

RESEARCH ARTICLE :

Knowledge and adoption of SRI method paddy growers

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SUMMARY : The present study was undertaken in Dharwad and Kalaghatgi talukas of Dharwad district of Karnataka state having large area under cultivation of paddy, from selected talukas the list of villages was prepared and five villages from each taluka were selected on the basis of highest area under paddy crop. From selected villages, the list of farmers was prepared village wise and 15 farmers from each villages were selected by random sampling technique. Total 150 respondents were selected for the study. The data were collected by personal interview. Based on the finding of the study majority of the respondents were having medium level of knowledge, followed by high level and low level of knowledge. While in case of adoption, that majority of the respondents had medium level of adoption, followed by high and low level of adoption. Among various personal, socio-economic profile characteristics of the respondents, education, land holding, area under SRI method, family income, social participation, mass participation, had highly significant relationship with at 5 per cent level of adoption whereas experience in SRI method, innovative proneness, risk orientation, extension contact, participation in training, cosmopolitanness, farmers field school, had highly and positively significant relationship with at 1 per cent level of adoption whereas only age had non-significant relationship with the knowledge and adoption of SRI method paddy growers.

KEY WORDS :

Knowledge, Adoption, SRI method paddy

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BACKGROUND AND OBJECTIVES

Rice is life for millions of people in the world where more than 90 per cent of rice is grown and consumed. In India, rice is grown in about 44 million hectares (Mha) with a production of 90 million tons (Mt) annually. Annual rice production needs to be enhanced from the present 90 Mt to about 100 Mt by the end of eleventh plan period to meet the growing demand due to rapidly increasing population. This increase in production has to

come despite the declining resources like land and water, which is a daunting task. Karnataka is one of the major rice growing states in India. It was grown in an area of (1.39 million ha) with an annual production of (4.04 million tonnes) in 2011-12.

System of rice intensification (SRI) is popular system of production of rice. SRI method involves the application of certain management practices, which together provide better growing conditions for rice plants, particularly in the root zone, than those

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for plants grown under traditional practices. This system seems to be promising to overcome the shortage of water in irrigated rice. SRI methodology involves a set of practices for nursery, plant, soil, water and nutrient management. The convergence of changes in the way that plants, soil and water are best managed and expected production is known as the system of rice intensification. This technology tries to change traditional practices especially with respect to water management that existed for thousands of years. Studying the profile of farmers' already practicing SRI method of paddy cultivation would certainly help to develop suitable extension strategies to reach the slow adopters thus reducing the time gap and increasing the adoption rate. The study thus aimed to document the profile characteristics of SRI paddy growers in Karnataka state.

Objectives :

- To ascertain the knowledge of the respondents regarding SRI method paddy cultivation by respondents
- To determine the extent of adoption of recommended SRI method paddy cultivation by respondents
- To find out the relationship between personal, socio-economic, characteristics of the respondents with their extent of adoption of recommended SRI method paddy cultivation by respondents.

RESOURCES AND METHODS

The present study was conducted in Dharwad district of Karnataka. The Research design adopted for the study was ex-post-facto-research design. Data collection was done through personal interview method with the help of interview schedule. Correlation between independent variables and knowledge of SRI method paddy growers, and information source utilization on paddy cultivation by the respondents were studied. 15 SRI method paddy crop growers from each village were randomly selected to constitute the total sample size of 150. The data were analyzed by using appropriate statistical tools. The statistical tools such as mean, standard deviation, frequency and percentage were employed wherever found appropriate and data collected were analyzed to draw valid inferences.

OBSERVATIONS AND ANALYSIS

It is evident from the data in Table 1 that a maximum

of 41.33 per cent of the respondents had medium level of knowledge, whereas minimum of 30.67 and the least of 28.00 per cent of respondents had high and low knowledge level, respectively.

Table 1 : Distributions of the respondents according to their level of knowledge

Category	Frequency	Percentage
Low (Mean - 0.425*SD)	42	28.00
Medium (Mean \pm 0.425*SD)	62	41.33
High (Mean + 0.425*SD)	46	30.67
Mean = 19.42; SD = 1.90		

The profile analysis of respondents revealed that, majority of them were middle aged grouped. With respect to education, farmers studied upto primary school. It is a fact that, as the age and education level increases, the level of knowledge also increases in addition the standard of living will also be better. Major proportion of the respondents were having marginal land holding. In the study area fifty per cent of the respondents were practicing SRI method cultivation of paddy in an area of upto 0.5 acre. This might be due to the fact that the farmers have cultivated paddy crop under SRI method as trial and hence, only a small portion of land was committed to this intervention. Hence, the results showed that, majority of the paddy farmers had medium knowledge about recommended cultivation practices of SRI method. The above findings are in confirmation of the results of the studies conducted by the Khule *et al.* (2008); Mahatab Ali (2010); Gungadi (2011) and Venkataswar Rao *et al.* (2012).

Table 2 revealed that a maximum of 36.00 per cent of respondents belonged to medium adoption category, followed by 32.67 per cent and 31.33 per cent of the respondents belonged to high and low adoption categories, respectively. The reason might be that, SRI method paddy crop require greater knowledge for cultivating and adopting SRI method to acquire more extent of adoption for SRI method. It was observed that most of the farmers belonged to middle age group, having primary school level

Table 2 : Distributions of the respondents according to their level of adoption

Category	Frequency	Percentage
Low (Mean - 0.425*SD)	47	31.33
Medium (Mean \pm 0.425*SD)	54	36.00
High (Mean + 0.425*SD)	49	32.67
Mean = 32.03; SD = 3.52		

of education, had marginal land holding, with medium income level, larger of the farmers were practicing SRI method cultivation of paddy in an area of upto 0.5 acre, as well as had medium level of SRI cultivation experience, medium level of innovative proneness, more exposure to mass media, high extension contact, majority of the farmers undergone trainings, most of the farmers attend in “farmers field school”, respectively.

This finding is in conformity with the findings of Keerthy Kumar (1992); Rao and Rao (1996); Gupta *et al.* (2001) and Venkataswar Rao *et al.* (2012), they found that more number of farmers belonged to medium adoption category with regard to extent of adoption of SRI method paddy cultivation.

The data presented in Table 3 indicate that, among various personal, socio-economic characteristics of the respondents, experience in SRI method (0.300), innovative proneness (0.238), risk orientation (0.265), extension contact (0.334), participation in training (0.325), cosmopolitaness (0.268), farmers field school (0.252), had highly positively significant relationship with extent of adoption, whereas education (0.178), land holding (0.183), area under SRI method (0.190), social participation (0.201), mass media participation (0.166), were significant with their extent of adoption. While only age (0.078) was negatively significant with their extent of adoption of SRI method paddy growers.

Table 3 : Relationships between selected characteristics of respondents with their extent of adoption of SRI method paddy growers (n=150)

Sr. No.	Independent variables	Correlation co-efficient ('r')
1.	Age	0.078NS
2.	Education	0.178*
3.	Land holding	0.183*
4.	Area under SRI method	0.190*
5.	Family income	0.210*
6.	Experience in SRI method	0.300**
7.	Innovative prones	0.238**
8.	Risk orientation	0.265**
9.	Social participation	0.201*
10.	Mass media participation	0.166*
11.	Extension contact	0.334**
12.	Participation in training	0.325**
13.	Cosmopolitaness	0.268**
14.	Farmers field school	0.252**

* and ** indicate significance of values at P=0.05 and 0.01, respectively

Conclusion :

Majority of the respondents were having medium level of knowledge, followed by high and low level of knowledge. In case of adoption, majority of the respondents had medium level of adoption, followed by high level and low level of adoption. Among various personal, socio-economic profile characteristics of the respondents, education, land holding, area under SRI method, family income, social participation, mass participation, had highly significant relationship with at 5 per cent level of adoption whereas experience in SRI method, innovative proneness, risk orientation, extension contact, participation in training, cosmopolitaness, farmers field school, had highly and positively significant relationship with at 1 per cent level of adoption whereas only age was non-significant relationship with the knowledge and adoption of SRI method paddy growers.

Hence, all these factors might have influenced them to adopt correct recommended SRI method of paddy cultivation practices. Further, the land holding and income increases, naturally farmer will be having more risk bearing capacity and more orientation towards economical returns also because of free advisory from NGO,s higher exposure to mass media, large number of farmers participated farmers field school, have increased knowledge level and hence majority of them coming under medium adoption category.

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