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Anita R DeshmukhSRF-NICRA, ICAR-ATARI,
Zone IX, Jabalpur, Madhya
Pradesh, India**Sonam Agrawal**Assistant Professor, COA,
Powarkheda, JNKVV, Jabalpur,
Madhya Pradesh, India**Alok Suryawanshi**SRFNFSM Oilseeds, ICAR-
ATARI, Zone IX, Jabalpur,
Madhya Pradesh, India

Knowledge of paddy growers about recommended technology

Anita R Deshmukh, Sonam Agrawal and Alok Suryawanshi

Abstract

The study entitled;” knowledge and adoption of paddy growers about recommended technology” was purposively conducted in Armori Panchayat Samiti of Gadchiroli district of Eastern Vidarbha. For the present study, 150 farmers were selected from 10 villages by using random sampling method. The main objectives to study the extent of knowledge and adoption of recommended technology among the paddy growers.

The data were collected by personal interview with the help of pretested and well structured interview schedule, subjected to appropriate statistical analysis. The findings of the present investigation indicate that near about half of the growers were in middle age group and educated upto high school level. Over one third of the paddy growers possessed upto 1.00 ha of land and had annual income upto Rs.50, 000. Majority of the paddy growers had very low socio-economic status. Near about half of the paddy growers were participants of informal organization. Over half of the paddy growers had medium level of source of information. Most of the paddy growers had medium level of scientific orientation and economic motivation. Over half of the responded paddy cultivation possessed high level of knowledge about recommended paddy cultivation technology. The respondents possess cent per cent knowledge were about cross ploughing, leveling of field, weeding, and control of stem borer by use of endosulphan, harvesting and threshing period of paddy. Whereas, majority of the respondents had poor knowledge about disease resistant varieties, seed treatment, use of Trichogramma, BGA and micro-nutrient of paddy.

Keywords: Knowledge, recommended technology, paddy cultivation, paddy cultivation practices

Introduction

Paddy (*Oryza sativa*) is grown on 150 million hectares which is about 11 per cent of the worlds cultivated Land in countries. In major ecosystems at altitude ranging from more than 3000 meters mean sea level in Nepal and Bhutan to 3000 meters below sea level in south India State of Kerala. In India archeological findings from the Ganga valley, Koldihwah (Neolithic) site suggest that paddy cultivation dates bade to 5000 B.C. Ancient Indian scriptures the “Yajurveda”, the “Atharva veda” and “smritis” make mention about paddy as not just as cereal for consumption as food but also as sacred offering to the duties especially during religious and social functions. However, the general consensus is that domestication of paddy took place independently. In China, India and Indonesia giving rice to Asia’s three varietal groups Japonica, Indica and Javanica. The impact of green revolution in paddy began in the early sixties attributed to the yield increase per unit area in India is mainly due to the development of Semi dwarf paddy varieties and crop management practices. Much of our success in rice production over the past 25 years has been largely based in combination of modern varieties, irrigation and large scale use of nitrogenous fertilizer where irrigation facilities area available, significant yield could be obtain at immense risk of degradation of the soil structure, soil texture, soil microbial population and fertility status due to indiscriminate use of chemical fertilizer. India became self-sufficient in paddy in 1977 that was achieved through a combination of increasing the area under cultivation and increasing cropping intensity with the adoption of modern varieties. At the present state of affairs especially in Vidarbha region the paddy growers are facing number of constraints. The various government and non-governmental organization have noticed that paddy growers are facing problems in number of areas like credit facilities, availability of seed, material and equipment. The new farm technology is essentially a seed, irrigation, fertilizer and pesticides technology. Rice (*Oryza sativa*) crop is grown in tropical and subtropical countries of the world. In India 45 million hectares of land is under paddy cultivation with an annual production of 87.8 million tones.

Correspondence

Sonam AgrawalAssistant Professor, COA,
Powarkheda, JNKVV, Jabalpur,
Madhya Pradesh, India

In Maharashtra about 65 per cent population depends on agriculture and allied activities for their livelihood and paddy is staple food of 50 per cent average area of Maharashtra under paddy cultivation. The total area of Maharashtra under paddy cultivation during 2004-05 was 14.88 lakh hectares with total annual production of 20.98 lakh metric tones and that of Vidarbha occupied 6.7 lakh hectares with annual production of 4.96 lakh metric tones. The Eastern Vidarbha consisting of Bhandara, gondia, Chandrapur, Gadchiroli and some part of Nagpur district is famous for specialized farming with rice as a major crop about 80 per cent gross cropped area in this region is under paddy cultivation in other words rice is a major source of food and income in eastern part of Vidarbha. Gadchiroli district in Vidarbha occupies 1.45 lakh hectares of land under paddy cultivation with annual production of 1.25 lakh metric Tones (Anonymous, 2012).

Methodology

The present study was carried out in Armori Panchayat Samiti of Gadchiroli district of Maharashtra State. Armori Panchayat

samiti was consider purposively because the area under rice cultivation was relatively higher as compare to other Panchaya samities of Gadchiroli district. The total area under rice cultivation during the year 2006-07 was 17000 hectares an production was 1400 kg/ha. Exploratory research design of social research was found to be appropriate. Ten villages having more area under rice cultivation during the year 2006-07 were identified. The list of farmers growing rice crop continuously since last five years in the selected villages were prepared village wise list a sample of 150 rice growers were drawn by disproportionate method of random sampling as the respondents for the study. The data were gathered through personal interview with the selected paddy growers with the help of an interview schedules. The independent variables were selected age, education, land holding, area under paddy, annual income, socio economic status, social participation, source of information, scientific orientation and economic motivation. The statistical tools namely mean, standard deviation, co-efficient, of correlation and co-efficient of regression were adapted to test the significantly of the results.

Table 1: Distribution of the respondents according to practice wise knowledge about recommended technology of paddy crop

S. No	Recommended technology of paddy crop	Respondent (n=150)			
		Knowledge		No Knowledge	
A	Preparatory tillage	Freq	%	Freq	%
1	Time of first ploughing (immediate after harrowing of previous crop)	149	99.33	1	0.67
2	Collection and burning stubbles	129	86.00	21	14.00
3	Time of second ploughing	136	90.67	14	9.33
4	Recommended dose of manure (FYM 25-30 Carrt load/ha.	102	68.00	48	32.00
B	Recommended Varieties				
5	Short duration varieties (Sakoli- 6 & Sindevahi)	119	79.33	31	20.67
6	Medium duration varieties (Sindevahi 75, PKV- Ganesh, Shindewahi-4, PKV-HMT, Sindevahi-2001, Sindevahi-5 & Sakoli)	121	80.67	29	19.33
7	Long duration varieties (Sindevahi-5 & Sakoli-8)	82	54.67	68	45.33
8	Scented varieties (Sakoli-7, PKV- Makrand)	60	40.00	90	60.00
9	Hybrid Varieties (Sahyandri)	31	20.67	119	79.33
C	Seed				
10	Seed rate of paddy (35-40 kg/ha)	120	80.00	30	20.00
D	Seed treatment				
11	Salt solution (3% brine solution)	15	10.00	135	90.00
12	Chemical treatment (3 g thirum/kg seed)	20	13.33	130	86.67
E	Seed bed preparation				
13	Size of raised bed preparation	115	76.67	35	23.33
14	Recommended dose of manure & fertilizer for raise bed (300 kg FYM & 1 kg urea of 10 kg phorate)	51	34.00	99	66.00
15	Spacing on raised bed (7-8 X 1-2 cm)	40	26.67	110	73.33
16	Time of sowing in raised bed (June- July)	144	96.00	6	4.00
F	Pudding operation				
17	Cross ploughing (Wooden plough power tiller/ tractor)	150	100.00	0	0.00
18	Leveling of field	150	100.00	0	0.00
G	Transplanting				
19	Age of seedling (25-30 days old)	141	94.00	9	6.00
20	Seedling spacing (20X 10 cm)	81	54.00	69	46.00
21	Sowing method (2-3 seedling)	145	96.67	5	3.33
H	Integrated nutrient management				
22	Recommended dose of fertilizer (100:50:50)	101	67.33	49	32.67
23	First dose of chemical fertilizer at puddling (50:50:50)	100	66.67	50	33.33
24	Second dose of chemical fertilizer (N 25 kg at sprouting)	50	33.33	100	66.67
25	Third dose of chemical fertilizer (N-25 kg before ear heard formation)	48	32.00	102	68.00
26	Use of urea + DAP brickets	36	24.00	114	76.00
27	Use of blue green algae	11	7.33	139	92.67
28	Dose of micronutrient (0.5% Zink sulphat + 0.25% calcium)	10	6.67	140	93.33
I	Water management				
29	Water level in field (at sowing 205 cm aftersowing 5 cm and letter 10 cm)	149	99.33	1	0.67
30	Removal of water before harvesting (10 days before harvesting)	150	100.00	0	0.00
J	Intercultural operation				
31	Use of weedcicles (4 lit buta clore/500 ml of water)	75	50.00	75	50.00
32	First weeding (15 days after planting)	148	98.67	2	1.33

33	Second weeding (45 days after planting)	140	93.33	10	6.67
K	Plant protection measures Pest and disease of paddy				
34	Insect pest on paddy crop (stem borer jassids, paddy gallfly and armyworm)	129	86.00	21	14.00
35	Disease of paddy crop (blast and smut)	101	67.33	49	32.67
L	Integrated pest management				
36	Use of resistant varieties	35	23.33	115	76.67
37	Seed treatment (3 gm thirum/ kg of seed)	15	10.00	135	90.00
38	Weed free bunds	145	96.67	5	3.33
39	Rope dragging over the crop for control of army worm	70	46.67	80	53.33
40	Control of jassids (removal of water after 3-4 days)	112	74.67	38	25.33
41	Control of army worm (add water in field)	95	36.33	55	36.67
42	Conservation and protection of protectors	5	3.33	145	96.67
43	Use of Trichogramma	7	4.67	143	95.33
44	Destroying disease plant	120	80.00	30	20.00
45	Control of rodent	76	50.67	74	49.33
M	Chemical control				
i	Pest				
46	For stem borer (endosulphan 17 ml)	146	97.33	4	2.67
47	For paddy gallfly (10% phorate)	83	55.33	67	44.67
48	For jassid (malathion 50%)	51	34.00	99	66.00
49	Armyworm (methyl parathion 2%)	9	6.00	141	94.00
ii	Disease				
50	Blast of paddy (3 gm thirium+ 3% brine solution)	35	23.33	115	76.67
51	Smut (copper oxicleotide 25 gm + steptocyclide 0.5 gm + 10 lit of water)	10	6.67	140	93.33
N	Harvesting				
52	Harvesting time	150	100.00	0	0.00
53	Time of threshing	150	100.00	0	0.00

Table 2: Distribution of respondent according to their level of knowledge

S. No	Knowledge level	Respondents (n=150)	
		Number	Percentage
1	Low	11	7.34
2	medium	47	31.33
3	High	92	61.33
		150	100.00

Result and Discussion

There were 61.33 per cent of the respondents observed in high category of knowledge about recommended paddy cultivation technology. As regards practice wise knowledge cent per cent of the respondents had knowledge about leveling of land, cross ploughing, time of first ploughing (99.33%), time of second ploughing (90.67%), time of sowing in raised bed (96.00%), age of seedling (94.00%), sowing method (96.67%) water level in field (99.33%), removal of water before harvesting (100.00%), first weeding (98.67%), second weeding (93.33%), insect pest on paddy crops (86.00%), harvesting and threshing time (100.00%), while higher per cent of the respondent had poor knowledge about hybrid varieties (79.33%), chemical treatment 3 gm thirum/kg seed (86.67%), salt solution 3% brine solution (90.00%), sapping on raised bed (73.35%), use of urea + DAP brickets (75.00%), use of BGI (92.67%), use of micronutrients (93.33%), use of resistant varieties (75.67%), use of Trichogramma (95.33%). Use of methyl parathion for the control of armyworm (94.00%), use of thirum + 3 % brine solution for control of blast of paddy (76.67%) smut (93.33%).

References

1. Bodake HD. Awareness and adoption of bio-fertilizers by farmers. M.Sc. Thesis (Unpub.) Dr. PDKV, Akola, 2003.
2. Dhande HN. Adoption on university recommended rice production technology by rice growers. M.Sc. Thesis (Unpub.) Dr. PDKV, Akola, 2003.

3. Gupta VP, Mankar, Sundarwami B. Knowledge of the farmer about improved cultivation practices of rice in Jammu. Maharashtra J Extn. Educ. 2001; 20:74-76.
4. Sarita Vaish, Singh P, Mishra B. Correlates of knowledge of rural women about rice production technology. Indian J Extn. Educ, 2003, 39(1-2).
5. Seeth Lakshmi R, Ganeshan R. participation pattern of women an IPM in rice. Agril. Ext. Rev. 2002; 14(5):28-30.
6. Sagwal RC, Malik RS. Knowledge index of rice grower farmer. Agril. Exten. Rev. 2001; 13:13-18.