ADOPTION OF RECOMMENDED RICE PRODUCTION TECHNOLOGY IN RAIPUR DISTRICT OF CHHATTISGARH

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ABSTRACT

This study was carried out in Raipur district of Chhattisgarh in 3 blocks namely Abhanpur, Arang and Dharsiwa. From the randomly selected 12 villages, a total of 120 farmers were finally considered in the sample for the collection of primary data. The study revealed that majority of respondents adopted disease management, pest management, nitrogen, phospharous, potash in rice cultivation with high extent in various soil types of Raipur district of Chattisgarh.

INTRODUCTION

In Chhattisgarh according to depth and topography, the soils are mainly classified as Bhata (Entisols), Matasi (Inceptisols), Dorsa (Alfisols) and Kanhar (Vertisols). On higher elevation the topography of soil situation called Bhata, lower to this Matasi, then Dorsa and at lowest elevation and highest deep Kanhar soils are widely situated. Due to variation in texture, structure and topography, bulk density, water holding capacity, soil productivity and other biological and chemical properties of the soils also differ accordingly. The predominant reasons for non-adoption or partial adoption of agricultural technologies according to soil types are the lack of awareness, small and scattered land holdings, illiteracy, poor resource status of farmers. As the developmental goals of agriculture comprises complicated and complex issues like sustainability, food security, environmental safety, balanced eco-system, value addition and so on. All of these cannot be worth true without proper utilization of ever shrinking, most valuable resource *viz* soil. Since, Chhattisgarh region is full of bio-diversity and high agriculture base and more than 75% population directly associated with this mega sector. With this point of view the present study was undertaken.

RESEARCH METHODOLOGY

The study was conducted in Raipur District of Chhattisgarh state. There are fifteen blocks in Raipur district. Out of these, three blocks namely Abhanpur, Arang and Dharsiwa were purposively selected for this study because of largest area under rice cultivation in comparison to other blocks in the district Out of the total villages of Arang, Abhanpur and Dharsiwa blocks, four villages from each block were selected purposively. Out of the total farm families of each selected village, 10 farmers were selected on the basis of soil types. In this way a total 120 farmers were finally considered in the sample for the collection of data and interviewed by the investigator with the help of structured interview schedule.

RESULTS AND DISCUSSION

(A) Knowledge about soil types:

Table 1 reveals that majority of the respondents were having 95.90 per cent knowledge about importance of matasi soil. Also majority of the respondents were having maximum 78.19 per cent knowledge about water holding capacity of kanhar soil. Soil structure of bhata soil was known to majority of the respondents (83.33%). Majority of the respondents were having 70.97 per cent is it

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Table 1. Distribution of respondents according to their Knowledge about various soil types

(n = 120)

S. No.	Agriculture particulars	Bhata (%)	Matasi (%)	Dorsa (%)	Kanhar (%)
01.	Importance	75.00	95.90	78.49	82.30
02.	Water holding capacity	70.83	70.28	62.36	78.19
03.	Soil structure	83.33	66.26	64.52	67.49
04.	Soil topography	66.67	67.47	70.97	69.13
05.	Soil depth	66.67	65.06	66.67	70.79
06.	Productivity	79.17	70.28	74.19	81.48

frequency or scores of respondents about soil topography of dorsa soil. Majority of the respondents were having 70.79 and 81.48 per cent knowledge about soil depth and soil productivity of Kanhar soils, respectively. Among , all the traits of soils being in interrogated by the farmers, the level of knowledge about all soil types was found fairly high.

(B) Overall adoption of recommended practices of paddy crops:

According to Table 2 majority of the respondents (71%) adopted recommended variety in kanhar soil. Majority of the respondents (79%) adopted recommended sowing methods in matasi soil, followed by kanhar (77%). Majority of the respondents (62%) adopted recommended dose of nitrogen in kanhar type of soil, followed by dorsa, matasi and bhata (61%,53% and 47%) respectively. Majority of the respondents (68%) adopted recommended dose of phosphorus in kanhar type of soil, followed by dorsa, matasi and bhata (63%,57% and 52%) respectively. Majority of the respondents (60%) were adopted recommended dose of potash in kanhar type of soil, followed by dorsa, matasi and bhata (57%, 48% and 41%) respectively. Majority of the respondents (74%) adopted recommended dose of pesticides in kanhar type of soil, followed by dorsa, bhata and matasi (71%, 65% and 60%) respectively. Majority of the respondents (86%) adopted recommended disease management in Dorsa type of soil, followed by kanhar, matasi and bhata (80%, 63% and 58%) respectively.

Table 2. Distribution of respondents according to overall adoption of rice technology in various soil types

S. No.	Practices	Bhata (%) (n=17)	Matasi(%) (n=350)	Dorsa(%) (n=260)	Kanhar(%) (n=435)
01.	Variety	23	56	69	71
02.	Sowing methods	71	79	75	77
03.	Nitrogen	47	53	61	62
04.	Phosphorus	52	57	63	68
05.	Potash	41	48	57	60
06.	Pest management	65	60	71	74
07.	Disease management	58	63	86	80

(C) Productivity of rice according to various soil types:

Data in Table 3 about the productivity of paddy crop in different soil types depict that half of the respondents were below 20 bag / acre productivity in bhata soil, (32.53 per cent) respondent were below 20 bag/acre productive in Matasi soil, (29.03%) respondent were in also below 20 beg/acre productivity in dorsa soil and majority of the respondents (32.09%) It is majority were in 21.1 to 22 bag/acre productivity in Kanhar soil.

Table 3. Productivity according to various soil types

S. No.	Productivity (bag/ acre)	Bhata		Matasi		Dorsa		Kanhar	
		F	%	F	%	F	%	F	%
1.	Below 20	4	50.00	27	32.53	9	29.03	9	11.11
2.	20.1-21	1	12.50	20	24.09	5	16.13	23	28.39
3.	21.1-22	1	12.50	13	15.66	7	22.58	26	32.09
4.	22.1-23	2	25.00	12	14.46	6	19.35	8	9.88
5.	Above 23.1	0	0.00	11	13.26	4	12.91	15	18.53

CONCLUSION

In terms of knowledge majority of the respondents were having maximum knowledge about importance of Matasi type of soil. Majority of the respondents (71%) adopted the recommended variety in Kanhar soil. Majority of the respondents (79%) used recommended sowing methods in Matasi soil, majority of the respondents used recommended dose of NPK as fertilizer in Kanhar soil, recommended doses of insecticides were also adopted maximum in Kanhar soil. Majority of the respondents (52.50%) were having below 20 bag/ acre productivity. The respondents were not using recommended practices as compared to eligible criteria according to various soil types. They adopt the all practices of rice crop in short terms and after the trial on small scale. They used various technology after some profitable discussion and suggestions.

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