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A case study on adoption of organic farming practices by the farmers in Tamil Nadu India

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Abstract
Many developed Countries must undergo a significant transformation in order to meet the related challenges of achieving food security and responding to climate. Projections based on population growth and food consumption patterns indicate that agricultural production needs to increase by at least seventy percent to meet demands by 2040. Most estimates also indicate that climate change is likely to reduce agricultural productivity, production stability and incomes in some areas that already have high levels of food insecurity. In this scenario organic farming is thus considered to achieving future food security. Keeping in mind the advantage of organic farming practices. The present study was undertaken to study the extent of adoption of the identified organic farming practices by the respondents in Tirunelveli district of Tamil Nadu state. One hundred and twenty farmers of both sexes served as respondents of the study. The extent of adoption of organic farming practices in paddy cultivation by the respondents is as follows. 'Spraying of Neem oil before flowering stage to manage sucking pest' (90.00 per cent), 'Neemkernal extract at 5 per cent to reduce pest attack' (90.00 per cent), 'Paddy seeds are stored with Ipomea leaves to control storage pest' (63.66 per cent).

Keywords: Adoption, organic farming practices, farmers

Introduction
Organic farming "is a production system which avoids or largely excludes the use of synthetically compounded fertilizers, pesticides, growth regulators, and livestock feed additives. To the maximum extent feasible, organic agriculture systems rely upon crop rotations, crop residues, animal manure, legumes, green manure, off-farm organic wastes, mechanical cultivation, mineral bearing rocks, and aspects of biological pest control to maintain soil productivity, tilt, to supply plant nutrients, and to control insects, weeds, and other pests". (USDA, 1980) [1]. The concept of the soil as a living system which must be "fed" in a way that does not restrict the activities of beneficial organisms necessary for recycling nutrients.

"Organic agriculture is a holistic production management system which promotes and enhances agro-ecosystem health, including bio-diversity, biological cycles and soil biological activity. It emphasizes the use of management practices in preference to the use of off-farm inputs, taking into account that regional conditions require locally adapted systems. This is accomplished by using wherever possible, agronomic, biological, and mechanical methods, as opposed to using synthetic materials, to fulfil any specific function within the system" (FAO, 1999) [2].

Organic farming system in India is very old and is being followed from ancient time. It is a method of farming system which primarily aimed at cultivating the land and raising crops in such a way, as to keep the soil alive and in good health by the use of organic wastes

(Crop, animal and farm wastes, aquatic wastes) and other biological materials along with beneficial microbes (bio fertilizer) to release nutrients to crops for increased sustainable production in an eco-friendly pollution free environment. In the recent days people have started realising the significance of organic farming and its role in food security and sustainable agricultural development. Considering the important of organic farming an attempt is made to analyse the organic farming practices of the farmers of Tamil Nadu.

Research methodology

Keeping in mind the advantage of organic farming practices. The present study was undertaken to study the organic farming practices followed by the farmers in Tirunelveli district of Tamil Nadu state. The specific objective of the was to find out the extent of adoption of the identified organic farming practices by the respondents. One hundred and twenty farmers of both sexes served as respondents of the study. Proportionate random sampling technique was followed for the selection of farmer respondents. The independent variables for the study were identified based on judge's opinion. Group discussion with farmers, key informant method participant and non-participant observation in addition to the pre-tested interview schedule were used for the collection of data.

Findings and Discussion

Extent of Adoption of Organic Farming Practices

The findings on the extent of adoptionof organic practices by the respondents in Paddy are presented and discussed in this section.

Extent of adoption of respondents on organic farming practices in paddy cultivation

The findings on the extent of awarness of various organic farming practices in paddy cultivation are presented in Table 1.

Table 1: Distribution of respondents according to their extent of adoption of organic farming practices in paddy cultivation (n=120)

S. No	Organic farming practices in paddy cultivation	Number of respondents	Percent
1.	Spraying of Neem oil before flowering stage(to manage sucking pest)	110	91.66
2.	Neemkernal extract at 5 per cent(to reduce pest attack)	109	90.83
3.	Paddy seeds are stored with Ipomea leaves to control storage pest	87	72.50
4.	Hot water treatment of seeds(to control seed borne diseases)	83	69.16
5.	Applying green leaf manure (Nutrient management)@6.25tonne/ha	77	64.16
6.	Applying Bio-fertilizers	67	55.83

It is observed from Table 1 that the extent of adoption of organic farming practices in paddy cultivation by the respondents is as follows. 'Spraying of Neem oil before flowering stage to manage sucking pest' (91.66 per cent), 'Neemkernal extract at 5 per cent to reduce pest attack' (90.83per cent), 'Paddy seeds are stored with Ipomea leaves to control storage pest' (72.50 per cent), 'Hot water treatment of seeds to control seed borne diseases (69.16 per cent), 'Applying green leaf manure (Nutrient management) @6.25tonne/ha' (64.16 per cent), 'Applying Bio-fertilizers' (55.83per cent). The application of bio-fertilizer is low because of high cost and lack of awareness among the respondents. This findings is accordance with the findings of (ajithkumar, 2001) [3].

Conclusion

Organic agriculture is a holistic food production system works with the sustainable use of locally available natural resources. The need to adopt a comprehensive approach for the promotion of organic agriculture by taking cooperation of all stakeholders, environmental friendly technologies, marketing infrastructure and financial support environmentally friendly for quality and quantity organic food production. The use of FYM, bio-fertilizer and other manure have been found more use full and effective in increasing the soil fertility the information on these aspects need to be popularized. The effective utilization of mass media like radio, television, newspaper and farm magazines is extent there for creating wider dissemination of the organic farming practices.

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