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Socio-economic profile of rice growers in Chhattisgarh plains with reference to farm mechanization

Yogendra Shriwas and HK Awasthi

Abstract
This study was carried out in Dhamtari, Mahasamund, Janjgir-Champa, Raigarh and Raipur; five selected districts of Chhattisgarh plains because these districts have highest farm machineries. The study aimed to assess the socio-economic profile of rice growers in Chhattisgarh plains with reference to farm mechanization. The information was obtained with help of interview schedule by personal interview. Collected data were analyzed by using suitable statistical tools. The data reveals that the maximum respondents (54.33%) were involved in single occupation Agriculture (rice cultivation), (72.66%) had their income up to ₹76,000, 43.66 per cent of the selected respondents had 2.01 to 4 ha of land holdings (medium farmers) and most of the respondents (41.34%) had not acquired credit for purchasing of farm machines and implements and the majority of them taken long term credit.

Keywords: Socio-economic profile, rice growers, Chhattisgarh plains, farm mechanization.

Introduction
Agricultural mechanization which entails the use of machines to perform several activities on the farm in order to save time, money spent on hiring of labor and most importantly increases the level of production which will automatically lead to a simultaneous increase in the farmers income. Agricultural mechanization implies the use of various power sources and improved farm tools and equipment, with a view to reduce the drudgery of the human beings and draught animals, enhance the cropping intensity, precision and timelines of efficiency of utilization of various crop inputs and reduce the losses at different stages of crop production. The end objective of farm mechanization is to enhance the overall productivity and production with the lowest cost of production. The contribution of agricultural mechanization has been well recognized in enhancing the production together with irrigation, biological and chemical inputs of high yielding seed varieties, fertilizers, pesticides and mechanical energy.
It has a positive indirect effect on agricultural extension and rural development because of the principle of agricultural extension which is aimed at helping people to helping themselves. The series of information supplied to the farmers in the rural area goes a long way in developing agriculture in that rural community, which automatically leads to increase in farmers‟ yield and finally improving the ways of life of the rural dwellers.

Objective
To assess the socio-economic profile of rice growers in Chhattisgarh plains with reference to farm mechanization.

Material and Methods
1. **Location of the study area:** The study was carried out in Dhamtari, Mahasamund, Janjgir-Champa, Raigarh and Raipur districts of Chhattisgarh. These districts having highest farm machineries.
2. **Selection of blocks:** From each selected district 2 blocks (2X5 = 10) were selected purposively for the study on the basis of highest area covered under farm mechanization.
3. **Selection of villages:** From each selected block, 3 villages (Total 3 X 10 = 30) will were selected on the basis of maximum availability of farm machineries in the villages. The list of farm maximum availability of farm machineries were developed with the help of Government Agricultural Engineers, Surveyors and Rural Agricultural Extension Officers.
4. **Selection of respondents:** From the list of farm machinery owners, total 10 farmers were selected randomly. In this way a total of 300 farmers were considered as respondents for the study.

5. **Collection of data and Statistical analysis:** Primary data from beneficiaries were collected through personal interview with the help of pre-tested structured interview schedule. Collected data were tabulated and processed by using appropriate statistical tools.

Socio-economic profile of rice growers

The independent variables i.e. occupation, annual income, size of land holding, and credit acquisition were considered as socio-economic profile of the rice growers.

Results and Discussion

Occupation of respondents

The data on distribution of the respondents according to their involvement in different occupation is given in the Table no.1. The data reveals that the maximum respondents (54.33%) were involved in single occupation Agriculture (rice cultivation) followed by 22 per cent Agriculture + Labour, 8.66 per cent Agriculture + Business, 6.30 per cent Agriculture + Independent profession, 5.33 per cent agriculture + caste occupation and 3.36 per cent of the respondents were involved in Agriculture + Service.

Table 1: Distribution of the respondents according to their involvement in various occupations (n=300)

Sl. No.	Categories	Frequency	Percentage
1.	Agriculture (Rice cultivation)	163	54.33
2.	Agriculture + Labour	66	22.00
3.	Agriculture + Caste occupation	16	5.33
4.	Agriculture + Business	26	8.66
5.	Agriculture + Independent profession	18	6.30
6.	Agriculture + Service	11	3.36

Annual income of respondents

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 no. 2.fig. no. 1 As regards to annual income of the respondents, majority of them (72.66%) had their incomes up to ₹76,000 followed by 17.00 per cent in the range between ₹ 76,001 to 1, 52,000, 7.34 per cent range between ₹ 1,52,001 to 2, 28,000 while only 3.00 per cent of the respondents obtained their income more than ₹ 2, 28,000.

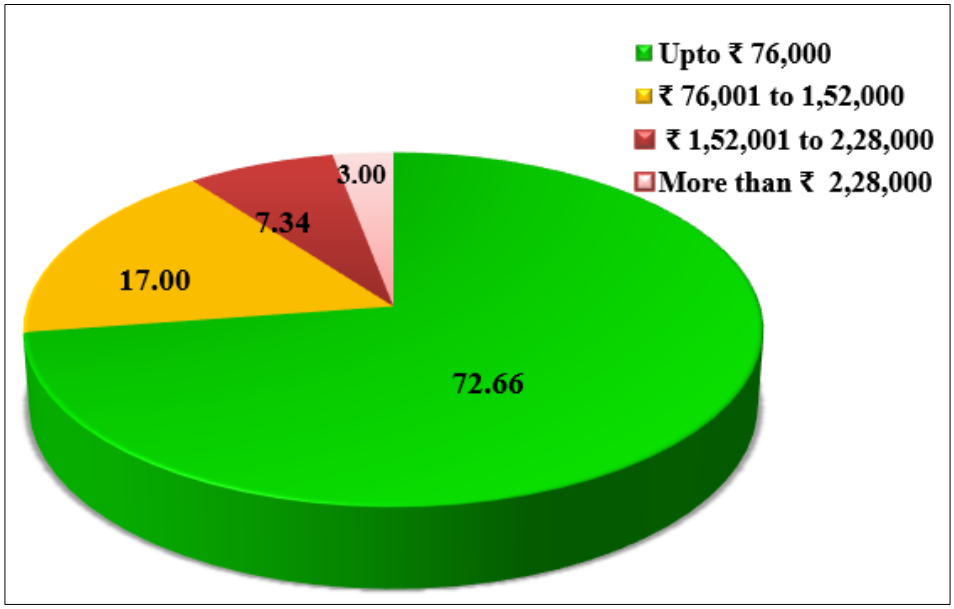

Fig. 1: Annual income of respondents

Table 2: Distribution of respondents according to their Annual income

S. No.	Annual income	Frequency	Percentage
1.	Upto ₹ 76,000	218	72.66
2.	₹ 76,001 to 1,52,000	51	17.00
3.	₹ 1,52,001 to 2,28,000	22	7.34
4.	More than ₹ 2,28,000	9	3.00
Total		300	100

Land holding of respondents

The finding on distribution of the respondents according to their land holdings are presented in the Table no. 3.fig. no. 2. The data regarding land holdings indicates that 43.66 per cent of the selected respondents had 2.01 to 4 ha of land holdings (medium farmers) followed by 30.33 per cent 1.01 to 2.00 ha of land holding (small farmers), 15.33 per cent up to 1.00 ha of land holding (marginal farmers) and only 10.68 per cent of the respondents had above 4.00 ha of land holdings (big farmers).

Table 3: Distribution of respondents according to their size of Land (n=300)

Sl. No.	Size of Land holding	Frequency	Percentage
1.	Marginal (Up to 1.00 ha)	46	15.33
2.	Small (1.01 to 2.00 ha)	91	30.33
3.	Medium (2.01 to 4.00 ha)	131	43.66
4.	Big (above 4.00 ha)	32	10.68

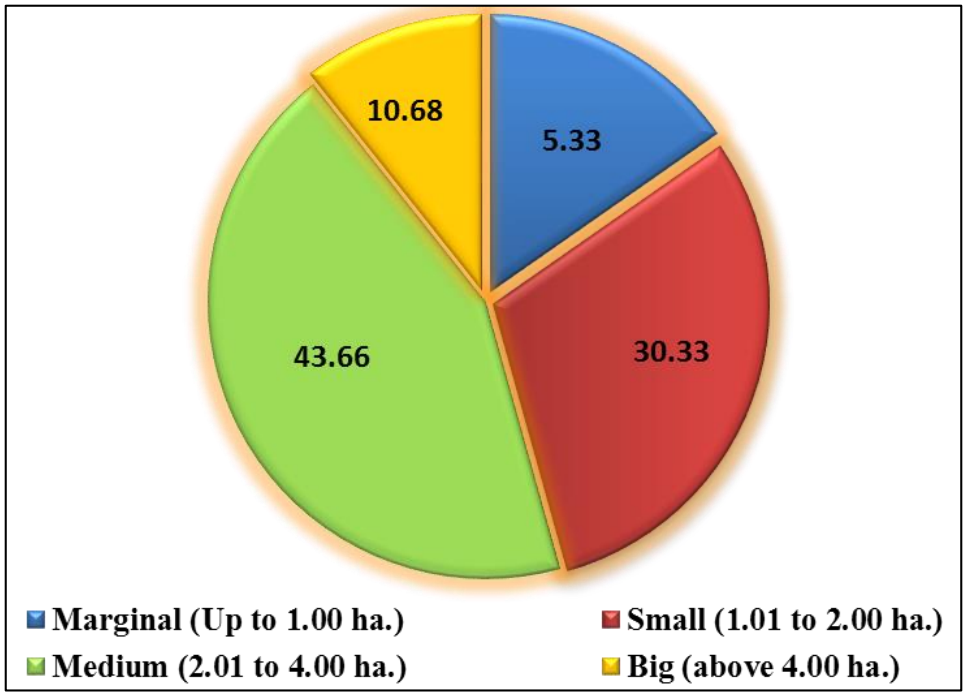

Fig 2: Size of land holding of the respondents

Credit acquisition of the respondents

The findings regarding credit acquisition are presented in the Table no. 4.fig. no. 3. It is clear from this data that the most of the respondents (41.34%) had not acquired credit for purchasing of farm machines and implements, while 58.66 per cent of the respondents had obtained credit for purchasing of farm machines and implements. Out of total credit acquired respondents, the majority of the them (69.31%) taken long term credit followed by 16.49 per cent taken short term credit while 14.20 per cent of the respondents taken medium term credit.

Table 4: Distribution of respondents according to their Credit acquisition

Sl. No.	Particulars	Frequency	Percentage
Credit acquisition (n=300)			
1.	Not acquired	124	41.34
2.	Acquired	176	58.66
Duration of credit (n =176)			
3.	Short term	29	16.49
4.	Midterm	25	14.20
5.	Long term	122	69.31
Availability of credit (n =176)			
6.	Easy	103	58.52
7.	Difficult	73	41.48
Source of credit (n =176)			
8.	Nationalized bank	141	80.11
9.	Money lenders	15	8.52
10.	Friends	7	3.97
11.	Neighbours	4	2.29
12.	Relatives	9	5.11

As regards to availability of credit, majority of the respondents (58.52%) had easy availability of credit and left 41.48 per cent of the respondents facing difficulty in availability of credit.

According to their source of credit, the majority of the respondents (80.11%) obtained credit from nationalised banks followed by 8.52 per cent obtained credit from money lenders, 5.11 per cent from relatives, 3.97 per cent from friends and left 2.29 per cent of the respondents had obtained credit from neighbours.

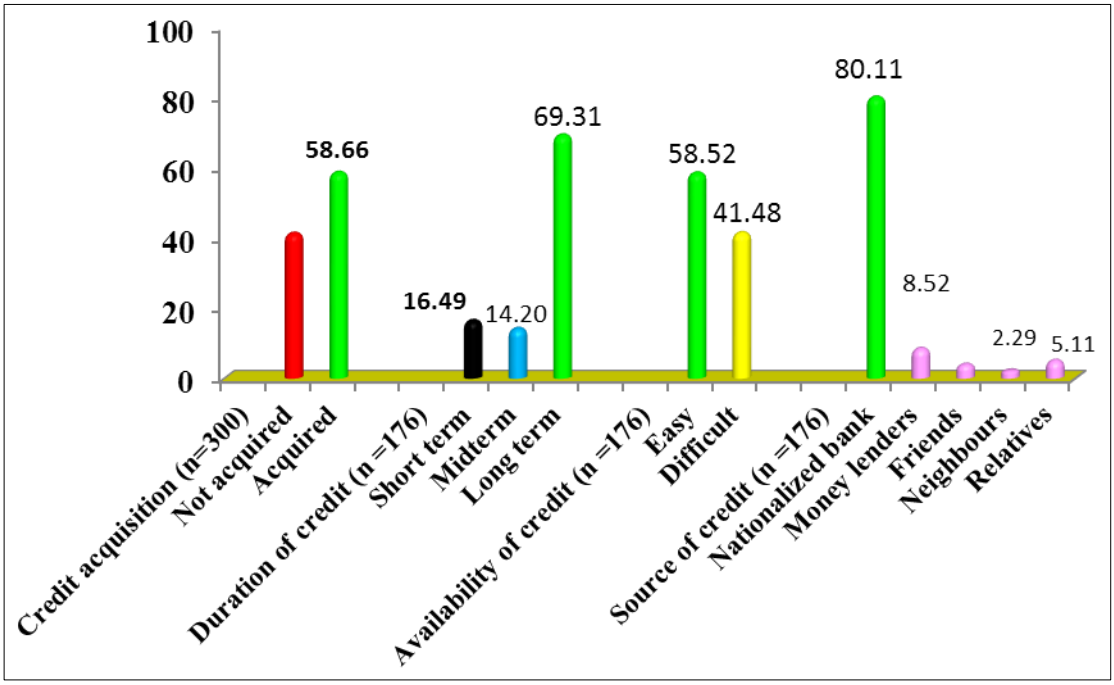

Fig 3: Credit acquisition of the respondents

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Conclusion
From the above findings it can be concluded that socio-economic characteristics might influence the living standard of the respondents and directly associated with impact of farm mechanization were considered in the study. More than half (54.33%) of the respondents were involved in single occupation agriculture (rice cultivation only), Agriculture was main source of income and majority of the respondents (72.66%) were having their incomes up to ₹ 76,000. Most of the respondents were possessed 2 to 4 ha of land and belonged to medium farmers category and more than half (58.66%) of the respondents had obtained credit for purchasing of farm machines and implements, majority of them (80%) acquired long term and easy credit from nationalized banks.

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