SOCIO-ECONOMIC STATUS OF HYBRID RICE GROWERS IN SURGUJA DISTRICT OF CHHATTISGARH

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Abstract: This study was carried out in selected blocks of Surguja district of Chhattisgarh during 2011-12. A total of 160 tribal farmers were selected randomly as respondents. The study aimed to determine the socio-economic status of the hybrid rice growers. The data were collected through personal interview method with the help of well structured and pre-tested interview schedule. The findings of this study revealed that majority of the respondents were found in middle age group and educated up to primary level having medium size of family (6 to 10 members) with membership in more than one organization. Majority (66.25%) of the respondents had medium experience of hybrid rice cultivation and they were involved in Agriculture + Labour works. Maximum number of the respondents were having medium size of land holdings and surviving with the range of Rs. 20,001 to Rs. 40,000 annual income. Majority of the respondents had also obtained short term credit from co-operative societies.

Keywords: Adoption, Socio-economic status, Hybrid rice growers.

INTRODUCTION

Rice (***Oryza sativa* L**.) is a plant belonging to the family of grasses, Gramineae. There are three major food crops (wheat, rice, maize) of 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 (Anonymous, 2010a). 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 (Yuan, 2010).

India has a long history of rice cultivation. Globally, it stands first in rice area and second in rice production. Within the country, rice occupies one quarter of the total cropped area, contributes about 40 to 43 per cent of total food grain production and continues to play a vital role in the national food and livelihood security system. India is one of the leading exporters of rice, particularly basmati rice. Rice is the staple food of 65 per cent of the total population in India. The total cultivated land in India is 142 m ha, production of 99 MT and productivity of 1337 kg/ha^{-1} (Anonymous, 2010b). India has the largest area under rice in the world.

Keeping in view of the above facts in to consideration, the present study was undertaken to find out the socio-economic profile of hybrid rice growers in Surguja district of Chhattisgarh.

MATERIAL AND METHOD

The present study was carried out in Surguja district of Chhattisgarh state during 211-12. Surguja district is situated in south-eastern part of Chhattisgarh state. Before the preparation of 9 new districts, Chhattisgarh had 18 districts from which Surguja district was selected for this study. During the research period Surguja district had 19 blocks, out of which, 4 blocks were purposively selected namely Sitapur, Ambikapur, Rajpur and Surajpur, because these four blocks are having sizable area under hybrid rice cultivation. A list of hybrid rice growers of the selected blocks were obtained from the office of the Agricultural Department of Surguja district and from each selected block, 40 farmers were selected as respondents. Thus, total 160 farmers cultivating hybrid rice were selected randomly for the present research study. Respondents were interviewed through personal interview with the help of pre-tested interview schedule. Prior to interview, respondents were taken in to confidence by revealing the actual purpose of the study and full care was taken in to consideration to develop good rapport with them. Collected data were analyzed by the help of various statistical tools i.e. frequency, percentage, etc.

RESULT AND DISCUSSION

Socio-personal profile of the respondents

Age

findings on age of the respondents are presented in Table 1. The data reveal that the majority (53.75%) of the respondents belonged to the middle age group (between 36 to 55 years). However, 27.50 per cent of the respondents were of young age group (up to the

age of 35 years). Whereas, in the older age group, the percentage of hybrid rice cultivation farmers was only 18.75 per cent. The findings indicated that the majority of the respondents in the study area belonged to the middle age groups, followed by young age group and older age group. This reflected that young and old people were not much involved in the hybrid rice cultivation. Purohit (1978), Singh *et al.* (2007), Kumar and Singh (2009), Prajapati (2010) also noted similar findings.

Education

About education, the data show that the most (25.62%) of selected hybrid rice cultivators had primary level of education, followed by 20.62 per cent of selected hybrid rice cultivators were high school passed and 16.89 per cent had passed middle school. However, 15.00 per cent had passed higher secondary, 11.25 per cent respondents were college passed and only 10.62 per cent respondents were illiterate. The findings revealed that the most of the respondents in the study area had passed primary level of education. Padekar *et al. (*2004), Singh *et al.* (2009) and Painkra (2000) also observed similar findings in their study.

Table 1: Distribution of respondents according to their socio-personal characteristics

(n = 160)

S.No.	Characteristics	Frequency	Percentage
1.	**Age**		
	Young (up to 35 years)	44	27.50
	Middle (36-55 years)	86	53.75
	Old (above 55 years)	30	18.75
2.	**Education**		
	Illiterate	17	10.62
	Primary school	41	25.62
	Middle school	27	16.89
	High school	33	20.62
	Higher Secondary	24	15.00
	College and above	18	11.25
3	**Size of family**		
	Small (1-5 members)	29	18.12
	Medium (6-10 members)	95	59.38
	Big (> 10 members)	36	22.50
4	**Social participation**		
	No membership	64	40.00
	Membership in one organization	46	28.76
	Membership in more than one organization	37	23.12
	Executive / office bearer in organization	13	8.12

Size of family

The data regarding size of family (Table 1) indicated that the 59.38 per cent of the respondents were having medium size of family (6 to 10 members), followed by 22.50 per cent of respondents had big size of family (above 10 members) and only 18.12 per cent of the respondents had small size of family (up to 5 members). Choudhary *et al.* (2001), Khaleche *et al.* (2003), Nguyen *et al*. (2003), Mohan and Deoghare (2004), Kanan *et al.* (2004) and Kumar (2010) also found almost similar findings.

Social participation

The data regarding social participation showed that the most of the respondents (40.00%) had no social participation, while only 28.76 per cent of the respondents were member of one organization, 23.12 per cent of the respondents falls in the category of member of more than one organization and 8.12 per cent of the

respondents were office bearer of organization. Thakur (2004), Kaur and Kalara (2006), Patel (2008), Khode *et al.* (2009), Gawle (2010) and Kumar (2010) also noticed similar findings in their study.

Experience of hybrid rice cultivation

Table 2: Distribution of respondents according to their experience of hybrid rice cultivation

(n=160)

S. No.	Experience	Frequency	Percentage
1	Less experienced (up to 4 years)	29	18.12
2	Medium experienced (4 to 8 years)	106	66.25
3	High experienced (Above 8years)	25	15.63

The data on experience of hybrid rice cultivation by the respondents are presented in Table 2. The findings indicated that the majority of the respondents (66.25%) were having up to 8 years of experience in the hybrid rice cultivation because the majority of the respondents in the study area were under the middle age group followed by 18.12 per cent of the respondents had 0 to 4 years of experience and only 15.63 per cent of the respondents had above 8 years of experience of hybrid rice cultivation. This finding is supported by Geetha *et al.* (2001), Balakrishnappa and Rajan (2010) in their study.

Socio-economic profile of the respondents
Occupation

Table 3: Distribution of respondents according to their occupation

(n=160)

S. No.	Occupation	Frequency	Percentage
1.	Agriculture (hybrid rice cultivation)	30	18.75
2.	Agriculture (hybrid rice cultivation) + Animal husbandry	29	18.12
3.	Agriculture (hybrid rice cultivation) + Labour work	46	28.76
4.	Agriculture (hybrid rice cultivation) + Service	15	9.37
5.	Agriculture (hybrid rice cultivation) + Business	26	16.25
6.	Agriculture (hybrid rice cultivation) + Others	14	8.75

Regarding the distribution of respondents according to their occupation, it is observed from the data in Table 3 that most of the respondents (28.76%) were involved in agriculture (hybrid rice cultivation) + labour, followed by agriculture (hybrid rice cultivation) 18.75 per cent, hybrid rice cultivation + animal husbandry 18.12 per cent, hybrid rice cultivation + business 16.25 per cent, Agriculture (hybrid rice cultivation) + Service 9.37 per cent and hybrid rice cultivation + others 8.75 per cent category, respectively as their main occupation. This finding is in conformity to the findings reported by Pandey *et al.* (2004), Raghuvanshi (2005), Verma (2009) and Kumar (2010).

Size of land holding

The distribution of the respondents according to their size of land holdings are presented in the Table 4. The data regarding land holdings indicated that 49.37 per cent of the selected hybrid rice growers had 2.1 to 4 ha of land holdings (medium land holdings) followed by 33.12 per cent of the respondents had 1.1 to 2 ha of land holdings (small land holdings), 15.62 per cent had more than 4 ha land holdings (large land holdings) and only 1.89 per cent of the respondents had less than 1 ha of land holdings (marginal land holdings). This findings find support from the work of Rajni (2006), Dhruw (2008), Patel (2008),Yadav (2008), Kumar (2010) and Gawle (2010).

Table 4: Distribution of respondents according to their size of land holding

(n=160)

S. No.	Size of land holding	Frequency	Percentage
1.	Marginal (upto 1 ha)	3	1.89

2.	Small (1.01 to 2 ha)	53	33.12
3.	Medium (2.01 to 4 ha)	79	49.37
4.	Large holding (above 4 ha)	25	15.62

Annual income

It is very difficult to assess the average annual income of each individual, as they are not maintaining any records. The attempt was made to collect the annual income of the respondents through discussion and interpretation from different angles. The distribution of the respondents according to their annual income is presented in Table 5.

Table 5: Distribution of respondents according to their annual income

(n=160)

S. No.	Annual income	Frequency	Percentage
1.	Low (Up to Rs.20,000)	34	21.25
2.	Medium (Rs.20,001 to 40,000)	81	50.62
3.	High (Rs.40,001 to 60,000)	27	16.88
4.	Very high (Above Rs.60,000)	18	11.25

It is clearly observed that majority of farmers (50.62%) were having their annual income in range of Rs. 20,001 to Rs. 40,000, which considered to be medium income, followed by 21.25 per cent of the respondent come under the income range of upto Rs. 20, 000 which come under to low level of annual income, while 16.68 per cent of the respondent come under the range of Rs. 40, 001 to 60,000 come under to high level of annual income. It has been also observed that only 11.25 per cent respondent come under to the range of more than Rs. 60,000 which considerable very high level of annual income. Bhosle *et al.* (2000), Singh *et al.* (2003) and Singh *et al.* (2004) also noted similar findings in their study.

Credit acquisition

Table 6: Distribution of the respondents according to their credit acquisition

(n = 160)

Particulars	Frequency	Percentage
Credit acquisition (n=160)		
• Not acquired	55	34.37
• Acquired	105	65.63
Duration of credit (n = 105)		
• Short term (6 months)	65	61.90
• Medium (6 - 18 months)	26	24.77
• Long term (6 month – 5 years)	14	13.33
Availability of credits (n = 105)		
• Easily available	89	84.77
• Difficult to obtain	16	15.23
Agencies of credit (n = 105)		
• Cooperative society	71	67.61
• Nationalized bank	12	11.42
• Regional rural bank	19	18.10
• Money lender	02	1.91
• Friends/Neighbors/Relative/Others	01	0.96

The findings regarding credit acquisition are presented in the Table 6. It is clear from this table that the majority of the respondents (65.63%) had acquired credit for agriculture. Out of total credit acquired farmers (105), it is further noted that 61.90 per cent respondent had preferred to take the short term loan credit (6 months), followed by 24.77 per cent of respondents had taken medium term loan credit (6 - 18 months) and only 13.33 per cent of the

respondents had taken long term credit (6 months – 5 years).

The findings regarding available of credits are concluded that majority of the respondents had acquired short term credit. The credit facilities were available to 84.77 per cent respondents very easily and quickly, followed by 15.23 per cent respondent faced some difficulty to obtain credit.

As regards to source of credit, the majority of the respondents (67.61%) had obtained credit from co-operative society, followed by 18.10 per cent had taken credit from regional rural bank, 12.76 per cent obtained it from nationalized bank, 1.91 per cent had obtained credit from money lender and 0.96 per cent had obtained credit from friends/ neighbours/ relatives and others. This finding is in conformity to the findings reported by Mukim (2004) and Kumar (2010)

Irrigation facility

The data regarding availability of irrigation and irrigation sources among the respondents are presented in Table 7. It was found that 65 per cent respondents had irrigation facilities and remaining 35 per cent had not got any assured irrigation facilities. The findings regarding sources of irrigation shows that the majority of the respondents (67.30%) had used the wells for irrigation, 24.03 per cent respondents used tube wells as an irrigation source. Whereas, 19.23 per cent respondents had used other (rivers) as irrigation source, 13.46 per cent respondents had used the ponds as irrigation source and only 10.57 per cent had used the canals as irrigation source.

Table 7: Distribution of the respondents according to their availability of sources of irrigation

Categories	Frequency	Percentage
Irrigation availability (n=160)		
Available	104	65.00
Not available	56	35.00
Sources of irrigation* (n=104)		
Canal	11	10.57
Tube well	25	24.03
Well	70	67.30
Pond	14	13.46
Other	20	19.23

* Frequency based on multiple responses

It could be concluded from the finding that the majority (65%) respondents had available irrigation facilities and 67.30 per cent had used wells as a major source of the irrigation. This finding is in conformity to the finding reported by Pardhi (1978) and Kumar (2010).

CONCLUSION

From the above findings it can be concluded that the majority of the respondents were found in middle age group and educated up to primary school, 59.38 per cent of the respondents had small size of family. 66.25 per cent of the respondents had 4 to 8 years experience of hybrid rice cultivation. The most of the respondents were involved in hybrid rice cultivation + labour work and had medium size of land holdings. 50.62 per cent belonged to medium range Rs. 20,001 to Rs. 40,000 annual income group. 65.63 per cent respondents had acquired the credit for agriculture purpose.

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