Study on Social-economic profile of the hybrid rice growers in Eastern Uttar Pradesh

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Abstract: The present study was conducted in two districts of Eastern Uttar Pradesh. Namely district Azamgarh in Eastern Plain Zone North and Sonbhadra in Vindhyan Zone of Uttar Pradesh since were selected purposively, the total number of blocks in Azamgarh district is 22. Out of 22 blocks, three blocks namely. Thekma, Tarwa and Tahbarpur of Azamgarh district were selected purposely. The total number of blocks in Sonbhadra district is 8. Out of these, three blocks namely, Chatra,Chopan and Duddhi of Sonbhadra district were selected purposely. Four villages from each block of districts were selected randomly to draw the samples of farmers, with the consideration of highest acreage under hybrid rice. Majority of the respondents was belonged to middle age group (35-55 years) and literate 86.11 per cent. Majority of respondents belonged to general caste in study area. It revealed that most of respondents were observed in nuclear/single families. Result revealed maximum number of respondents found in medium category and their accounts 51.66 per cent. Result revealed that 43.33 per cent of respondents were observed less than 1 ha of land and they belonged to marginal farmer's category. The maximum respondents were engaged in agriculture 41.66 per cent. Maximum number of the respondents belonged to the annual income of medium(Rs.93624-295483) 51.94per cent. Most of respondents having the mixed type of house was found 55.00per cent.

Keywords: Socio-Economic, annual income, respondents, land holding, educational status etc.

Introduction: Paddy (*Oryza sativa*) is one of the vital cereal crops of the world and forms the staple food for more than 50 per cent of population and is recognized as "king of cereals". India stands first in area and second in total food production. In India rice is grown in 43.86 million ha, the production level is 104.80 million tones and the productivity is about 2390 kg/ha (Agricultural Statistics at a glance- 2015). Uttar Pradesh is the second largest rice producing state with almost 5.85 million hectare land under cultivation producing about 12.5 million tonnes of rice is one of the most important food crops and feeds more than 60 per cent population of India. Rice is grown in almost all the states in the country however the major 5 states in rice production are West Bengal, UP, Andhra Pradesh Punjab and Tamil Nadu. (Agricultural Statistics at a glance- 2015) In India, it is the most favorite staple food for about 65 per cent of the population. Among the paddy growing countries, India has the largest area under cultivation (42.56 million hectares during 2010-12) followed by China and Bangladesh. India is second to China in terms of volume of paddy output and it accounts more than 20 per cent of global production. Productivity in India is much lower than in Egypt, Japan, China, Vietnam, United States of America and Indonesia and even below the world's average. It makes up 42 per cent of India's total food grains production and 45 per cent of the total cereals produced in the country. Paddy provides about 22 per cent of the world supplies of calories and 17 per cent of the proteins. Average paddy yield of India is 1339 kg per hectare which are continues to play a vital role in the country's exports constituting nearly 25 per cent of the total agricultural exports from the country. In India, hybrid rice is grown on an area of 44 million hectares with production of about 132 million tons (Sharma *et al.* 2015). Indian agriculture is the residence of small and marginal farmers. Majority of the land holdings are small in numbers and their holdings are increasing

with disintegration of land. Technology is the knowledge/information that permits some tasks accomplished more easily, some other service to be rendered for the manufacture of a product (Lavison, 2013). Technology itself is improving a given situation and changing the status to a more desirable level. Azamgarh and Sonbhadra from Eastern regions of Uttar Pradesh is an important place of rice cultivation in this country. To expand the cultivation of this crop in other parts of the country, the knowledge on the present situation of rice production in this region would be significantly contributory to design appropriate programs for its widespread cultivation. These happenings are certainly due to a number of factors. Adoptions of modern technologies for rice cultivation are influenced by the farmer's demographic and socio-economic position.

Methodology

Selection of state:

The study was conducted in state Uttar Pradesh. Uttar Pradesh is a state in northern India. The state is divided in to 18 divisions and 75 districts and capital of Uttar Pradesh is Lucknow.

Selection of District

The present study was conducted in two districts of Eastern Uttar Pradesh. Namely district Azamgarh in Eastern Plain Zone North and Sonbhadra in Vindhyan Zone of Uttar Pradesh since were selected purposively,

Selection of Blocks

The total number of blocks in Azamgarh district is 22. Out of 22 blocks, three blocks namely. Thekma, Tarwa and Tahbarpur of Azamgarh district were selected purposely. The total number of blocks in Sonbhadra district is 8. Out of these, three blocks namely, Chatra,Chopan and Duddhi of Sonbhadra district were selected purposely.

Selection of village:

Four villages from each block of districts were selected randomly to draw the samples of farmers, with the consideration of highest acreage under hybrid rice.

Measurement of variables:

Age: -

Age calculated by chronological years at the time of personal interview and categorized in to three categories by formula Mean - SD, mean ± SD and Mean + SD. Based on age, of the respondents were classified in to three categories which are follows: -

S.N.	Categories of age	Age
1	Young (Up to 35 years)	Less than (Mean - SD)
2	Middle (From 36 to 61 years)	Between (Mean ± SD)
3	Old (Above 61 years)	More than (Mean + SD)

Education: -

Education is generally calculated through Year spend in formal education by therespondents.
The number assign to the respondent's Education level-

S.N.	Education Level	Score
1	Illiterate	1
2	Literate	2

2(i)	Primary education	3
2(ii)	Secondary education	4
2(iii)	High school	5
2(iv)	Intermediate	6
2(v)	Graduate	7
2(vi)	Post graduate and above	8

Marital status: -

It is divided into two categories married and unmarried assigned to them score 1 and 2respectively: -

S.N.	Categories	Score
1.	Married	1
2.	Unmarried	2

Religion: -

Religion, assigned as per governments norms the religion divided in research area into mainly following categories and scoring to them**-**

S.N.	Category	score
1	Hindu	1
2	Muslim	2
3	Jain	3
4	Others (Sikh, Christian)	4

Caste: -

The operational measurement of the caste was done according to personal characteristic status scale developed by Trivedi (1963) and scoring was done as follows.

S.N.	Category	Score
1	Scheduled Caste/ Scheduled tribe	1
2	Other Backward Caste	2
3	General Caste	3

Type of Family: -

According to Trivedi, the type of family is categorized into Nuclear and Joint family which scoring is given below: -

S.N.	Category	Score
1.	Nuclear family	1
2.	Joint family	2

Size of family: -

The size of family represents the number of members present in family. They were grouped into three categories according to their class interval which are Small, Medium, and large and their scoring is 1, 2 and 3 respectively.

S.N.	Category	Score
1.	Small (up to 5)	1
2.	Medium (6-10)	2
3.	Large (above 10)	3

Size of land holding: -

` According to government norms (1991) the respondent is divided into four categories namely Marginal (below 1 ha), Small (1 – 2 ha), Medium (2-4 ha) and large(above 4 ha).

S.N.	Category	Score
1.	Marginal ((below 1 ha)	1
2.	Small (1 – 2 ha),	2
3.	Medium (2 - 4 ha)	3
4.	Large (above 4 ha)	4

Occupation: -

According to collected information about occupation was divided into six categories and their scoring is given below: -

S.N.	Category	Score
1.	Farming only	1
2.	Farming + animal husbandry	2
3.	Farming + Service	3
4.	Farming + Business	4
5.	Farming + AH + Service	5
6.	Farming + AH + Business	6

Housing Pattern: -

It refers to the habitation of the family members. It's divided into three categories viz. Kuccha, Pucca and mixed house and scoring assigned to them.

Social

S.N.	Category	Score
1.	Kuccha	1
2.	Pucca	2
3.	Mixed	3

Participation: -

Based on participation the respondents are divided into four categories and scoring is assigned to them 0, 1, 2 and3.

S.N.	Category	Score
1.	No Participation	0
2.	Participation in one organization	1
3.	Participation in two organization	2
4.	Participation in more than two organization/Office bearer	3

Family Annual Income: -

It refers to income produced by the family from various occupations in a year. The family income is categorized into three categories based on class interval and assigned the score.

S.N.	Category	Score
1.	Up to 1,00,000 Rs.	1
2.	1,00,001 Rs to 2,00,000 Rs	2
3.	2,00,001 Rs to 3,00,000 Rs	3
4.	3,00,001 Rs to 4,00,000 Rs	4
5.	4,00,001 Rs to 5,00,000 Rs	5
6.	Above 5,00,000 Rs	6

Statistical Data analysis: -

Statistical framework for analysis of data to analyze the collected information, following statistical tools and methods were used for interpreting the data.

Percentage: Simple comparisons were made based on frequency and percentage.

Mean or Average: - Mean percent score was obtained by multiplying total obtained score of the respondents by hundred and divided by the maximum obtainable score under each practice.

Result and Discussion:
Table-1 Distribution of the respondents on the basis of age

N=360

S. No.	Categories (years)	Respondents	
		Frequency	per cent
1.	Young age (up to 34)	72	20.00
2.	Middle age (35-55)	178	49.44
3	Old age (56 and above)	110	30.55
	Total	360	100.00

Mean=45.01, S.D. =10.83, Min. =28, Max. =72

Table-1 reveals that majority of the respondents was belonged to middle age group (35-55 years) 49.44per cent   followed by old age group (56 and above) 30.55per cent and rest of all respondents belonged to the young age group (Up to 34) 20.00 per cent, respectively. The age of the selected respondents ranged from 28 to 72 years. The mean of age of the respondents was observed 45.01 years.

Table-2 Distribution of the respondents on the basis of education

N=360

S. No.	Categories	Respondents	
		Frequency	%
1.	Illiterate	50	13.89
2.	Literate	310	86.11
2. a.	Primary school	70	19.44
2. b.	Middle school	53	14.72
2. c.	High school	58	16.11
2. d.	Intermediate	98	27.22
2. e.	Graduate & Post graduate	31	08.61

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Table-2 reveals that the majority of the respondents were literate 86.11 per cent and rest of respondents 13.89 per cent illiterate. Literate respondents further categorized in five categories, and their educational status worked out. Table-2 also revealed that most of respondents completed intermediate 27.22 per cent followed by primary school 19.44 per cent, high school 16.11per cent, middle school 14.72 per cent and graduate and postgraduate 08.61 per cent respectively. It also revealed that educational status of respondents excellent in comparison of both district Azamgarh 70.90 per cent as well as Sonbhadra district 64.00 per cent.

Caste category:
Table-3 Distribution of the respondents on the basis of caste

N=360

S. No.	Categories	Respondents	
		Frequency	%
1.	General caste	180	50.00
2.	Other Backward classes	120	33.33
3.	Scheduled caste	60	16.66
	Total	360	100.00

Table-3 depicted that the majority of respondents belonged to general caste 50.00per cent, followed by scheduled caste 33.33per cent and other backward caste category 16.66per cent, respectively. Therefore, it concluded that the general caste was dominated over other backward classes and schedule caste in study area.

Type of family:
Table-4 Distribution of the respondents on the basis of family type

N=360

S. No.	Family type	Respondents	
		Frequency	%
1.	Nuclear/Single family	187	51.94
2..	Joint family	173	48.05
	Total	360	100.00

Table-4 Indicated type of family of respondents. It revealed that most of respondents were observed in nuclear/single families 51.94 per cent and rest of rest ofrespondents came in joint family 48.05 per cent. It was evident from that above thatin recently rural society prefers single family instead of joint family.

Size of family:
Table-5 Distribution of the respondents on the basis of family size

N=360

S. No.	Categories (members)	Respondents	
		Frequency	%
1.	Small (up to 4)	90	25.00
2.	Medium (5-8)	186	51.66
3.	Large (9 and above)	84	23.33

	Total	360	100.00

Mean= 6.16, S.D. =2.49, Min=3, Max=15.

Table-5 depicted the size of family of respondents and it revealed maximum number of respondents found in medium category and their accounts 51.66 per cent followed by medium category 25.00per cent and large category 23.33per cent, respectively. It also revealed that majority of respondents belongs to medium size of family.

Size of land holding:

Table-6 Distribution of the respondents on the basis of land holding (hectares)

N=360

S. No.	Categories (hectares)	Respondents	
		Frequency	**%**
1.	Marginal farmers	156	43.33
2.	Small farmers	120	33.33
3.	Medium	44	12.22
4	Large farmers	40	11.11
	Total	**360**	**100.0**

Mean=1.17, S.D. =0.73, **Min=0.3, Max= 5.**

The Table- 6 depicted that 43.33 per cent of respondents were observed less than 1 ha of land and they belonged to marginal farmer's category. Whereas, small farmers, medium and large farmers accounted 33.33 per cent, 12.22 per cent and 11.11 per cent land holding, respectively in study area. The mean of land holding was found to be 1.178 hectare, S.D. 0.73 ha, minimum of 0.3 and maximum of 5.0 hectares.

Occupation:

Table-7 Distribution of the respondents on the basis of occupation

N=360

S. No.	Occupation	Main		Subsidiary	
		Frequency	%	frequency	%
1.	Agriculture labour	00	00	63	17.50
2.	Caste based occupation	22	6.11	31	8.61
3.	Government Service	24	6.66	36	10.00
4.	Private Service	18	5.00	09	2.38
5.	Agriculture	150	41.66	20	5.55
6.	Business	13	3.61	05	1.38
7.	Agro-based enterprises	04	1.11	14	3.88
8.	Dairying	00	00	07	1.94
9.	Gardening	9	2.50	4	1.11

Table- 7 revealed that the maximum respondents were engaged in agriculture 41.66 per cent followed by Govt. services 6.66 per cent, caste based occupation 6.11 per cent, Private Service 5.00 per cent, business 3.61per cent, gardening 2.50 per cent and agro- based enterprises accounts 1.11 per cent respectively. The maximum respondents were observed whose subsidiary occupation as agriculture labour 17.50 per cent, followed by govt. services 10.00per cent, caste based occupation 8.61per cent, agriculture 5.5per cent, agro-based enterprises 3.88 per cent, dairying 1.94 per cent and gardening and 1.11 per cent,

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respectively.

Annual income:

Table-8 Distribution of the respondents on the basis of annual income (Rs.)

N=360

S. No.	Annual income (Rs.)	Respondents	
		Frequency	%
1.	Small (up to 93623)	93	25.83
2.	Medium (93624-295483)	187	51.94
3.	High (295484 and above)	80	22.22
	Total	360	100.00

Mean =194583, S.D. =100899.9, Min. =Rs 46000, Max. =425000.

Table 8 indicted that maximum number of the respondents belonged to the annual income of medium (Rs.93624-295483) 51.94per cent followed by small (up to 93623 Rs.) 25.83 per cent and high (295484 and above) 22.22per cent, respondents were found in high income range from Rs. (295484 and above), respectively.

Table-9 Distribution of the respondents on the basis of housing pattern

N=360

S. No.	Housing pattern	Respondents	
		Frequency	%
1.	Kuchcha	60	16.66
2.	Mixed	198	55.00
3.	Pucca	102	28.33
	Total	360	100.00

Table -9 depicted the type of house possession of respondent in study area. The mixed type of house was found 55.00per cent followed by pucca houses 28.33per cent and kuchcha house 16.66per cent, respectively in study area.

Summary and Conclusion:

Majority of the respondents was belonged to middle age group (35-55 years). Majority of the respondents were literate 86.11 per cent and rest of respondents 13.89 per cent illiterate. Majority of respondents belonged to general caste in study area. It revealed that most of respondents were observed in nuclear/single families. Result revealed maximum number of respondents found in medium category and theiraccounts 51.66 per cent. Result revealed that 43.33 per cent of respondents were observed less than 1 ha of land and they belonged to marginal farmer's category. The maximum respondents were engaged in agriculture 41.66 per cent. Maximum number of the respondents belonged to the annual income of medium(Rs.93624-295483) 51.94per cent. Most of respondents having the mixed type of house was found 55.00per cent. Result revealed that 42.22 per cent of the respondents were participated as member oftwo organizations/office bearer.

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