

Original Research Article

Socio-Economic Conditions of Paddy Growers in Raichur District, Karnataka, India

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ABSTRACT

The present study was conducted during 2014-15 in Tungabhadra project area of Raichur district in Karnataka state to assess the Socio-Economic Conditions of Paddy Growers. One hundred and twenty five paddy growers from Manvi and Sindhanur talukas respectively. The present study is mainly based on the primary data obtained from sample respondents through survey method. It was found that most of the paddy growers interviewed was of middle age, having large holdings and belonging to medium levels of socio-economic. The average family size was around seven members which were composed of two males, two females and three children. It was noticed that exactly 84% of the respondents were literate. It was noticed that the large respondents had highest cropping intensity (210.58 %) as compared to small and medium respondents (206.61% and 176.85%). Paddy was the major food crop grown in kharif and Rabhi season by all the respondents compared to the maize, sorghum, sugarcane, sunflower and ground nut respectively.

Keywords

Paddy, Socio-economic condition, Raichur district

Introduction

India has the largest area under the rice accounting for 28.5 per cent of the global rice and India produce 22% of world production. Rice is India's pre-eminent crop, and it is the staple food of the people of the eastern and southern parts of the country. In India, the major paddy growing states are Uttar Pradesh, West Bengal, Orissa, Chattisgarh, Andhra Pradesh and Karnataka, In Production wise West Bengal, Andhra Pradesh, Uttar Pradesh and Karnataka (Anon., 2013). Karnataka is one of the major paddy growing states in India. It was grown on an area of 13.40 lakh ha with an annual production of 40.53 lakh tonnes and the average yield of paddy is around 3103 kg/ha during 2013-14

(DES Bangalore-2013-14). The major paddy growing districts in Karnataka are, Raichur, Ballari, Haveri, Uttar Kannada, Dharwad, Koppal, Mysore, Hassan, and Chitradurga. Paddy in the state is grown under different agro-climatic (upland, low land and rain fed) conditions. In Raichur district comprising area 1, 78,356 ha, production 5,72,963 tones and yield was 3,377 kg/ha. (DES Bangalore-2013-14).

The crop is damaged by more than 100 species of insect pests of which about dozen are of significance. The state loses 30 per cent yield every year on this account. However, out of all inputs, pesticides play key role in increasing agriculture production by controlling agriculture pests and diseases.

It has been observed that about on third of reliable global output is estimated to be lost due to insect pests, disease and weeds. In India, the value of crop lost due to pest was estimated at Rs.6, 000 crores in 1983 (Atwal, 1986), which reported to have further increased to Rs.29, 000 crores in early 1990's (Dhaliwal and Arora, 1996). The agrochemical policy group, apex body of 200 crop protection companies has said agriculture produce lost in 2007 due to pest was estimated at Rs.1.40 lakh crores (Kumarswamy, 2008).

Materials and Methods

The present study attempted to analyze the economics of use of pesticides in Paddy production. Paddy is predominantly grown in Raichur district. The area under Paddy in Raichur district is 1, 78,356 hectare (2014). The Pesticide use in study area is high hence, Raichur in Karnataka state is purposively selected for the study. The soil of district is Medium Black, Deep Black, Mixed Red and Black cotton soils suitable for agriculture and horticulture crops. Raichur district is surrounded by Karnool district of Andhra Pradesh in the East, Bagalkote district in the West, Yadgir district in the North, Adoni district of Andhra Pradesh in the South. The climate of the district is very hot and dry. The district consists of five talukas viz., Sindhanur, Manvi, Raichur, Lingasugur and Devdurga.

Nature and source of data

The present study is mainly based on the primary data obtained from sample respondents through survey method. Multistage sampling procedure was adopted to get a necessary information from sample respondents. In 1st stage two talukas were selected viz., Sindhanur and Manvi talukas. The map showing the study area is presented in Fig.1, in 2nd stage four and five villages

were selected from Sindhanur and Manvi talukas respectively and in 3rd stage from each selected village, small, marginal and big farmers were randomly selected for the study. The farmer having land holdings of 0.1 ha and 2 ha were grouped as small respondents, while, the respondents having land holdings of more than 2 ha and less than 4 ha were grouped as medium respondents and the respondents having land holdings of 4 ha and more than 4 ha were grouped as large respondents. Thus the total sample constitutes 125 paddy farmers from nine villages of two talukas in Raichur district (Table 1).

The information pertaining to socio economic aspects of respondents, such as age, family composition, education level, land holdings, cropping pattern, *etc.*, were elicited. The details pertaining to paddy cultivation namely, area under paddy, land preparation operations, inputs used and output obtained were collected. Data on price of inputs and outputs, method of sale, use of plant protection chemicals, awareness of farmers with regard to toxicity levels of pesticide, safety measure followed during applications of plant protection chemicals (PPCs) and behavioral aspects before and after application of PPCs were collected. The survey was under taken during January 2015. The data pertain to the crop year 2014-15.

The secondary data with regards to cropping pattern, rainfall, area under crops in the district and the sample talukas and other necessary data were collected from the District Statistical Office (DSO), Raichur.

The important crops grown in the district are paddy, jowar, maize, cotton, ground nut, sugarcane, wheat and sunflower. Among cereals paddy is major crop, followed by jowar, maize and wheat. The area under paddy in Raichur district is 1,42,700 hectare and in selected talukas is 68,120 hectare (47.73%) and 40,687 hectare (28.51%) in

Sindhanur and Manvi respectively.

Tabular analysis

The tabular analysis were employed for determining general characteristics, Socio-economic conditions, cropping pattern, pesticide usage, costs, returns and profits, etc, from paddy production in the study area. The percentages and averages were worked out to draw meaningful inferences.

Results and Discussion

General characteristics of the sample respondents

The average age of the sample respondents was 41.81 years indicate that most of the respondents were middle age group (Table 2) and it was 40.12 years, 42.32 years and 43.01 years for small, medium and large respondents respectively. The average family size was around seven members which were composed of two males, two females and three children. The average size of land holding of the respondents was 3.38 ha. The size of holding of small, medium and large farmer's was 1.75 hectares, 2.72 hectares and 5.67 hectares respectively. The average size

of irrigated farm was 3.14 hectares. Small, medium and large respondents respectively had 1.52 hectares, 2.46 hectares, and 5.42 hectares under irrigation. The average area under the paddy for sample respondents was 2.56 hectares and it ranged from 1.23 hectares for small respondents to 4.32 hectares for large respondents. The average paddy yield was 74.65 q\ha. It was 74.40 q\ha, 74.87 q\ha and 74.79 q\ha for small, medium and large respondents respectively.

Educational status of the sample respondents

The educational status of the sample respondents was presented in Table 3. It was noticed that on an average 84.00 per cent of respondents were literate. Among literates, 45.60 per cent of respondents had education up to primary level, 23.20 per cent of them studied up to secondary school. The respondents who had college education worked out to 15.20 per cent, the remaining 14.00 per cent of the respondents were illiterate. It was noticed that 90.00 per cent of the large respondents were literate which was highest when compared to other groups.

Table.1 Selection of farm respondents from the study area

Sl. No	Name of selected Blocks and Villages	No of Respondents			Total number of samples in each village
		Small	Medium	Large	
1	Sindhanur Block				
1.1	Mullur	7	6	5	18
1.2	Gorebal	7	6	4	17
1.3	Singapore	6	5	3	14
1.4	Belagurki	6	5	4	15
2	Manvi Block				
2.1	Baltigi	6	4	3	13
2.2	Kardi Gudda	5	4	3	12
2.3	Jambaladinni	6	5	4	15
2.4	Sangapur	5	4	3	12
2.5	Gavighatta	4	3	2	9
Total		52	42	31	125

Thus all together 125 respondents in different size groups were selected from nine villages.

Table.2 General characteristic of sample respondents

Sl. No.	Particulars	Respondents			
		Small (n=52)	Medium (n=42)	Large (n=31)	All (n=125)
I	Average age (years)	40.12	42.32	43.01	41.81
II	Family composition	(Fig in Numbers)			
	Male members	1.93 (36.35)	2.60 (38.07)	2.85 (37.35)	2.46 (37.33)
	Female members	1.05 (19.77)	1.70 (24.89)	2.00 (26.21)	1.58 (23.98)
	Children / Child	2.33 (43.88)	2.53 (37.04)	2.78 (36.44)	2.55 (38.69)
	Average size family	5.31 (100.00)	6.83 (100.00)	7.63 (100.00)	6.59 (100.00)
III	Size of land holding	(Area in hectare)			
	Average size of dry farm	0.23 (13.14)	0.26 (8.88)	0.25 (4.40)	0.24 (7.72)
	Average size of irrigated farm	1.52 (86.85)	2.46 (91.11)	5.42 (95.59)	3.14 (92.28)
	Average size of land holding	1.75 (100.00)	2.72 (100.00)	5.67 (100.00)	3.38 (100.00)
	Average area under paddy	1.23 (71.51)	2.13 (78.30)	4.32 (76.19)	2.56 (75.73)
	Yield (qt\ha)	74.40	74.87	74.79	74.65

Note: Figures in parenthesis are percentages

Table.3 Educational status of the sample respondents (Fig in Numbers)

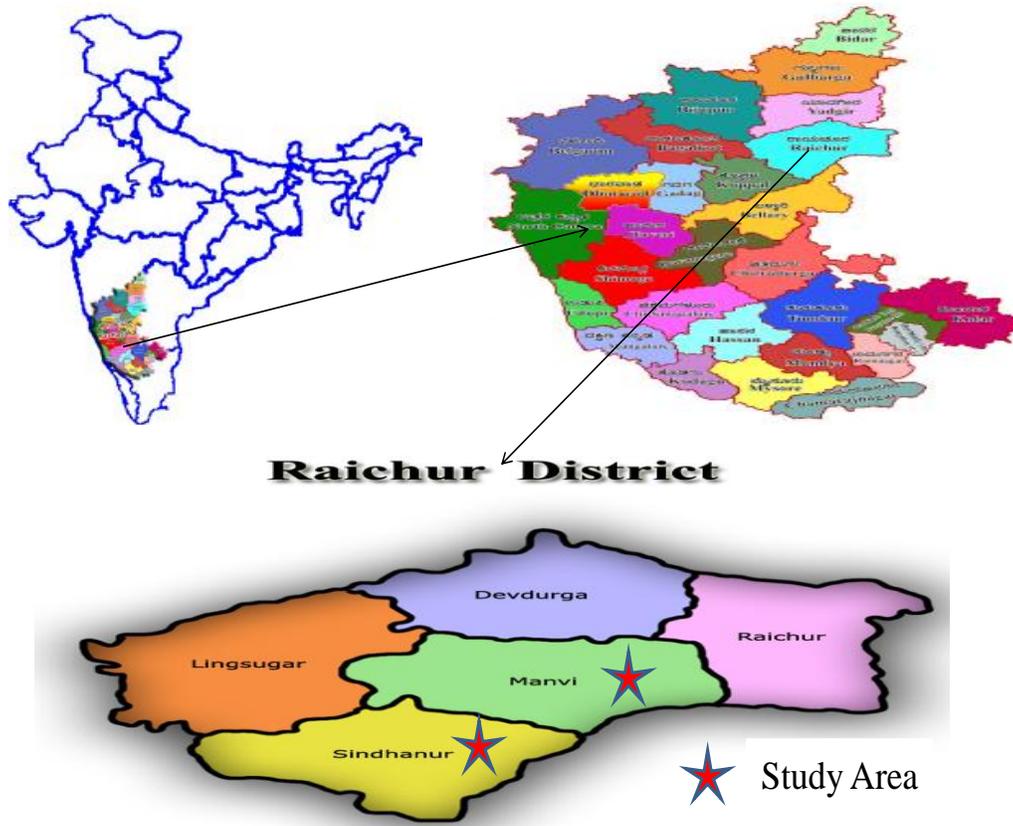
Sl. No.	Education	Respondents			
		Small (n=52)	Medium (n=42)	Large (n=31)	All (n=125)
1	Illiterate	9 (17.31)	8 (19.05)	3 (9.68)	20 (16.00)
2	Primary	25 (48.08)	19 (45.24)	13 (41.94)	57 (45.60)
3	Secondary	12 (23.08)	6 (14.29)	11 (35.48)	29 (23.20)
4	College and above	6 (11.54)	9 (21.43)	4 (12.90)	19 (15.20)
	Total	52 (100.00)	42 (100.00)	31 (100.00)	125 (100.00)

Note: Figures in parenthesis are percentages

Table.4 Cropping pattern and major crops grown by the respondents during the year 2013-14 (Area in hectare)

Crop\ season	Small (n=52)	Medium (n=42)	Large (n=31)	All (n=125)
Kharif				
Paddy	1.23	2.13	4.32	2.56
Maize	0.15	0.0	0.24	0.13
Sunflower	0.20	0.13	0.34	0.22
Sorghum	0.10	0.00	0.12	0.07
Sugar cane	0.07	0.16	0.36	0.20
Rabi				
Paddy	1.23	2.13	4.32	2.56
Maize	0.025	0.71	0.75	0.50
Sunflower	0.0	0.00	0.24	0.08
Sorghum	0.0	0.00	0.00	0.00
Summer				
Maize	0.02	0.06	0.35	0.14
Sunflower	0.0	0.00	0.31	0.10
Ground nut	0.07	0.00	0.30	0.12
Horticulture crop				
Banana	0.00	0.30	0.29	0.20
Gross cropped area	3.09	5.38	11.9	6.79
Size of land holding	1.75	2.72	5.67	3.38
Cropping intensity (%)	176.85	206.61	210.58	204.31

Fig.1 Map showing the study area in Raichur district



Cropping pattern and major crops grown

As could be seen Table 4 all the three categories of respondents are growing a number of crops on their farm. The major crops were grown during kharif by sample respondents were paddy, maize, sunflower, sorghum and Sugarcane. Among these crops the area under paddy was found to be highest (2.56 ha), Maize, sunflower, sorghum, and sugarcane occupied an average area of 0.13 hectares, 0.22 hectares, 0.07 hectares, and 0.20 hectares respectively.

During *Rabi* season paddy, maize, sunflower and sorghum were the major crops grown. The average area under these crops was 2.56

hectares, 0.50 hectares, 0.08 hectares, and 0.00 hectares respectively.

During summer where irrigation facility was available maize, sunflower and ground nut were grown. The average area for crops was 0.14 hectares, 0.10 hectares and 0.12 hectares respectively. It was noticed that the large respondents had highest cropping intensity (210.58 %) as compared to small and medium respondents (206.61% and 176.85%).

It is concluded that the most of the sample respondents were middle age group. The family size was around seven members which were composed of two males, two females and three children. The size of land

holdings, paddy area and irrigated land were more in large respondents compare to others groups because of joint family. The large respondents were high in literacy rate compare to other groups because of more financial stability. Paddy and maize were the major food crops grown, whereas sorghum, sugarcane, sunflower and ground nut were the other crops grown by the sample respondents. Paddy is the major food crops of the area grown in *khari* and *Rabi* season by the all categories of respondents. Mono cropping of paddy (paddy after paddy) is a highly prevailing in the area.

References

Agri Business Export Knowledge Center, UAS Dharwad, 2012-2013.

- Anonymous, 2013, www.Indiastat.com/Agriculture.
- Anonymous, 2014, www.Indiastat.com/Agriculture.
- Atwal, S. S., 1986, Future of pesticides in plant protection in G. S. Venkataraman (Ed) 1986, plant protection in the year 2000 AD. Indian National Sci. Acad., New Delhi.
- Dhaliwal, G. S. and Arora, R., 1996, Principle of insect pest management. Common Wealth Publishers, New Delhi.
- Directorate of Economics and statistics (DES) Bangalore.
- District Statistical Office (DSO) Raichur.
- Kumarasamy, S., 2008, Crop loss due to pest attack pegged at Rs.1.40 lakh crores. 33 (4):73-74.