



Knowledge and Adoption of Recommended Rice Cultivation Practices Among The Rice Growers in Kabini Command Area of Karnataka

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ABSTRACT

The study was conducted in 4 taluks of Kabini Command area of Karnataka in 2016 to assess the knowledge and adoption level of recommended rice cultivation practices among the rice growers. A total of 120 respondents were interviewed using a pre-tested interviewed schedule. The findings revealed that the majority of rice growers had medium (60 %) knowledge level with respect to recommended cultivation practices of rice, followed by high (20.86 %) and low (19.67 %) knowledge level. 63.33 per cent of the rice growers comes under medium adoption level category, followed by high (19.17 %) and low (17.5 %) adoption level category. In respect of individual recommended practices cent per cent of the rice growers had correct knowledge and adoption on recommended rice varieties, time of sowing, age of seedlings used in transplantation and recommended rice varieties, number of seedlings per hill used in transplantation, time of fertilizers application respectively.

Keywords: Rice Growers, Extent of Adoption, Respondents, Potential Yield, Level of Knowledge.

INTRODUCTION

Rice (*Oryza sativa L.*) is the most widely grown crop in India. It is the most important staple food crop of the country providing food for more than 70 per cent population. For more than half of the humanity "rice is life". Considering its importance, the United Nation designated year 2004 as the "International Year of rice". It is grown in an area of 44.0 million ha with the production of 106.0 million tones and the productivity of 2455 kg/ha. It is projected that India needs to produce 115 million tonnes of rice by the year 2020 to maintain the present level of food self-sufficiency. To maintain national food security there is a need to increase rice production to sustain self-sufficiency [1-3]. Knowledge and adoption of new technologies and bridging the yield gap could improve not only the production but also the efficiency of rice productivity. Therefore this study was undertaken to assess these aspects in detail with the following objectives.

1. To assess the extent of knowledge of recommended rice cultivation practices among the rice growers in Kabini Command area.
2. To assess the extent of adoption of recommended rice cultivation practices among the rice growers in Kabini Command area.

MATERIAL AND METHODS

The study was conducted during 2016-17 in 4 taluks of Kabini Command Area of Karnataka (viz., Nanjangud and T. Narsipura of Mysore district, Kollegala and Yelandur of Chamarajanagara district). Considering the highest number of rice growing farmers 12 villages were selected from all the 4 taluks and 10 rice growing respondents were selected from each village by applying simple random sampling technique, thus 120 rice growers were selected as respondents for the study. The data collection was done by personal interview method with the help of the well- structured internal schedule. The statistical tools such as frequency percentage and mean were used to analyse the data.

In the present study, the knowledge was operationalized as the body of information understood and retained by the rice growers about the rice cultivation as recommended in package of practices. It was measured using the scale developed by Anatasi [4] with slight modification.

Adoption refers to the actual use of all the recommended cultivation practices in rice production by the farmers in package of practices. Adoption level was measured using the scale developed by Sengupta [5] with slight modification.

A total of 20 recommended rice cultivation practices were selected based on judgment of specialists to know the knowledge and adoption level of rice growers. While analyzing the knowledge level, the respondents were given a score of 1 and 0 for correct and wrong answers respectively. Based on total score obtained for the 20 recommended practices, the respondents were grouped into high, medium and low categories by taking the mean and standard deviation as a measure of check. With regards to analyzing the adoption level, the respondents were given a source of 2, 1 and 0 for full adoption, partial adoption and no adoption respectively. Based on the total score obtained for the 20 recommended practices, the respondents were grouped into high, medium and low categories with mean and standard deviation as a measure of check.

RESULTS AND DISCUSSION

Knowledge level of recommended rice cultivation practices among the rice growers in Kabini Command area:

The recommended practices used to measure the knowledge level among the rice growers is presented in Table 1. Cent per cent of the respondents were known about the recommended rice varieties, time of sowing and rate of seedlings used in transplantation. Majority of them were known about recommended seed rate (74.17%), main field preparation practices (60%), age of seedlings used for transplantation (70%), spacing (90%), time of fertilizers application (68.33%), water management (51.67%), weed management (53.33%), disease management practices (75%), pest management practices (78.33%) and recommended criteria for harvesting(92%). Majority of them were not known about chemicals and quantity of chemicals used for seed treatment (56.67%), nursery management practices (60%), recommended fertilizers dosage (62.50%), recommended organic manures (59.17%), INM practices (76.67%), IPM practices (70 %)and IDM practices (73.33%).

Table 1: Extent of Knowledge of recommended rice cultivation practices among the rice growers in Kabini Command Area (n=120)

Sl. No.	Practices	Knowledge level of rice growers n=120			
		Known		Not known	
		N	%	N	%
1	Selection of recommended Rice varieties	120	100	0	0
2	Time of Sowing	120	100	0	0
3	Recommended Seed rate	89	74.17	31	25.83
4	Chemical and quantity used for Seed treatment	52	43.33	68	56.67
5	Nursery management	48	40	72	60
6	Main field preparation	72	60	48	40
7	Recommended seedling transplantation stage	84	70	36	30
8	Recommended rate of seedlings for transplantation	120	100	0	0
9	Recommended Spacing	108	90	12	10
10	Recommended Fertilizer dosage	45	37.50	75	62.50
11	Time of fertilizer application	82	68.33	38	31.67
12	Recommended Organic manures	49	40.83	71	59.17
13	Water management	62	51.67	58	48.33
14	Weed management	64	53.33	56	46.67
15	Disease management	90	75	30	25
16	Pest management	94	78.33	26	21.67
17	INM practices	28	23.33	92	76.67
18	IDM practices	36	30.00	84	70.00
19	IPM practices	32	26.67	88	73.33
20	Harvesting practices	92	76.67	28	23.33

Over all Knowledge level of rice growers about recommended cultivation practices of rice:

The data in Table 2 reveals that the majority of rice growers had medium knowledge level (60 %) with respect to recommended cultivation practices of rice, followed by high (20.86 %) and low (19.67 %) knowledge level.

Table 2: Overall Knowledge of recommended rice cultivation practices among the rice growers of Kabini Command Area n = 120

Category	Score	Frequency	Per cent (%)
Low Knowledge	< 12.19	23	19.67
Medium Knowledge	12.19 – 13.99	72	60
High Knowledge	> 13.99	25	20.86

Adoption level of recommended rice cultivation practices among the rice growers in Kabini Command area:

The recommended practices used to measure the adoption level among the rice growers is presented in Table 3. Majority of the rice growers have fully adopted the technologies like recommended rice varieties (100%), age of seedlings used for transplantation (100%), seed rate recommendation (50.83%), rate of seedlings used in transplantation (100%), time of fertilizers application (65%) and harvesting practices (68.33%). Majority of the growers were partially adopted the technologies like time of sowing(63.33%), nursery management (90%), main field preparation practices (100%), spacing, fertilizers dosage(100%), water management(100%), weed management practices(75%), organic manure application (68.33%), disease management(57.50%) and pest management (61.67%). Majority of the growers were not yet adopted the technologies like seed treatment(62.5%), INM practices(89.13%), IPM practices (85.83%)and IDM (93.33%) practices(%).

Table 3: Extent of Adoption of recommended rice cultivation practices among the rice growers of Kabini Command Area n=120

Sl. No	Practices	Adoption level of rice growers (n=120)					
		Full adoption		Partial adoption		No adoption	
		N	%	N	%	N	%
1	Selection of recommended Rice varieties	60	100	0	0	0	0
2	Time of Sowing	44	36.67	76	63.33	0	0
3	Recommended seed rate	61	50.83	59	49.17	0	0
4	Chemical and quantity used for Seed treatment	28	23.33	17	14.17	75	62.5
5	Nursery management	9	7.50	108	90	3	2.50
6	Main field preparation	0	0	120	100	0	0
7	Recommended stages for transplantation of seedlings	93	77.5	27	22.50	0	0
8	Recommended rate of seedlings for transplantation	120	100	0	0	0	0
9	Recommended Spacing	0	0	120	100	0	0
10	Recommended Fertilizer dosage	20	16.67	100	83.33	0	0
11	Time of fertilizers application	78	65	42	35	0	0
12	Recommended Organic manure	0	0	74	61.67	46	38.33
13	Water management	0	0	120	100	0	0
14	Weed management	30	25	90	75	0	0
15	Disease management	51	42.5	69	57.50	0	0
16	Pest management	46	38.33	74	61.67	0	0
17	INM practices	0	0	13	10.83	107	89.17
18	IDM practices	0	0	8	6.67	112	93.33
19	IPM practices	3	2.5	14	11.67	103	85.83
20	Harvesting practices	82	68.33	38	31.67	0	0

Over all Adoption level of rice growers about recommended cultivation practices of rice:

The data in Table 4 reveals that the majority (63.33%) of rice growers come under medium adoption level category, followed by high (19.17 %) and low (17.5 %) adoption level category.

Table 4:Overall Adoption of recommended rice cultivation practices among the rice growers of Kabini Command Area n = 120

Category	Score	Frequency	Per cent (%)
Low Adoption	< 21.93	21	17.5
Medium Adoption	21.93 – 26.91	76	63.33
High Adoption	> 26.91	23	19.17

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