Research Paper

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Study on Existing Agricultural Practices in Orathanadu Block of Tanjore District

Home Science

KEYWORDS : Agriculture, Eco-friendly, natural.

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ABSTRACT

For this research, fourteen villages in Orathanadu block of Thanjavur district was selected as a study area based on its surplus amount of production and storage of Food grains. Totally 420 farmers were selected as a sample for household survey. The over doses of fertilizers and pesticides resulted in intolerable pollution in air, water and soil. Increased use of pesticides residues which are injurious to health. Some of the activities are involved in agriculture are harmful to the environment but the survival of man is linked to agriculture. Hence agriculture cannot be abandoned for the sake of environment. Therefore, there is a real need to develop the technologies, process and practices which are eco-friendly so that agriculture becomes sustainable.

INTRODUCTION

"*The ultimate goal of farming is not the growing of crops, but the cultivation and perfection of human beings*"
- **Masanobu Fukuoka**

After Independence India has been producing enormous amount of food grain, still there is shortage of food grains to feed the population. Out of several reasons, the major reasons are population growth, agricultural land is being converted into IT park, theme park, industry and apartment and 15 – 20 per cent of food grain losses during pre and post harvesting period. The greatest challenge in India is to provide atleast one feed to the increasing population. The annual loss of agricultural product due to pest and infestation in India is around Rs.25,000 crores per year.

Inadequate support for the product, increase the cost of inputs and inadequate and non- availability of credit, more than 80 per cent of the farmers wanted to leave farming and also the farmers sell their land to the builders. This leads to scarcity of the agricultural workers in villages. We all aware that more than 2,70,940 farmers who committed suicide all over the country due to high cost of fertilizers and pesticides. Unable to repay, the loan in time, and sometimes facing humiliation, some farmers resorted to the extreme step of committing suicide.

There are different nomenclatures to organic farming. It is also called as eco-friendly farming, i.e., farming in relation to eco-region. Whatever may be the name, the principle concept is that eco-friendly farming based on natural principles which alone are sustainable (Hiruvenkangagounder et al., 2007).

Eco-friendly agriculture is defined as "an ecological production management system that promotes and enhances biodiversity, biological cycles, and soil biological activity. It is based on minimal use of off-farm inputs and on management practices that restore, maintain, or enhance ecological harmony. The primary goal of organic agriculture is to optimize the health and productivity of interdependent communities of soil life, plants, animals and people." The term "eco-friendly" is defined by law, as opposed to the labels "natural", which may imply that some eco-friendly methods were used in the production of the foodstuff, but this label does not guarantee complete adherence to eco-friendly practices as defined by a law. Most "natural" products do not contain synthetic products, but may have been provided conventional food or feed (http://www.foa.org).

The aim of the study is to create awareness to the farmers to avoid using the chemical fertilizers and pesticides and educate them about the harmfulness of the chemicals in the agriculture and make them to use eco-friendly methods of agriculture.

METHODOLOGY

The study was conducted in Thanjavur District of Tamil Nadu state. Orathanadu Block was selected as study area as maximum surplus amount of cultivation, production and storage of food grains. Fourteen villages from a block were selected on the basis of cultivation, production and storage of food grains. Four hundred and twenty households from the selected villages were randomly selected to analyse the existing agricultural practices in the selected households.

An Interview schedule was formulated which includes socio-economic profile of the sample, types of crops cultivated, problems faced during cultivation, methods used to control insects, quantity of food grains produced and storage practices in the selected villages, problems encountered during production and the measures undertaken to solve the problems.

RESULTS AND DISCUSSION

a) Socio-economic profile of the selected households

The socio-economic profile helps to understand the age, education, occupation, type of the family and monthly income of the selected households. Table I explains the socio-economic profile of the selected households.

TABLE I
SOCIO-ECONOMIC PROFILE OF THE SELECTED HOUSEHOLDS
N=420

S. No	Category	Classification	M * 140	S * 140	**L * 140**
			%	%	%
1.	Age (in years)	21 – 30 31 - 40 41 - 50 Above 51	29 27 43 1	34 31 31 4	13 28 54 5
2.	Education	Illiterate Primary Secondary Higher secondary Graduate	23 13 51 12 1	16 31 24 21 8	- 11 43 34 12
3.	Occupation **	Agriculture Subsidiary occupation a) Dairy b) Poultry c) Business trade	100 79 41 4	100 69 59 12	100 80 34 27
4.	Type of the family	Nuclear family Joint family	66 34	51 49	36 64

5.	Monthly income of the family (in Rupees)	Upto 5000 5000 - 10000 Above 10000	3 81 16	- 20 80	- 1 99

*M-Marginal, S-Small, L-Large
**Multiple responses

A high proportion (43 per cent) of the marginal farmers belonging to the age group of 41-50 years and majority of them had undergone secondary education (51 per cent). The table indicates that 66 per cent of the marginal farmers were lived in nuclear family and their monthly income was between 5000-10000 (81 per cent) and their main occupation is Agriculture.

A high proportion (34 per cent) of the small farmers belonging to the age group of 21-30 years and majority of them had undergone primary education (31 per cent). The table indicates (51 per cent) of the small farmers were lived in nuclear family and their monthly income was above 10000 (80 per cent) and their main occupation is Agriculture.

Fifty four per cent of the large farmers belonging to the age group of 41-50 years and majority of them had undergone secondary education (42 per cent). The table indicates 64 per cent of the large farmers were lived in joint family and their monthly income was above 10000 (99 per cent) and their main occupation is Agriculture.

b) Food Crops Cultivation, Production and Storage

The aspects discussed under this head are the types of food crops cultivated, problems faced during cultivation, methods used to control Insects**,** quantity of food grains produced, quantity of food grains stored and methods used to control pest during storage**.**

i) Type of food crops cultivated by the selected households
All the selected farmers cultivated sufficient quantity of paddy for household consumption and seed purpose. Among pulses black gram and green gram was the major crops cultivated by more than 20 per cent of the households. The result shows the declaring trend of agricultural produce.

ii) Problems faced during cultivation
Invariably all types of farmers expressed that they had problem due to insects, pests, water shortage, labour and high cost of fertilizer and pesticides.

iii) Methods used to control Insects
All categories were adopting chemical methods to control insects and pests. Chemicals that used by the farmers were Copper sulphate, deltamethrin, Glyphosate and aluminium phosphide.

iv) Quantity of food grains produced
Figure I represent the quantity of food grains produced.

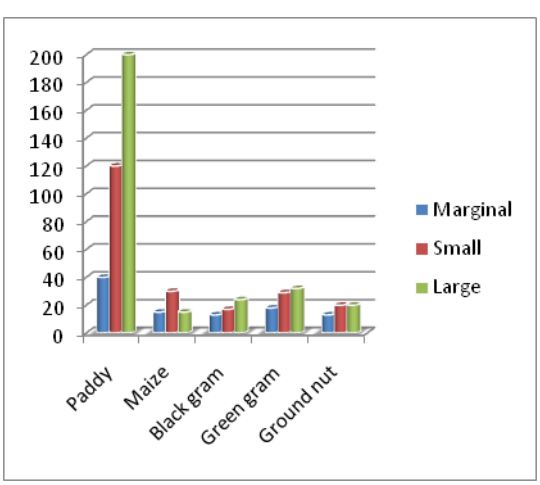

FIGURE I

* Each bag contains 70kg of food grains

The maximum quantity of paddy produced was 40 bags by marginal farmers and 120 and 200 bags by small and large farmers respectively. The yearly production of maize was only upto 30 bags by small farmers and fifteen bags each of marginal and large farmers because this cereal do not find a prominent place in the daily use.

Black gram and green gram were the only pulses produced by all the category of farmers.

v) Quantity of food grains stored
Regarding cereals twenty five per cent of marginal, 60 per cent of small and 100 per cent of large farmers stored paddy annually. These pulses were used only for family consumption and for use as seed during the next season.

Farmers stored a part of their produced food grains for their future. As regards food grains, large farmers and small farmers stored 50 per cent of what they produced, while marginal farmers sold more than half of their produce to fulfill their economic needs.

vi) Methods used to control pest during storage

TABLE II
METHODS USED TO CONTROL PEST DURING STORAGE

S. No	Methods **	M *	S *	L*
		%	%	%
1.	Sun drying	100	100	100
2.	Bioresmethrin	100	100	100
3.	Dichlorvos	70	76	80
4.	Methacrifos	70	76	90
5.	Permethrin	80	84	90
6.	Use of neem leaves	10	8	5

*M-Marginal, S-Small, L-Large
**multiple responses

Cent percent of the selected households irrespective of group of farmers adopted sun drying and using bioresmethrin to control insects during storage. Seventy, 76 and 80 per cent of the marginal, small and large farmers respectively were using dichlorvas for storage. Seventy, 76 and 90 per cent marginal, small and large farmers respectively were using methacrifos. Permethrin was used by 80 per cent of marginal farmers, 84 per cent of small farmers and ninety per cent of large farmers to control pest in pulses. Only a very few per cent, 10 per cent marginal, 8 per cent small, 5 per cent large farmers were using neem leaves for controlling insects and pests during storage.

vii) Opinion of farmers regarding present agriculture

TABLE III
OPINION OF FARMERS

S. No	Opinion of the farmers **	M* 140	S* 140	L* 140
		%	%	%
1.	Insect, pest attack	100	100	100
2.	Water shortage	100	100	100
3.	Labour problem	100	100	100
4.	High cost of fertilizers & pesticides	97	76	70
5.	Conversion of agriculture lands into Industries and Colleges	63	54	47
6.	Migration of farmers	32	26	39
7.	Not interested in agricultural activities	62	73	92

*M-Marginal, S-Small, L-Large
**Multiple responses

Cent per cent of the farmers expressed that they had problem due to insects, pests, water shortage and labour problem. Majority of 97 per cent of marginal, 76 per cent small and 70 per

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cent of large farmers had problems due to the high cost of the fertilizers and pesticides. 63 per cent, 54 per cent and 47 per cent of marginal, small and large farmers had converted their agricultural lands into Industries and colleges. 32 per cent of marginal, 26 per cent of small and 39 per cent of large farmers had migrated from village to town. 62 per cent, 73 per cent and 92 per cent of marginal, small and large farmers are not interested in agricultural activities.

Conclusion:

The existing agricultural practices adopted by the selected households revealed that due to high cost of chemical fertilizers, pesticides and health related issues motivated the farmers to go for indigenous agricultural practices. They are ready to learn eco-friendly agricultural practices to safeguard our environment from pollution and also lead to a healthy life.

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