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A STUDY ON CONSTRAINTS EXPERIENCED BY THE FARMERS IN ADOPTION OF SYSTEM OF RICE INTENSIFICATION (SRI) TECHNOLOGIES

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Abstract

System of Rice Intensification is a whole package of agronomic approaches which explain the genetic potential of rice plants to create better growing environment (both above and below ground) to enhance soil health and reduce inputs (seed, water, labor etc.,). In India, more than one million farmers are practicing SRI across almost all the rice cultivating district. System of rice intensification (SRI) is a new approach, now gaining popularity as it is found to increase the productivity and to reduce the cost of cultivation besides saving water use. The specific objectives of the study are to access the information and skill needs of the respondents on SRI technologies. A total number of 120 respondents were selected from ten villages in Krishnagiri District of Tamil Nadu by using proportionate random sampling method. The main objective of the study was to analyse the constraint experienced by the paddy farmers in adoption of SRI technologies. The results revealed that majority of the constraints experienced in adoption of SRI technologies were lack of communication and insufficient training programme by the respondent. A systematic strategy for providing effective training programme for large scale capacity building should be evolved in close collaboration among the State Agricultural Department, Agricultural University and Non-Government Organization.

Key words : Adoption, agronomic approaches, SRI technologies.

Introduction

Rice is one of the most important cereal crop that hold the key towards food for more than 50 per cent of the people living in Asia, where 90 per cent of the worlds rice is grown and consumed. Asia's food security depends largely on the irrigated rice fields, which account for more than 75 per cent of the total rice production (Virk *et al*., 2004). The increasing water scarcity labour and increasing environment concerns. The prevailing precious situation has given us a wakeup call to develop and popularize innovative water saving technologies to produce more rice crop from every drop of water. There are few options such as zero tillage, direct seedling, aerobic rice and the System of Rice Intensification (SRI), which can help to save water and enhance yield and economies the water use.

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Materials and Methods

The study was conducted in Krishnagiri district of Tamil Nadu. The Krishnagiri district has 10 blocks *viz*., Bargur, Mallur, Krishnagiri, Kaveripattinam, Uthangarai, Veppanpatti, Hosur, Shoolagiri and Kelamangalam. Totally of which Kaveripattinam block was selected as it has the maximum area under SRI cultivation technologies. There are fifteen revenue villages under SRI cultivation in Kaveripattinam block. These revenue village were arranged in descending order based on maximum under of paddy farmers under SRI cultivation. a sample size of 120 respondents were fixed for the study considering the limitation of time and other resources. A total number of 120 respondents were identified from the selected 10 villages by using proportionate random sampling method. The data collected from the respondents through interview schedule were coded, tabulated, analyzed and presented

Table 1 : Constraints faced by the respondents in the adoption of SRI technologies.

S. no.	Constraints	Number	Per cent	Rank
I.	**Bio-physical constraints**			
1.	Inundation due to monson an floods	106	88.33	I
2.	Improper maintenance of channels	86	71.66	III
3.	Soil condition is not suitable	67	55.83	V
4.	Difficult in draining the water during rainy seasons	87	72.50	II
5.	Using cono weeder is ineffective	74	61.66	IV
II.	**Socio-economic and psychological constraints**			
1.	Lack of reasonable support price	66	55.00	IX
2.	Non-availability of credit	45	38.33	III
3.	High cost of labour	96	80.00	I
4.	Non-availability of skilled labour	89	74.16	VI
5.	Difficulty on preparation of nursery beds	94	78.33	III
6.	Lack of skilled labour in transplanting	94	78.33	III
7.	Problem in transplanting the young seedlings	90	75.00	V
8.	Difficulty in adoption of square method of planting	74	61.67	VIII
9.	Lack of subsidy for inputs	45	37.50	X
10.	Lack of confidence in the new technology	95	79.16	II
11.	Lack of knowledge on application of pesticide based on ETL	77	64.16	VII
III.	**Technological constraints**			
1.	Complicated practices	83	69.16	II
2.	Lack of knowledge on the use of marker	56	46.66	V
3.	Non-availability of marker	71	59.16	III
4.	Lack of knowledge on the use of leaf colour chart	88	73.33	I
5.	Non-availability of cono weeder	47	39.16	VI
6.	Lack of knowledge on the use of light traps	70	85.33	IV
IV.	**Extension constraints**			
1.	Insufficient raining programmes	41	34.16	II
2.	Lack of communication	54	45.00	I

in the form of tables in order to make the findings meaningful and easily understandable.

Results and Discussion

Constraints faced by the respondents in the adoption of SRI technologies

The constraints experience by the respondents in the adoption of SRI technologies are presented in table 1.

It could be observed from table 1 that among the bio-physical constraints, the foremost major bio-physical constraint expressed by vast majority of the respondents was inundation due to monsoon and floods' (88.33 per cent). Difficulty in draining the water during rainy season was the next constraint expressed by 72.50 per cent of the respondents. The third important constraint faced was improper maintenance of channels (71.66 per cent). The other bio-physical constraints encountered by SRI respondents were that use of cono weeded was ineffective and the soil condition was not suitable. This finding is in line with the findings of Punitha (2005).

Among the socio-economic and psychological constraints, the foremost major socio-economic and psychological constraint expressed by most of the respondents were lack of confidence in the new technology' 80.00 per cent. Non-availability of skilled labour was the next constraint expressed by 82.50 per cent of the respondents. The third important constraint faced by more than two-third of the respondents (79.16 per cent) was 'high cost of labour'. The other socio-economic and psychological constraints faced by SIR respondents were 'lack of skilled labour in transplanting' (78.33 per cent), 'problem in transplanting the young seedlings' (75.00 per cent), lack of knowledge on application of pesticides based on ETL' (64.16 per cent), 'difficulty in the adoption of square method of planting' (61.67 per cent), 'lack of reasonable support price' (55.00

per cent), 'non-availability of credit' (38.33 per cent) and 'lack of subsidy for inputs' (37.50 per cent). This fining is in line with findings of Mukesh (2007).

Among the technological constraints, the foremost major technological constraint expressed by majority of the respondents was lack of knowledge on the use of leaf colour chart (73.33 per cent). Complicated practices under SRI method of cultivation as a constraint was expressed by 69.16 per cent of the respondents. The third importance constraint faced by more than half of the respondents (59.16 per cent) was non-availability of marker. The other technological constraints expressed by SRI respondents were lack of knowledge on the use of marker (46.66 per cent) and non-availability of cono weeder (39.16 per cent). This finding is in line with the findings of Pandy *et al*. (2004).

Among the extension constraints, the foremost major extension constraint expressed by majority of the respondents was 'lack of communication' (45.00 per cent). Around one-third (34.16 per cent) of the respondents expressed insufficient training programmes on SRI method of cultivation as the constraint faced in the adoption of SRI technologies. This finding is in line with the findings of Abiramasundari (2002).

Conclusion

It concluded that the lack of communication and in sufficient training programme were the extension constraints experienced by the respondents in the adoption of SRI technology. A systematic strategy for providing effective training programme for large scale capacity building should be evolved in close collaboration among the state Agricultural Department, Agricultural University and non Government organization.

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