



Study on Assessing the Socio-economic Characters of Banana Growers in Vaishali District of Bihar

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Abstract

In terms of area and production, bananas are the top crop in India, with Bihar coming in at number seven. Bihar cultivars include Dwarf Cavendish, Alpan, China, Chinichampa, Malbhog, Muthia, and Kothia. Banana cultivation is well-known in the Vaishali district and the Ganga basin region. A total of 135 respondents from seven villages in the Bidupur and Hajipur blocks of the Vaishali District of Bihar were taken in the study and well-structured interview schedule is used to collect data. A correlation was found between the growers' profile and their knowledge and implementation of banana producing technology. The majority of the farmers (66%) had a medium degree of general knowledge about the technology recommended for producing bananas, according to the data. The results show that most of the farmers were in the age group of 35-55 years (57.00%) and 36.29 percent of banana growers had completed their higher secondary education with 7 to 27 years of banana cultivation experience (62.00%). Sample farmers largely live as joint family type (71.12%) whereas majority of banana growers (44.00%) had land holdings from 1.01 ha to 2 ha. And earn their living from banana cultivation, with 73.34 percent in the medium income group i.e. Under (Rs. 55,398 to Rs.3,61,348). Extension agents and agricultural scientists may have increased banana production by regularly visiting, educating, and advising growers. It is suggested to conduct number of training programs, tour visits and exhibition to increase the awareness about banana exports and production.

Keywords: Socio-economic characters, Small and marginal farmers, Knowledge, Banana growers.

1. Introduction

The banana (*Musa* sp.) is India's second most important fruit crop after mango. It is the most popular fruit because of its year-round availability and various benefits. It is one of the most remunerative crops preferred by farmers for cultivation both in the uplands and lowlands (Issac *et al.*, 2012). The banana is one of the world's oldest fruits, is known as the "Apple of paradise," and is botanically known as *Musa paradisiaca*. It has a high export potential. Hi-tech

crop cultivation is a financially feasible business that increases productivity and improves product quality and early harvest (Vitonde A.K. and Patil R.K. 2005). Among the fruit crops, India's banana ranks first in production and third in area. It covers 13 per cent of the entire land area and produces 33 per cent of the total fruit production. Maharashtra has the largest production (392401 thousand tonnes). Karnataka, Gujarat, Bihar, AP, and Assam are the main banana-producing states. India leads the globe in

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banana production and area with a total yearly output of 29.16 million metric tonnes from 358.0 thousand hectares in 2017. (www.arcejournals.com) Bihar ranks 7th in the country, producing 1,968.21 tonnes (agriexchange.apeda.gov.in). Dwarf cavendish, alpine, china, chimichanga, mailbag, muthia and other are Bihar cultivars.

The production of bananas requires sufficient knowledge and a positive attitude with improved management practices to make it commercially viable by adopting improved management practices. Modern science and technology suggest adopting improved agriculture and horticultural practices (Sarker, 2016). The Vaishali district area around the Ganga basin is known for its good production of horticultural crops. The climatic conditions in the district are ideal for banana growing in the state, and there is plenty of room to expand the area under this crop. Banana production is a specific sort of farming in this tract that provides more remunerative income to growers than conventional grain and pulse crops (Barsha, 2022). The main objective of this study was to determine the Knowledge and adoption of banana production technology by the Vaishali district of Bihar growers. The specific objectives were (i) to identify the personal and socioeconomic characteristics of banana growers, (ii) to assess the banana grower's Knowledge of banana production technology, (iii) to determine the extent of Adoption of banana production technology and (iv) To determine the relationship between the dependent and independent variables. The personal, socio-economic, communicational, and psychological characteristics of banana growers and their Knowledge and adoption of banana production technology practises were studied in seven villages in the Vaishali district. The relationship between banana growers' characteristics and Knowledge and adoption level was also investigated.

Among the various cultivars grown in Bihar, Chiniya Kela, also known as Chinia or Chini Champa, holds a

special place. This cultivar is particularly popular in the Vaishali district and other parts of Bihar. Chiniya Kela is known for its sweet taste, small to medium-sized fruits, and thin peel. The plants are relatively shorter than other varieties, making them less susceptible to wind damage. This cultivar is well-adapted to the local climatic conditions and soil types of Bihar, particularly in the Ganga basin area. Farmers in Vaishali district often prefer Chiniya Kela due to its good market demand, relatively shorter crop cycle, and better resistance to pests and diseases than other local varieties. The cultivation of Chiniya Kela contributes significantly to banana production in Bihar and plays a vital role in the region's agricultural economy.

2. Methodology

The study was conducted in Vaishali District of Bihar. Out of 16 blocks two blocks Bidupur and Hajipur were selected for study of banana production technology because it has the highest area in production of banana fruit crop.

From the selected two blocks, four villages were selected from Bidupur and three villages was selected from Hajipur block based on the maximum number of farmers and area. From each selected village 02 percent of the farmers were selected on the basis of proportionate random sampling method. A household survey was conducted and data was collected using a semi-structured schedule through face-to-face interviews with 135 banana farmers, selected for the study purpose whereas data analysis was done with the help of SPSS Software and statistical tool such as mean, standard deviation and coefficient of correlation was used. The inquiry yielded results, which led to a conclusion.

3. Results and Discussion

Table 1 shows the frequency distribution of profile of the respondents observed over the factors of Age, Educational qualification, Types of family, Size of land holdings, Annual income (Rs.), Area under banana cultivation and Banana cultivation experience.

Table 1: Socio-economic characteristics of the profile farmers

Factors	Category	No. of respondents	Percentage
Age (in years)	Young (below 35 years)	24	18.00
	Middle (35 -55 years)	77	57.00
	Old (above 55 years)	34	25.00
	Mean=45.57	S.D.= 10.21	
Level of education	Illiterate	3	2.22
	Can read only	4	03.22
	Can read and write	6	4.44
	Primary school	31	23.00
	Middle school	14	10.32
	Higher secondary	49	36.29
	Graduation	22	16.29
	Postgraduate and above	6	4.44
Types of family	Nuclear family	39	28.88
	Joint family	96	71.12
Size of land holdings	Marginal (up to 1 ha.)	9	06.66
	Small (1.01 to 2 ha.)	36	26.66
	Semi-medium (2.01 to 4 ha.)	59	43.73
	Medium (4.01 to 10 ha.)	25	18.51

Annual income (Rs.)	Large (10.01 and above)	6	04.44
	Low-income group (below Rs. 55,398)	18	13.33
	Medium income group (Rs. 55,398 to Rs.3,61,348)	99	73.34
	High income group (above Rs. 3,61,348)	18	13.33
	Mean = 208373.13		S.D. = 152975.09
Area under banana cultivation	up to 1 ha	48	35.50
	1.01 ha. to 2 ha	59	44.00
	2.01 ha to 4 ha	25	18.50
	4.01 ha to 10.00 ha	3	2.00
	10.01 ha and above	0	0.00
Banana cultivation experience.	Low banana cultivation experience (below 7 years)	28	21.00
	Medium banana cultivation experience(7-27years)	84	62.00
	High banana cultivation experience (above 27 years.)	23	17.00
	Mean = 17.38		S.D. = 10.05

1. AGE

The results furnished in Table 1 showed that majority of banana growers (57.00%) belonged to middle age category, whereas (18.00%) of banana growers are found in young age category and (25.00%) of growers belonged to old age category. The banana growers in middle age category have higher interest in social participation, farming experience and more engaged in adoption. The result clearly showed that the majority of banana growers were in middle age group (35-55 years). These findings matched with those of Bhagwan (2017) and Mahajan (2000).

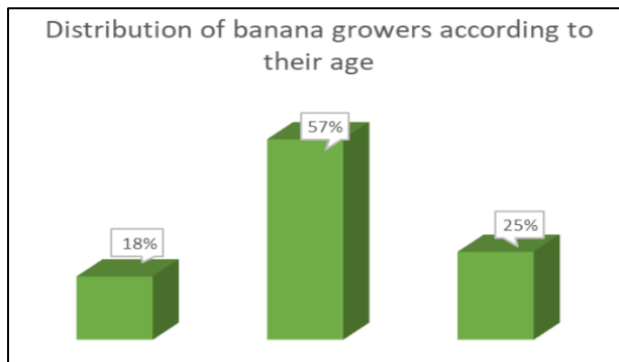


Fig. 1: Distribution of banana growers according to their age.

2. Education

Analysis on educational status above Table 1 reveals that the majority (36.29%) of the banana growers were educated up to higher secondary, followed by 23.00 percent of banana growers had completed their education up to primary level, further 16.29 percent, 10.32 percent and 4.44 percent of banana growers had education up to graduation, middle school and postgraduate level, respectively. Whereas 3.22 percent of banana growers can able to read only, 4.44 percent can able to read and write only and only 2.22 percent of banana growers are illiterate. As a result, it was determined that the maximum number of banana growers had a higher secondary level of education. The reason could be that the farmers will have to go out from their village for higher studies as there is no proper facilities for higher studies as free education. Similar results were observed from Pawar (2008) and Hendege *et al.* (2007).

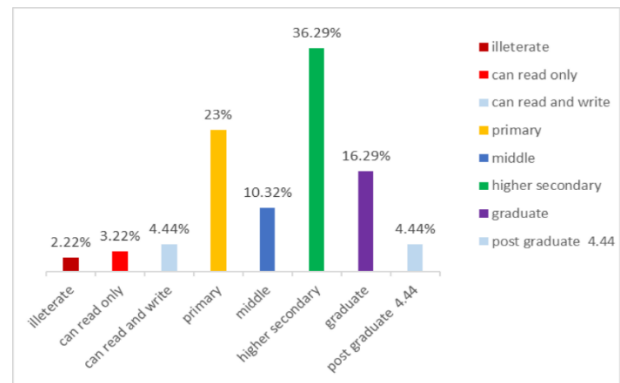


Fig. 2: Distribution of banana growers according to their educational level.

3. Types of Family

Studying on family types reveals that maximum number (71.12%) of banana growers belonged to joint family category whereas 28.88 percent of banana growers belonged to the category of nuclear family. It could be because the study area has a high prevalence of joint family systems. These observations are in line with the findings of Bhagwan (2017)

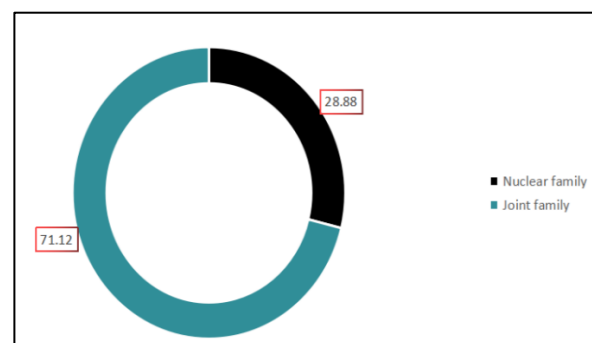


Fig. 3: Distribution of Banana growers according to their type of family.

4. Land Holding

According to Table 1, the highest percentage of banana growers (43.73%) had semi-medium land holdings, 26.66 percent and 18.51 percent of banana growers had small land holdings and medium land holdings, respectively. Whereas 06.66 percent of banana growers had marginal land holdings and only 04.44 percent of banana growers had large land holdings.

The Table1 revealed that the vast majority of banana

growers had semi-medium category of land holdings. This could be due to land inheritance from their forefathers, which may have been passed down from generations after generations.

These findings are in line with the findings of Vijay (2016) and Bhandare (2011)

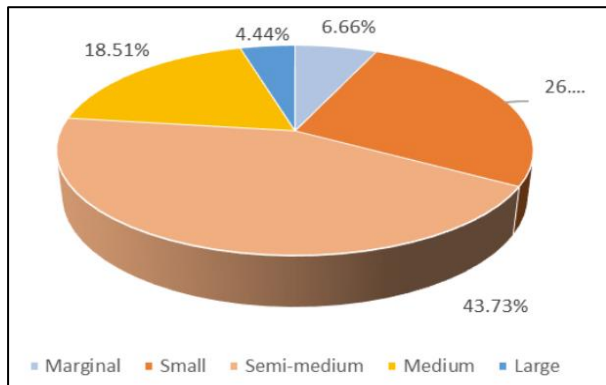


Fig. 4: Distribution of banana growers according to their land holdings.

5. Annual Income in Banana Cultivation

Annual income results depicted in Table 1 revealed that the majority of banana growers (73.34%) had medium annual income followed by 13.33 percent of banana growers falls under the category of both low- and high-income group. According to the results, majority of banana growers fell into medium category of annual income. This could be because of higher fluctuation of produce prices but average production and the need to sell to make money, lower pricing of their various produce and semi-medium and medium- sized land holdings are all possible factors.

These findings are comparable to those of Makwan (2005).

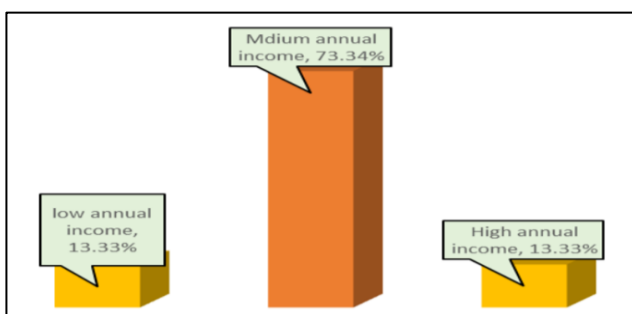


Fig. 5: Distribution of banana growers according to their annual income in banana.

6. Area Under Banana Cultivation

As per Table 1, 44.00 percent of banana growers had small land holdings under banana cultivation, 35.50 percent of banana growers had marginal land holdings whereas 18.50 percent of them had semi-medium land holdings and 2.00 percent of banana growers had medium land holdings under banana cultivation. The majority of banana growers had small land holdings.

These observations are in line with the findings of Vijay

(2016) and Punjabrao (2006).

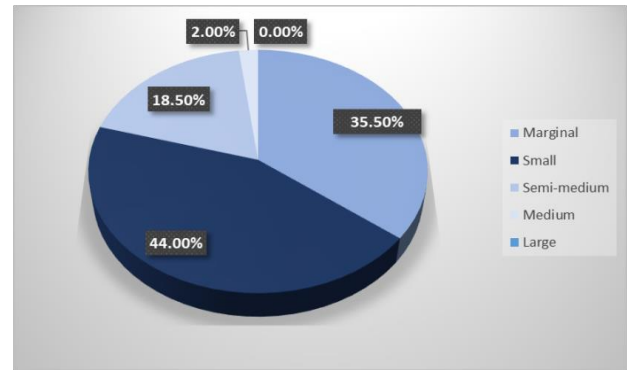


Fig. 6: Distribution of banana growers according to area under banana cultivation.

7. Banana Cultivation Experience

Exploring the experience level of farmers on banana cultivation, the majority of banana growers (62.00%) had a medium level of experience in banana cultivation. While 21.00 percent of banana growers had a low level of experience in banana cultivation and 17.00 percent had a high level of banana cultivation experience. It can be stated that the majority of banana growers had a medium level of experience in banana cultivation.

These findings were similar with the findings of Amaladeepan (2018) and Bhagwan (2017).

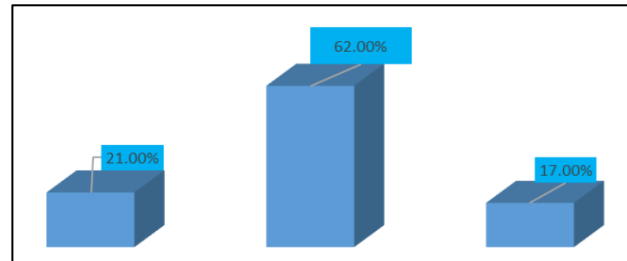


Fig. 7: Distribution of banana growers according to banana cultivation experience.

4. Conclusion

Thus, from the study, it is understandable that the majority (57.00%) of banana growers belonged to medium age, 36.29 percent had a higher secondary level of education, nearly three fourth of banana growers had joint family, 43.73 percent had semi-medium land holding. Furthermore, 44.00 percent of banana growers had land between 1.01 and 2 hectares under banana cultivation. Majority of banana growers earn more than 55,398 Rs per year, in terms of banana cultivation experience, around 62.00 percent are concerned.

5. Competing Interests

Authors have declared that no competing interests exists.

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