



## Extent of Adoption of FFS Farmers in Rice and its Relationship with Profile Characteristics

N Ch Balu Naik, CH Ramesh Babu, V Srinivasa Rao and G B M Ram Naidu

Department of Extension Education, Agricultural College, Bapatla 522 101, Andhra Pradesh

### ABSTRACT

The study revealed that majority of Farmers Field School (FFS) farmers were of medium adoption (57.50%) followed by high (29.17%) and low (13.33%) levels. The relationship between profile characteristics and extent of adoption of FFS farmers in rice cultivation was observed that the computed 'r' values of mass media exposure, extension participation, achievement motivation, scientific orientation, innovativeness, FFS training received were significant at 1% level of probability. Whereas age, education and farming experience were found non-significant. Farm size is negatively and non-significantly associated with adoption of FFS farmers on rice cultivation. The multiple linear regression revealed that all ten variables explained around 76.65 per cent of variation in the extent of adoption. The independent variables contributed significantly in explaining the variation of the dependent variable. The independent variables like achievement motivation, innovativeness and FFS training received were significantly related with the extent of adoption.

**Key words :** Adoption, Farmers Field School, Profile, Relationship, Rice

Rogers, (1983) had defined adoption as a decision to make full use of an innovation at the best course of action available. Rice is an important food crop and is a staple food for 75 per cent of population in India. The annual estimated crop losses were due to weeds (35.00%), diseases (25.00%), insects (20.00%), nematodes (6.00%), storage pests (7.20%) and rodents (6.80%), accounting for Rs.1.64 million rupees loss due to the different pests in India. In order to prevent the ill effects and reduce crop losses there is a need for introduction of Farmers Field School (FFS) programme *i.e.*, Integrated Pest Management (IPM) has become an alternative to pesticides and pests. FFS is the best extension method to take IPM to farmers, because it will make the farmers experts in their own fields as reported by Yamini Varma and Rajendran, (2007).

Therefore a study was conducted, to assess the extent of adoption and its relationship with selected profile characteristics of FFS farmers in rice cultivation.

### MATERIAL AND METHODS

The study was conducted in six and twelve randomly selected mandals and villages, respectively from two revenue divisions in Krishna district of Andhra Pradesh, where the Agricultural department had organized FFS programme on rice since 1998. Ex-post-facto research design was followed in the present study. In each village, 10

FFS farmers were selected randomly to serve as sample respondents. Thus, 120 farmers constituted the sample for the study. The data were collected through well structured pre-tested interview schedule, which was coded, tabulated and analyzed and presented in tables. Statistical measures such as frequency, percentage, correlation coefficient and multiple linear regressions were used.

### RESULTS AND DISCUSSION

From the Table 1 it was evident that 57.50 per cent of respondents had medium extent of adoption followed by high (29.17%) and low (13.33%) levels. The probable reason might be that, most of the respondents had adopted the recommended FFS practices in rice production technology, which helped them to obtain more score. Whereas 13.33% of respondents were still in the low adoption category, which indicates that extension personnel had made efforts that were needed to improve the adoption level. These findings are in tune with Rath *et al.*, (2007).

### Relationship between selected profile characteristics of FFS Farmers with their extent adoption towards FFS Practices in rice cultivation

The correlation values of mass media exposure, extension participation, achievement motivation, scientific orientation, innovativeness and



Table 3. Multiple linear regression analysis of independent variables of FFS farmers with extent of adoption of FFS practices in rice cultivation

Sl.No	Independent variables	Regression coefficient	n=120	
			Standard error	t value
1.	Age	1.3036	0.8733	1.4927NS
2.	Education	-0.0164	0.3599	0.0457NS
3.	Farm size	-0.8278	0.6575	1.2590NS
4.	Farming experience	-0.1393	0.5629	0.2474NS
5.	Mass media exposure	-0.0477	0.1648	0.2897NS
6.	Extension participation	-0.1169	0.1836	0.6370NS
7.	Achievement motivation	0.7753	0.2361	3.2832**
8.	Scientific orientation	0.2874	0.2082	1.3806NS
9.	Innovativeness	0.5707	0.2431	2.3474*
10.	FFS training received	1.0184	0.1485	6.8575**

F-value = 35.7819

R<sup>2</sup>=0.7665

\* = Significant at 0.05 level of probability

NS: Non-significant

\*\* = Significant at 0.01 level of probability

sizes in adoption of new technology. The finding is in conformity with Sreedevi (1992).

There was non-significant relationship between farming experience and extent of adoption of FFS farmers (Table 2). This might be the reason for farmers with more farming experience usually have more belief on traditional methods of farming. They would not try new practices due to uncertainty of returns. This might have led to non-significant relationship with the adoption of FFS practice by the farmers, in concurrence with Hemanth Kumar (2002).

There was significant relationship between mass media exposure and extent of adoption of FFS farmers (Table 2). It implied that greater the mass media exposure greater will be adoption. This finding is in accordance with Rath *et. al.* (2007).

There was significant relationship between extension participation and extent of adoption of FFS farmers (Table 2). This might be the reason of increased participation in extension activities will provide them more confidence about technology and it has direct effect on farmers decisions, as reported Patel *et. al.* (2003).

There was significant relationship between achievement motivation and extent of adoption of

FFS farmers (Table 2), Which means higher the achievement motivation, the greater would be their level of adoption of FFS rice technologies, in conformity with Natarajan (2004).

There was significant relationship between the scientific orientation and extent of adoption of FFS farmers (Table 2). Normally, farmer with more scientific orientation would adopt more number of recommended practices in conformity with the findings of Ahire *et.al.* (2007).

In the Table 2, that there was significant relationship between the innovativeness and extent of adoption of FFS farmers. Innovativeness is the individual ability in earlier adoption of a new technology. So, as the farmer with this trait acquire more knowledge from various sources of information and adopt the FFS practices in rice cultivation in conformity with Madhavalatha and Rama Chandra Reddy (2004).

There was a significant relationship between the FFS training received and extent of adoption of FFS farmers (Table 2). Rice farmers with high innovativeness and high exposure to mass media can easily learn the new technologies and adopted in FFS practice in rice cultivation, in agreement with Veerendranath (2000).

**Multiple linear regression analysis of independent variables of FFS farmers with extent of adoption of FFS practices in rice cultivation**

It can be observed from the Table 3 that the computed F ratio was 35.7819 at 10 and 109 degrees of freedom. The statistical test thus depicted that all ten independent variable put together to contribute 76.65 per cent and explained a significant amount of variation in the adoption of farmers, leaving the rest for extraneous effect.

Out of ten t values, achievement motivation, innovativeness and FFS training received allowed significant relationship with extent of adoption of FFS farmers on rice cultivation. So, multiple regression analysis provided a great scope to predict the extent of adoption possessed by farmers by making use of the above said selected variables.

Majority of the FFS rice farmers had medium extent of adoption followed by high and low categories. Out of ten independent variable, six variables namely mass media exposure, extension participation, achievement motivation, scientific orientation, innovativeness, FFS training received showed had significant relationship with the extent of adoption of FFS farmers on rice cultivation. The multiple linear regression analysis indicated that all ten variables put together explained 76.65 per cent of variance in the adoption of FFS recommended practices. Though, all the independent variables contributed significantly in explaining the variation of the dependent variable, the independent variables like achievement motivation, innovativeness and FFS training received allowed significant relationship with the extent of adoption.

**LITERATURE CITED**

**Ahire L M, Sandhya Shenoy and Venugopal Reddy Ch 2007.** A study on adoption level of grower of Krishna district of Andhra Pradesh. Journal of Research ANGRAU 35 (1) : 73-76.

**Hemanth Kumar B 2002.** A Study on attitude, knowledge and adoption of recommended practices by oriental tobacco farmers in Chittoor District of Andhra Pradesh. M.Sc (Ag) Thesis, Acharya N G Ranga Agricultural University, Hyderabad.

**Madhavalatha S and Rama Chandra Reddy D 2004.** Study on Knowledge of integrated pest management practices in cotton by Farmers Training Centre trained farmers in Kurnool district of Andhra Pradesh. The Andhra Agricultural Journal 5(3 & 4): 469-472.

**Natarajan N 2004.** Impact of farmers field school on rice in Pondicherry region of union territory of Pondicherry. M.Sc (Ag) Thesis Submitted to Acharya N G Ranga Agricultural University, Hyderabad.

**Patel M M, Amit Chatterge and Mohamood Khan 2003.** Adoption of wheat production technology. Indian Journal of Extension Education XXXIX (1&2): 58-62.

**Rath N C, Lipidas, Mishra S K and Lenka S 2007.** Adoption of upland rice technologies and its correlates. Oryza 44(4): 347-350.

**Ravichandra Prasad C 2002.** A study on the impact of on farm extension demonstrations (OFED's) in rice in Nellore district of Andhra Pradesh. M.Sc (Ag) Thesis, Acharya N G Ranga Agricultural University, Hyderabad.

**Rogers E M 1983.** Diffusion of Innovations. The Free Press of Glencos, New York. PP: 169-175.

**Shiva Kumar U 1997.** Farmers Field School a medium to transmit know-how and do-how among rice farmers-An analysis. M.Sc(Ag)Thesis, Tamilnadu Agricultural University, Coimbatore, Tamilnadu.

**Sreedevi R 1992.** An evaluate study of farm women training conducted by Krishi Vigyan Kendra in Ranga Reddy District of Andhra Pradesh. M.Sc (Ag) Thesis. Andhra Pradesh Agricultural University, Hyderabad.

**Veerendranath G 2000.** A critical study on flow, utilization and source credibility of agricultural information among rainfed castor growing farmers of Nalgonda district of Andhra Pradesh. Ph.D. Thesis, Acharya N G Ranga Agricultural University, Hyderabad.

**Yamini Varma C K and Rajendran P 2007.** Farmers Field School- A successful approach for IPM training. Agricultural Extension Review (1-6): 5-7.