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ACQUAINTANCE AND ATTITUDE OF TRIBAL FARMERS TOWARDS MODERN RICE PRODUCTION TECHOLOGY

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In Chhattisgarh state, rice is an important kharif cereal occupying an area of 3.8 m ha out of total kharif cereals of 4.3 m ha. In this region rice is mainly grown through biasi method (direct seeding followed by ploughing in standing water at 25-40 DAS) constituting more than 80% of rice cultivation in the area. Other imporatnt systems are transplanting, line sowing and lehi system. As regards to total population the figure in 1.21 crore which includes 15.06 lakhs Harijans and 3.39 lakhs tribals. Rice cultivation in the major agricultural activity of the farming community of this state. Inspite of abundant rainfall, optimum solar radiation, favourable temperatures, relatively well conserved soils, surplus man power for year around crops production, the productvity of rice in the state is 1.042 t/ha which is less than national average (2.81 t/ha). Despite improvement in production technologies of rice crop a break through of higher order has not been achived. Several scientists have opined that knowledge about improved practices is a key factor in harnessing good yield from rice (Sakharkar et al. 1992. Therefore to assess the knowledge level of tribal farmers regarding modern rice production technology the study entitled "Acquaintance and attitude of tribal farmers towards modern rice production technology" was undertaken in 1999 to 2001 with the following specific objectives :

1. To determine the extent of knowledge and knowledge gap regarding recommended rice production technology.
2. To study about the extent of attitude towards modern agriculture.

METHODOLOGY :

The study was conducted in 16 districts of Chhattisgarh state and Balaghat district of Madhya Pradesh. Out of total 88 tribal blocks, only 9 blocks were selected by stratified random sampling method. For this, all the blocks were first divided into four equal stratum as per distance from IGAU headquarters at Raipur. Thereafter, 10% blocks were randomly selected in this study from each stratum. Two villages were selected in each blocks by using random sampling method. From each village, 20 respondents were randomly selected in the present study. Thus, the 360 respondents were selected for the collection of data by personal interview method with the help of pre-tested structured interview schedule. The knowledge level of respondents about improved rice production technology was assessed in this study. A knowledge index was worked out to assess the level of knowledge of each respondent with the help of following equation :

$KI = O/S \times 100$ Where, KI = Knowledge index of a respondent, O = Total score obtained by a respondent, S = Totat obtained score

On the basis of knowledge index (KI), calculated for each respondents, they were categorized in following categories :

Categories	Score
No knowledge (00)	0
Low knowledge (up to 33.33)	1
Medium knowledge (33.34 to 66.66)	2
High knowledge (above 66.66)	3

Categories	Score
Least favourable (Less than 22.05)	1
Moderate favourable (22.06–29.47)	2
Favourable (More than 29.47)	3

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Attitude of respondents regarding the modern agricultural practices was thought to be directly or indirectly linked with their adoption. It was operationalized as respondents degree of favourableness or unfavourableness towards the modern agricultural technologies. This was measured with the help of an attitude scale originally developed by Singh (1980) with slight modifications as desired according to the tribal dialect. The scale consist of 4 positive and 4 negative statements. The categorization was done according to mean and standard deviation of obtained score as :

RESULTS AND DISCUSSION :

1. Attitude towards modern agriculture : With regards to attitude of resondents towards modern agriculture, findings reveal that 58.33% respondents were having favourable, 17.50% had more favourable and about 24% of the respondents had less favourable attitude towards modern agriculture. These results indicate that most of the tribal people are still belonging to medium and low level (Table 1). Similar finding was reported by Shrivastava (1999).

Table 1. Distribution of respondents according to their attitude towards modern agriculture

(N = 360)

Characteristics	Frequency	Percentages
Less favourable (Less than 22·05)	87	24·17
Favourable (22·06–29·47)	210	58·33
More favourable (More than 29·47)	63	17·50

2. Extent of knowledge regarding improved rice production technology : The knowledge level of selected farming communities were assessed related to the improved cultivation practices of rice corp, since rice is the major crop of this region and cultivated by most of the respondents (Table 2).

Table 2. Extent of knowledge of the respondents regarding improved rice production technology

(N = 312)

Practice	Nil		Low		Medium		High	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Seed treatment	69	22·12	105	33·64	108	34·62	30	09·62
Variety	6	1·92	117	37·50	120	38·46	69	22·12
Culture	153	49·04	111	35·58	48	15·38	00	0·00
Sowing	0	0·00	84	26·92	153	49·04	75	24·04
Nitrogen	57	18·27	102	32·69	135	43·27	18	5·77
Phosphorous	78	25·00	141	45·19	81	25·96	12	3·85
Potash	174	55·17	102	32·69	36	11·54	00	0·00
Manure	21	6·73	96	30·77	135	43·27	60	19·23
Pest control	87	27·87	156	50·00	66	21·15	3	0·96
Disease control	183	58·65	105	33·65	18	05·78	6	1·92
Weed control	72	23·08	126	40·38	114	36·54	00	0·00
Water management	96	30·77	141	45·19	69	22·12	6	1·92
Other	3	0·96	93	29·80	108	34·62	108	34·62

In most of the selected practices, majority of the respondents were grouped under low to medium level of knowledge, but in some practices like use of potash and disease control measures were still unaware among more than 50% of the respondents. The knowledge of improved varieties, sowing method and other intercultural operation were found as some of the practices in which more than 22% respondents had high level of knowledge. Joshi and Shinde (1984) also confirmed this finding.

3. Overall extent of knowledge about improved rice production technology : In all about 70% respondents were categorised as medium and 29% respondents were having low level of knowledge and only 0.96% of the respondents were found in the high level of knowledge about improved rice cultivation practices (Table 3).

Table 3. Distribution of the respondents according to their overal extent of knowledge about improved rice production technology

(N = 312)

Percentages	Characteristics	Frequency
Low (up to 33·33)	90	28·85
Medium (33·34–66·66)	219	70·19
High (More than 66·66)	3	00·96

4. Knowledge gap : The overall knowledge gap related to rice cultivation practices was found 58.72% (Table 4). For this gap disease control, use of potash, applications of cultures etc. were the major contributing practices but sowing method, rice varieties, use of manures etc. were the important practices due to which the overall knowledge level of respondents was raised up to 41.28%, rest of the selected practices could not influence significantly. The overall gap in the knowledge of rice cultivation practices by the selected respondents was 58.72%.

Table 4. Extent of gap in knowledge about selected cultivation practices of rice

(Maximum Obtainable score = 936) (N = 312)

Practice	Mean obtainable score	Knowledge gap (%)	Rank
Seed treatment	411·84	56·00	VII
Variety	574·08	38·67	X
Culture	205·92	78·00	III
Sowing	614·64	34·33	XI
Nitrogen	427·44	54·33	VIII
Phosphorous	340·08	63·67	V
Potash	174·72	81·33	II
Manure	539·76	42·33	IX
Pest control	296·40	68·33	IV
Disease control	156·00	83·33	I
Weed control	352·56	62·33	VI
Water management	296·40	68·33	IV
Other	633·36	32·33	XII

CONCLUSION :

The respondents had medium attitude towards modern agriculture. The tribal respondents had no knowledge about seed treatment, varieties, sowing methods, nitrogen and manure application. They were unaware about importance of potash and disease control, but had low knowledge about seed treatment with culture, phosphorous application, water management and control of pest and diseases in the crop. The extent of overall knowledge about improved rice production technologies was medium. Analysis of knowledge gap about different cultivation practices of rice had wide variation ranging from 38% in method of sowing to 83% in disease control. The overall knowledge gap was 59%, which is the indication for bridging them by using different media's.

REFERENCES :

1. Joshi, Y. B. and Shinde, N. V. (1984). Adoption of sorghum Production technology and constraints of yield. Magarashtra J. Extn. Edn., 3:113-117.
2. Sakharkar, V.J., Nikhade, D.M. and Bhopale, R.S. (1992). Correlates of knowledge and adoption behaviour of soyabean growers. Maharastra J. Extn. Edu. 11 : 212-213.
3. Shrivastava, D.K. (1999). impact of Institution Village Linkage Programme on production and socio-economic status of farmers in Raipur district of madhya Pradesh. M.Sc. (Ag.) Thesis, Indira Gandhi Agricultural University, Raipur (C.G.).
4. Singh, B. (1980). Small farmers and modern farm technology. Rural India. 43 (5) : 89.