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Extent of Adoption of SRI cultivation practices among rice growers in Maihar District of MP, India

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Abstract

The present study was conducted to investigate the SES profile of SRI Farmers District Maihar (M.P.). One hundred twenty beneficiaries from Maihar block were selected. Out of a total of 24 farmers were purposively selected as respondents in the study. Result found that the highest percent of no adoption in Disease control and medium adoption of SRI technology.

Keywords: SRI, correlation, adoption and farmers

Introduction

In India, agriculture occupies a most vital place in the economy of the nation and indeedly important and responsible for the development of the rural people. It provides livelihood to about 75% of the population and contributes nearly 50% to the national income. For the agricultural and rural development progress of various programmes implemented since independence to improve the socio-economic conditions through agricultural production and to improve the quality of life of rural communities. Our attempts and approaches concerning agricultural development are tremendous. Agricultural technology development is of a high order.

Rice (*Oryza sativa* L.) is a plant belonging to the family of grasses, Gramineae. There are three major food crops (wheat, rice, maize) of the world and rice is one of the foremost cereal crops feeding over more than half of the world's population. It is grown in more than a hundred countries, with a total cultivated area of about 156 m ha, producing more than 680 mt grains annually. About 90 per cent of the rice in the world is grown in Asia. Rice provides 27 per cent of dietary energy supply and 20 per cent of dietary protein intake in the developing world. The global production of rice has been estimated to be at the level of 680 mt and the area under rice cultivation is estimated at 156 m ha in 2009. This has been successfully demonstrated in the People's Republic of China, where hybrid rice technology appears to be a feasible and readily available option for raising the yield potential. The average yield of hybrid rice is at least 20 per cent more than that of inbred rice and it has been anticipated that hybrid rice technology will play a key role in ensuring food security worldwide in the new century.

Rice is the staple food crop for more than 65 per cent of the Indian population. India has the largest acreage of rice in the world having an area of over 43.18 m ha India is second largest producer (90 mt) after China. The productivity of rice is only 1337 kg/ha in India. Chhattisgarh is popularly known as "rice bowl" of India and occupies an area of around 3.61 m ha with the production of 5.4 mt and productivity of 1517 kg/ha. Chhattisgarh is now known as one of the most potential areas for hybrid rice in India.

In Madhya Pradesh State, rice is the staple food and it is grown in an area of 43.77 million hectares with a production of 96.43 million tonnes and productivity of 2203 kg per hectare during 2007-08 and area production and productivity reduced in the subsequent year. Therefore, a more efficient and fundamental approach is needed for reducing water requirements of rice for economic rice production. In recent years, several strategies *viz* direct sowing of rice, alternate wetting and drying etc have been tried (Tabbal *et al.*, 2002). However, the yield potential could not be matched with the irrigated lowland rice. Also, the main threats to the future food-security are shrinking land, depleting water resources, declining trends in soil fertility and productivity, and depletion of ground water table.

Methodology

The study was conducted in Maihar district of M.P. Maihar block were purposively selected for the study. Five villages were selected from maihar block. Total 120 respondents were selected randomly as respondents. The data collection was done by the use of interview schedule through personal interview. Data were analyzed with help of suitable statistical tools *viz*: Percentage, Rank and Mean Score.

Results

Table 1: Adoption level of rice growers about SRI.

S. No.	Practices	Extent of Adoption			Mean score	Rank
		complete	Partial	No		
1	Field preparation	25	63	32	2.058	VIII
2	Deep summer ploughing	16	65	39	2.191	VI
3	Use of genetically pure and viable seed	13	54	53	2.333	IV
4	Improved variety	17	48	55	2.316	V
5	Technique used as per ploughing of SRI	12	48	60	2.401	II
6	Nursery preparation through SRI technique	45	48	27	1.850	XIII
7	Optimum seed rate	41	54	25	1.866	XII
8	Seed treatment	38	52	30	1.933	XI
9	Time of transplanting	45	54	21	1.801	XV
10	Depth and spacing	38	45	37	1.991	IX
11	Use of organic manure and bio fertilizer	28	22	70	2.350	III
12	Balance dose of chemical Fertilizer	35	55	30	1.958	X
13	Irrigation management	68	33	19	1.591	XVI
14	Weed control	43	59	18	1.791	XIV
15	Insect control	25	58	37	2.101	VII
16	Disease control	24	18	78	2.45	I
17	Harvesting Method	70	44	6	1.466	XVII

Table 1 it was observed that the mean adoption score was highest in Disease control (2.45) Rank I. followed by Technique used as per ploughing of SRI (2.401) Rank II, Use of organic manure and bio fertilizer (2.350) Rank III, Use of genetically pure and viable seed (2.333) Rank IV, Improved variety (2.316) Rank V, deep summer ploughing (2.191) Rank VI, Insect control (2.101) Rank VII, Field preparation (2.058) Rank VIII, Depth and spacing (1.991) Rank IX, Balance dose of chemical fertilizer (1.958) Rank X, Seed treatment (1.933) Rank XI, Optimum seed rate (1.866) Rank XII, Nursery preparation through SRI technique (1.850) Rank XIII, Weed control (1.791) Rank XIV, Time of transplanting (1.801) Rank XV, Irrigation management (1.591) Rank XVI, Harvesting Method (1.466) Rank XVII.

Table 2: Over all farmers adoption of SRI technology

S. No.	Adoption of the farmers	No. of respondents	Per centage
1.	Low	36	30.00
2.	Medium	53	44.17
3.	High	31	25.83
	Total	120	100.00

Table 2. reveals that out of 120 respondents 44.17 percent showed medium adoption, 30.00 per cent of respondents indicated low adoption whereas only 25.83 percent depicted high adoption of SRI technology.

Conclusion

It can be concluded that the highest percent of no adoption in Disease control with mean score (2.45) and Rank I and out of 120 respondents 44.17 percent showed medium adoption, 30.00 per cent of respondents indicated low adoption whereas only 25.83 percent depicted high adoption of SRI technology.

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