Available online at http://www.journalcra.com

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

International Journal of Current Research
Vol.9, pp.065-068, October, 2010

ISSN: 0975-833X

RESEARCH ARTICLE

KNOWLEDGE LEVEL OF SYSTEM OF RICE INTENSIFICATION (SRI) TECHNOLOGY AMONG FARMERS IN CUDDALORE DISTRICT OF TAMIL NADU

Balakrishnan, T* and Vasanthakumar, J**

* Department of Agricultural Extension, Faculty of Agriculture, Annamalai University, Annamalainagar – 608 001

** Faculty of Agriculture, Annamalai University, Annamalainagar – 608 001.

ARTICLE INFO

Article History:
Received 13th July, 2010
Received in revised form
17th August, 2010
Accepted 23rd September, 2010
Published online 15th October, 2010

Key words:
SRI technology,
Knowledge,
Paddy crop nutrients

ABSTRACT

Efficient transfer of innovations and their practical application to field situations is the key to economic development of India. Still there exists a wide gap between the technology available at the research level and its knowledge at farmer's level. Keeping this in view, an attempt has been made to know the knowledge level of SRI technology. The study was conducted in Cuddalore District of Tamil Nadu. The study revealed that more than half the proportion (54.00 per cent) of respondents had medium level of knowledge followed by 31.00 per cent of the respondents who had high level of knowledge. Only 15.00 per cent of the respondents had low knowledge level. Out of eleven major recommended nursery practices of SRI technology, maximum knowledge level was found towards seed rate per acre and minimum knowledge was observed towards quantity of fungicide. The study revealed that out of twelve major recommended main field practices of SRI technology, maximum knowledge level was found towards seeding per hill and minimum knowledge level was observed towards size of drainage channel.

INTRODUCTION

System of Rice Intensification (SRI) was originally developed in Madagascar in the 1980s. It comprises a set of individual rice management practices that can help small farmers to increase their rice yields significantly without depending on hybrid seeds, mineral fertilizers and pesticides.

***Corresponding author:** bhuvana_sankar@ymail.com

The SRI began promoting throughout Asia in 1997 by Norman Uphoff, a political scientist and director of the International Institute for Food, Agriculture and Development at Cornell University in Ithaca, New York, and then its ideas were introduced into Cambodia in 1999 by the director of CEDAC (Centre dûEtude et de Développement Agricole Cambodgien), a local NGO, with the first farmer-based field experimentation starting in 2000 in Kandal Province. In that year, only 28 farmers were willing to participate in the evaluation of SRI. By 2006, nearly 60,000 farmers were using SRI,

and it was expected that this number would increase to be more than 80,000 farmers in 2007 (there are about 1.8 million rice farming households in Cambodia) (Koma, 2007). Due to the significant contribution of SRI to improve the livelihoods of rice farmers and the environment of the country, the Cambodian Government had officially endorsed SRI in 2005. Moreover, in 2006 the Royal Government of Cambodia has integrated SRI promotion into its National Development Plan (2006-2010).

The System of Rice Intensification (SRI), developed by Fr. Henri de laulanie during eighties in Madagascar, offers opportunities for improving rice production in a variety of situations around the world (Uphoff *et al*., 2002), SRI was promoted under the "Integrated Cereal Development Programme-Rice". Efficient transfer of innovations and their practical application to field situation is the key to economic development of India. Extension services in India today have large number of professional extension workers at national, state, district, block and village level. Several programmes to help farmers to know about the new technologies are in operation throughout the country. Still there exist a wide gap between the technology available at the research level and its knowledge at farmers level, particularly in SRI practices. Keeping this in view, an attempt has been made to know the knowledge level of SRI practices.

METERIALS AND METHOD

The present study was conducted in Cuddalore district of Tamil Nadu. The respondents were selected from all the thirteen blocks by proportionate random sampling procedure. Thus a total of 300 respondents were selected as a sample for the study. *Ex post-facto design* was followed in this study. The data were collected with the help of well structured and pre – tested interview schedule. The findings are presented here under:

RESULTS AND DISCUSSION

The results of the investigation are being presented in subsequent Tables. The distribution of respondents according to the knowledge level of respondents on recommended practices of SRI technology is presented in Table 1.

Table 1. Distribution of respondents according to level of knowledge about SRI technology

(N=300)

S. No	Category	Frequency	Percent
1	Low	45	15.00
2	Medium	162	54.00
3	High	93	31.00
	Total	300	100.00

The results in the Table 1 indicate that majority of the respondents (54.00 per cent) had medium level of knowledge about SRI technology followed by 31.00 per cent and 15.00 per cent of the respondents with high and low levels of knowledge, respectively. As majority of the respondents possessed medium level of innovativeness, mass media exposure and information source utilisation, they would have gained only medium level of knowledge on SRI cultivation. This is in agreement with the findings pertaining to the knowledge level of farmers in general as reported by Santhi (2006).

Item-wise knowledge of respondents on recommended nursery practices of SRI technology

The results on the knowledge level of respondents on the selected items relating to nursery practices in SRI technology are furnished in Table 2.

Table 2. Item-wise knowledge of respondents on recommended nursery practices of SRI technology

(n =300)

S. No	Item	Number of respondents	Percentage of respondents
1	Size of the nursery area	275	91.67
2	Height of the nursery bed	256	85.33
3	Quantity of DAP per bed	236	78.67
4	Application of DAP	272	90.66
5	Seed rate per acre	288	96.00
6	Recommended fungicide for seed treatment	245	81.67
7	Quantity of fungicide	210	70.00
8	Duration for soaking seeds in fungicide solution	241	80.33
9	Recommended bio-fertilizer	282	94.00
10	Quantity of bio-fertilizer	264	88.00
11	Application of 0.5% urea to enhance seedling growth	226	75.33

It is evident from the Table 2 that among the eleven selected nursery practices of SRI technology in rice cultivation, a vast majority (96.00 per cent) of the respondents had knowledge on seed rate per acre. As the recommendation of seed rate (3 Kg) is easy to remember, most of the respondents had acquired right knowledge score. Ninety-four per cent of the respondents had knowledge about the recommended bio-fertilizer. This may be due to the appreciable efforts taken by extension agencies through mass media and by their personal acquaintance. More than ninety per cent of the respondents (91.67 per cent) had knowledge about size of the nursery area. The simple nature of the technology and the rich experience of respondents in farming could be the reasons for higher knowledge level. Around ninety per cent (90.66 per cent) of the respondents had knowledge about application of DAP. This may be due to the long years of experience with the same crop and associated technologies. Eighty-eight per cent of the respondents had knowledge about quantity of bio-fertilizer. The knowledge about the quantity of bio-fertilizer might have been gained through the exposure of respondents towards mass media. The finding is in line with the findings of Raman (2007). More than eight-five per cent (85.33 per cent) of the respondents had knowledge about height of the nursery bed. This might be due to the extension efforts taken by the State Department Officials in highlighting the importance of the practice.

More than eighty per cent (81.67 per cent) of the respondents had knowledge about recommended fungicide for seed treatment. This may be due to the regular contact of the respondents with extension agency. More than eighty per cent (80.33 per cent) of the respondents had knowledge about duration of soaking seeds in fungicide solution. This also might be due to their mass media exposure and extension agency contact. Quantity of DAP per bed was known to 78.67 per cent of the respondents. The respondents would have gained the knowledge from extension workers and mass media. Three-fourths (75.33 per cent) of the respondents had knowledge about recommended technology application of (0.5 % urea) for proper seedling growth. This may be due to their experience in rice cultivation. This finding is in line with the findings of Raman (2007). Seventy per cent of the respondents had knowledge about the quantity of fungicide. The respondents might have known the importance of fungicide treatment through extension officials.

Practice-wise knowledge level of respondents on main field practices of SRI technology

The results on the knowledge level of respondents on the selected items related to main field practices of SRI technology are furnished in Table 3.

Table 3. Item-wise knowledge of respondents on recommended main field practices in SRI technology

(n = 300)

S. No	Items	Number of respondents	Percentage of respondents
1	Recommended quantity of FYM / acre	240	80.00
2	Size of drainage channel	229	76.33
3	Spacing	290	96.67
4	Seedling age	270	90.00
5	Seedling per hill	300	100.00
6	Time of irrigation	271	90.33
7	Maintenance of recommended height of water level	268	89.33
8	Time of first weeding	295	98.33
9	Name of the mechanical weeder	280	93.33
10	Recommended inorganic fertilizer	264	88.00
11	Recommended bio-fertilizer	284	94.67
12	Quantity of bio-fertilizer	260	86.67

It may be observed from the Table 3 that among the twelve selected items relating to recommended main field practices of SRI technology, cent per cent of the respondents obtained knowledge score for the 'seedling per hill'. This may be due to its local name *viz.*, "Single Seedling" so that it was easily understood and remembered by the respondents. Majority of the respondents (98.33 per cent) had correct knowledge on time of first weeding. This might be due to the fact that farmers used to face many problems like low yield due to weed infestation, high labour cost and non-availability of labour for weed management. This would have prompted the respondents to acquire knowledge on weeding operations. More than ninety-five per cent (96.67 per cent) of the respondents had knowledge on recommended spacing. This may be due to the efforts of the extension officials who would have given more

information regarding the advantages of the spacing.

Majority of the respondents (94.67 per cent) had knowledge about recommended bio-fertilizer. The officials of State Department of Agriculture used to frequently visit the farmers' field and explain the importance of application of bio-fertilizer in increasing the yield. This may be the probable reason for the knowledge about recommended bio-fertilizer. More than ninety-three per cent (93.33 per cent) of the respondents who had correct knowledge about the name of the mechanical weeder. This may be due to extension efforts coupled with supply of Cono-weeder by State Department of Agriculture to the individual respondents. Majority of the respondents (90.33 per cent) was found to have knowledge on time of irrigation. SRI gives special emphasis on water management for the crop. The farmers would have got better exposure to information about the practice through extension efforts and direct monitoring by extension personnel. The age of seedling was known to majority of the respondents (90.00 per cent). The knowledge on age of seedling might be due to the fact that this practice is important for profused tillering and for getting high yield. This would have urged the respondents to seek information, which in turn would have enabled them to acquire knowledge. Around ninety per cent (89.33 per cent) of the respondents were found to have knowledge on height of water level to be maintained in the main field. Majority of the respondents were knowledgeable about this practice probably due to their exposure. This finding is in line with the findings of Renjini (2000).

Majority of the respondents (88.00 per cent) had knowledge on recommended inorganic fertilizers. This might be due to the possession of more years of experience in rice cultivation. More than eighty per cent (86.67 per cent) of the respondents had knowledge on quantity of bio-fertilizers. This may be due to the extension efforts coupled with the supply of bio-fertilizers by State Department of Agriculture to individual respondents.

Over three-fourths of the respondents (76.33 per cent) had correct knowledge on size of drainage channel. Majority of the respondents were knowledgeable about this practice probably due to their experience in rice farming.

Conclusion

It can be concluded that majority of the respondents belonged to medium level of knowledge on SRI technology followed by high and low level of knowledge. As SRI has been introduced recently to enhance yield levels in paddy crop, the extension officials have been taking intensive efforts to popularise the technology. The knowledge was imparted by training programmes, field demonstrations, study tours, personal visits and by publicity through mass media.

REFERENCES

Raman, E. 2007. A Study on Occupational Skills and Knowledge of Agricultural Labourers in Thiruvannamalai District. Unpublished M.Sc. (Ag.) Thesis, Annamalai University, Annamalai Nagar.

Renjini, A.R. 2000. "Adoption of Weed Management Practices in Alappuzha District of Kerala", Unpublished M.Sc. (Ag.) Thesis, Annamalai University, Annamalainagar.

Santhi, S. 2006. "A study of system of rice intensification (SRI) among rice farmers of Tirunelveli district", Unpublished M.Sc. (Ag.) Thesis, Annamalai University, Annamalainagar.

Uphoff, N., Fernandes, E.C.F., Yuan, L.P., Peng J., Rafarlphy, S. and J.Rabenandrasena, (Eds.) 2002. Assessment of the System of Rice Intensification: Proceedings of an International Conference, Sanya, China, April 1-4, 2002. Ithaca, Ny: Cornell International Institute for Food, Agriculture and Development.

Koma Saing, Y. 2007. Experiences with System of Rice Intensification (SRI) in Cambodia from 2000-2007. CEDAC, Phnom Penh, Cambodia.

****