

Knowledge of farmers of Thanjavur district of Tamil Nadu on organic farming in paddy

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ABSTRACT

The present study was conducted in Orathanad block of Thanjavur district, Tamil Nadu covering 90 farmers cultivating paddy. Data on the profile characteristics of farmers and their knowledge on organic farming practices in paddy were gathered and analyzed. Majority of the respondents (86.67%) were above 45 years of age; one-third (33.33%) of them were educated up to high school, majority (73.33%) had been doing farming alone and 60.00 per cent had high experience in farming of more than 20 years. They had mainly (40.00%) small size farms (2.51-5.00 acre); 42.22 per cent grew paddy on medium size area (2.51-5.00 acre). Main source of irrigation for majority of them (84.44%) was canal water. Two-third of the farmers (66.67%) possessed cows. They (46.67%) had mainly low social participation. Their mass media exposure and contact with extension agencies were also medium (61.11 and 65.56% respectively). Majority of them had medium level of risk orientation and innovativeness (77.78 and 57.78% respectively). Of the total respondents only 42.22 per cent showed their willingness to do organic farming whereas 57.78 were unwilling. Five variables viz source of irrigation, social participation, risk orientation, innovativeness and willingness to do organic farming showed positive and significant relationship with the knowledge of organic farming practices in paddy.

Keywords: Paddy; farmers; organic farming; knowledge

INTRODUCTION

Organic agriculture is a unique production management system which 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 (Sunil et al 2013).

According to Gold (1994) to achieve sustainability many alternative well known approaches are integrated pest management, integrated crop management, low-input agriculture, permaculture, biodynamic farming, precision agriculture and organic farming. Rigby and Caceres (2001) reported that sustainability can be considered in relation to organic farming as a sector growing rapidly in many countries. Badgley et al (2006) reported that organic food can fulfill the demands for food and sustain the

environment. The yields from organic agriculture are not less than from conventional agriculture (Ramesh et al 2005).

In Tamil Nadu the State Department of Agriculture, NGOs, Tamil Nadu Agricultural University and other government and private agencies have started advocating organic farming in major crops after the launch of National Programme for Organic Production (NPOP) in May 2000. Hence it becomes imperative to learn about the willingness of farmers to do organic farming and their knowledge level. Hence this study was conducted to know about the knowledge of farmers on organic farming in paddy.

METHODOLOGY

The present study was conducted in Orathanad block of Thanjavur district, Tamil Nadu. In total 90 respondents cultivating paddy were selected randomly

taking 15 farmers each from six villages viz Panchanadhikottai, Azhiyavaikkal, Kaattukurichi, Thennamanadu, MelaUlur and Paruthikottai and surveyed by using a well-structured interview schedule. A teacher-made knowledge test was developed to measure the knowledge level of farmers on organic agriculture in paddy. The scores of all the individual items were summed up to get knowledge score of respondents. Based on the total score the respondents were classified into three categories namely 'low', 'medium' and 'high' knowledge level using mean (X) and standard deviation (SD) as a measure of check. The statistical tools viz percentage analysis, mean and standard deviation and simple correlation coefficient were employed to analyze the data.

RESULTS and DISCUSSION

Profile of the respondents

From the data given in Table 1 it is clear that majority of the respondents (86.67%) were above 45 years of age. One-third (33.33%) of them were educated up to high school followed by illiterate (22.22%). Majority of them (73.33%) had been doing farming alone and 60.00 per cent had high experience in farming of more than 20 years. They had mainly (40.00%) small size farms (2.51-5.00 acre) followed by 37.78 per cent with big farms (>5 acre). They (42.22%) grew paddy on medium size area (2.51-5.00 acre) followed by 35.56 per cent high (>5 acre). Main source of irrigation for majority of them (84.44%) was canal water. Two-third of the farmers (66.67%) possessed cows followed by 46.66 per cent who had poultry. They (46.67%) had mainly low social participation followed by medium (43.33%). Their mass media exposure and contact with extension agency were also medium (61.11 and 65.56% respectively). Majority of them (77.78%) had medium level of risk orientation. Majority (57.78%) fell in the medium level category of innovativeness. Of the total respondents 57.78 per cent were not willing to do organic farming whereas 42.22 per cent showed their willingness.

Table 1. Distribution of respondents according to their profile characteristics (n= 90)

Component	Respondents	
	Number	Percentage
Age (years)		
Young (Up to 35)	3	3.33

Middle (35.1-45)	9	10.00
Old (>45)	78	86.67
Educational status		
Illiterate	20	22.22
Primary	14	15.56
Middle	5	5.56
High	30	33.33
Higher secondary	8	8.89
Collegiate	13	14.44
Occupational status		
Farming alone	66	73.33
Farming and wage earner	16	17.78
Farming and business	5	5.56
Farming and job	3	3.33
Farming experience (years)		
Low (Up to 10)	9	10.00
Medium (10.1-20)	27	30.00
High (>20)	54	60.00
Farm size (acre)		
Marginal (Up to 2.50)	20	22.22
Small (2.51-5.00)	36	40.00
Big (>5.00)	34	37.78
Area under paddy (acre)		
Low (Up to 2.50)	20	22.22
Medium (2.51-5.00)	38	42.22
High (>5.00)	32	35.56
Source of irrigation		
Well	10	11.11
Bore-well	2	2.22
Canal	76	84.44
Livestock possession		
Cow	60	66.67
Buffalo	14	15.56
Bull	14	15.56
Calf	36	40.00
Goat	12	13.33
Sheep	17	18.89
Poultry	42	46.66
Social participation		
Low	42	46.67
Medium	39	43.33
High	9	10.00
Mass media exposure		
Low	23	25.56
Medium	55	61.11
High	12	13.33
Contact with extension agency		
Low	23	25.56
Medium	59	65.56
High	8	8.88
Risk orientation		
Low	11	12.22
Medium	70	77.78
High	9	10.00
Innovativeness		
Low	16	17.78
Medium	52	57.78
High	22	24.44
Willingness to do organic farming		
Willing	38	42.22
Not willing	52	57.78

Overall knowledge of farmers on organic farming practices in paddy

It is evident from Table 2 that majority (42.22%) farmers had medium knowledge level on organic farming practices in paddy followed by low (36.67%). This could be due to their low social participation and medium level of mass media exposure and contact with extension agencies.

Table 2. Distribution of farmers according to their overall knowledge on organic farming practices in paddy (n= 90)

Knowledge level	Respondents	
	Number	Percentage
Low	33	36.67
Medium	38	42.22
High	19	21.11
Total	90	100.00

Relationship of the profile characteristics of the farmers with their overall knowledge level on organic farming in paddy

It was found (Table 3) that the variables viz sources of irrigation (X7), social participation (X9), risk orientation (X12), innovativeness (X13) and willingness to do organic farming (X14) had positive and significant

Table 3. Simple correlation of the profile characteristics of the farmers with their overall knowledge level on organic farming in paddy (n= 90)

Code	Variable	Correlation coefficient
X1	Age	0.136 ^{NS}
X2	Educational status	0.129 ^{NS}
X3	Occupational status	0.083 ^{NS}
X4	Farming experience	-0.141 ^{NS}
X5	Farm size	0.111 ^{NS}
X6	Area under paddy	0.125 ^{NS}
X7	Sources of irrigation	0.279*
X8	Livestock possession	1.117 ^{NS}
X9	Social participation	0.568*
X10	Mass media exposure	0.119 ^{NS}
X11	Extension Agency Contact	0.123 ^{NS}
X12	Risk orientation	0.224*
X13	Innovativeness	0.234*
X14	Willingness to do organic farming	0.834*

*Significant at 5% level, NS: Non-significant

positive and significant relationship with the knowledge of organic farming in paddy at 5 per cent level. Jaganathan et al (2012) reported that innovativeness, mass media exposure, risk orientation, extension orientation and social participation had a significant and positive relationship with knowledge level.

CONCLUSION

The knowledge of farmers on organic farming in paddy was found at low to medium levels. The profile characteristics like source of irrigation, social participation, risk orientation, innovativeness and willingness to do organic farming had positive and significant relationship with the knowledge of organic farming in paddy. While planning and executing the agricultural programmes the extension functionaries may take into account these profile characteristics. Nearly half of the respondents were willing to do organic farming in paddy. Skill-oriented trainings, demonstrations and exhibitions on organic farming in paddy may be organized to instill the knowledge of organic farming among the farmers.

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