. It means the family type of any respondents did not facilitate to acquire and know the adoption level. It seems that family type is no decisive factor, therefore the null hypothesis was accepted and research hypothesis was rejected. There is positive and significant correlation between the sizes of family members and adoption level of organic farming practices of coffee plantation the size of family members of adopters depends upon many supporting and helping factors which coordinates the individual's activities solid with their job. Therefore null hypothesis was rejected and alternate hypothesis was accepted.

The annual income of the adopters has been observed statistically positive and significantly correlated with adoption level. It may be referred from the table that annual income possessed by adopters through passing many years, is responsible for enhancing the adoption level of them. Therefore the null hypothesis was rejected and research hypothesis was accepted. The further examination of table indicates that there was no significant relationship between occupation and adoption level of respondents. . It means the occupation of any respondents did not facilitate to acquire and know the adoption level. It seems that occupation is no decisive factor, therefore the null hypothesis was accepted and research hypothesis was rejected.

The size of land holding of the adopters has observed positive and significant relationship with adoption level, hence the null hypothesis was rejected and alternate hypothesis was accepted, meaning thereby that the landholding is one of decisive factor in adoption level.

The social participation of adopters has observed positive and significant relationship with adoption level, hence the null hypothesis was rejected and alternate hypothesis was accepted, meaning thereby that the social participation is one of decisive factor in adoption level.

Then the further examination of table indicates that the extension contact of adopters has observed positive and significant relationship with adoption level, hence the null hypothesis was rejected and alternate hypothesis was accepted, meaning thereby that the extension contact is one of decisive factor in adoption level. The innovativeness and decision making of adopters has observed positive and significant relationship with adoption level, hence the null hypothesis was rejected and alternate hypothesis was accepted, meaning thereby that the innovativeness and decision making was one of decisive factor in adoption level.

In nut shell, the influence of socio economic variables and knowledge on the adoption of organic farming practices in coffee plantation, out of 14 variables, 11 variables viz. age, education, family size, income, land holding, household materials, social participation, extension contact, innovativeness, decision making, knowledge of adopters showed significant contribution on the level of adoption.

4. Conclusion

The finding of the study revealed that the majority of the respondents (50.00 per cent) of the respondents had medium level of adoption, followed by 34.17 per cent belonged to high level of adoption and remaining 15.83 per cent of growers belonged to high level of the adoption. The

influence of socio economic variables and knowledge on the adoption of organic farming practices in coffee plantation, variables like age, education, family size, income, land holding, household materials, social participation, extension contact, innovativeness, decision making, knowledge of adopters showed significant relationship on the level of adoption and variables like caste, family type, occupation showed non-significant relationship on the adoption level of respondents.

5. References

1. Asadollahpour A, Najafabadi MO, Hosseini SJ. Factors affecting the conversion to organic farming in Iran: a case study of Mazandaran rice producers. *J Sci Int (Lahore)*. 2014;26(4):1855-1860.
2. Malviya A, Verma J, Dawar A. Adoption level of farmers regarding organic farming practices in Madhya Pradesh state of India. *Int J Curr Microbiol App Sci*. 2020;9(7):3551-3555.
3. Priyanka R, Srivastava JP, Jahanara. Adoption behaviour and constraints in adoption of organic farming practices of coffee plantation in Dindigul District of Tamil Nadu. *Int J Agric Sci*. 2018;10(11):6281-6282.
4. Kumar J, Pradhan M, Singh N. Sustainable organic farming in Sikkim: an inclusive perspective. In: SenGupta S, Zobaa A, Sherpa K, Bhoi A, editors. *Advances in Smart Grid and Renewable Energy. Lecture Notes in Electrical Engineering*, Vol. 435. Singapore: Springer; c2018. p. 367-378.
5. Million M, Like M, Chalchisa T. Adoption status and factors determining coffee technology adoption in Jimma Zone, South West Ethiopia. *Pelita Perkebunan*. 2020;36(1):68-83.
6. Azam MS, Shaheen M. Decisional factors driving farmers to adopt organic farming in India: a cross-sectional study. *Int J Soc Econ*. 2018;46(4):562-580.
7. Nandi R, Bokelmann W, Nithya VG, Dias G. Smallholder organic farmers' attitudes, objectives and barriers towards production of organic fruits and vegetables in India: a multivariate analysis. *Emirates J Food Agric*. 2015;27(5):396-406.
8. Nemes N. Comparative analysis of organic and non-organic farming systems: a critical assessment of farm profitability. *FAO; Rome*; c2009.
9. National Bank for Agriculture and Rural Development. Available from: <https://www.nabard.org/demo/auth/writereaddata/File/OC%2038.pdf>
10. Coffee Board of India. Available from: <https://coffeeboard.gov.in/>