

# International Journal of Statistics and Applied Mathematics

ISSN: 2456-1452  
Maths 2024; SP-9(2): 83-85  
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<https://www.mathsjournal.com>  
Received: 19-01-2024  
Accepted: 23-02-2024

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## Impact of technology adoption on marketing of produce as well as income generation of farmers

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### Abstract

The present investigation was undertaken to Impact of technology adoption on marketing of produce as well as income generation of farmers Barabanki District were carried out in the year 2018-19 by following the random sampling, 120 respondents were selected from the two blocks. Out of total respondents 50.8% of the respondent were belong to 9 members and above in their family size. 43.3 Percent of the respondent were belong to land holding 2.5 acres (Marginal farmers) group. The marketing phase is also important. In the present age the expanding role of marketing can in no way be looked upon as wasteful, since the economic function of distribution is doubtless as important as production of goods. 29.2 Percent of farmers were used adoption technology on marketing channel use. Maximum, 34.2 Percent of farmers involve annual maintenance cost per tree Rs. 80-90. Most farmers in the study area are 57.5 Percent of farmers involve total income of banana farming 5 to 10 lac. The present study has been carried out the means to increase per acre yield and consequently the income of farm. The consumption of banana is mainly domestically and a small part shares in the global market. The findings suggest that a special program should be taken by the government to improve the level of knowledge, adoption and favorable attitude towards banana cultivation technology.

**Keywords:** Farmers, income generation, land holding, marketing channel, members

### Introduction

Banana is the best-known, healthy, delicious and tropical fruit. It contains several essential nutrients and has benefits for digestion, heart health and weight loss. Banana is the second important fruit crop in India. It is being cultivated in climates ranging from humid tropical to dry mild subtropical. Banana crop has always ensured good profit. It is due to the minimum risk factor that the area of banana cultivation has grown in the state in the last decade. These plants are sources of foods, silage, fragrance, rope cordage, garlands shelter clothing, smoking material, numerous ceremonial and religious uses. Bananas are grown in at least 107 countries. although the wild species have fruits with numerous large, hard seeds, virtually all culinary bananas have seedless fruits. Banana and plantains are grown in about 120 countries. Total annual world production is estimated at 86 million tonnes of fruits. India leads the world in banana production with an annual output of about 14.2 million tonnes. Other leading producers are Brazil, Ecuador, China, Phillipines, Indonesia, Costa Rica, Mexico, Thailand and Colombia. In India banana ranks first in production and third in area among fruit crops. It accounts for 13% of the total area and 33% of the production of fruits. Production is highest in Maharashtra (3924.1 thousand tones) followed by Tamil Nadu (3543.8 thousand tonnes). Within India, Maharashtra has the highest productivity of 65.70 metric tones /ha. Against national average of 30.5 tonnes/ha. The other major banana producing states are Karnataka, Gujarat, Andhra Pradesh and Assam. Banana is a perennial crop that grows quickly and can be harvested all year round. During 2016-17, the world acreage of banana was area (in 858`000 hectare), while the world production 29163 Metric Tones and productivity was 33.9 Metric Tons/ Hectare.

### Research Methodology

The study entitled, "Impact of technology adoption on marketing of produce as well as income generation of farmers" was conducted in Barabanki District during 2018-19 and two blocks selected in this study. From each selected block, a list prepared.

From each block, three villages were selected for study purpose and 20 respondents selected from each village. These areas shall present different segment of Banana farming Dependent and independent variables namely age, education, religion, caste, type of house, type of family, size of family, annual income, land holding etc. were used the collected data were subjected to statistical analysis for which statistical tools, Percent, weighted mean, arithmetic mean, rank and standard deviation.

**Results**

**Table 1:** Distribution of farmers according to family size

Family Size	Frequency	Percent	Mean ± SD
Up to 5 members	17	14.2	4±1
6 to 8 members	42	35.0	7±1
9and above members	61	50.8	13±3
Total	120	100.0	11±5

Table 1. Indicates the distribution of the farmers according to the family size. 50.8% of the respondent were belong to 9 members and above in their family size with the mean family size 13 and standard deviation 3 followed by 35.0 Percent of respondent were belong to the 6-8 members with the mean family size 7 and standard deviation 1 In Study area Barabanki. Only 14.2 Percent of farmers were belonged to up to 5 members with the mean family size 4 and standard deviation 1 and overall mean family size of the banana growers were found to be 11 and standard deviation 5 in the research study area. In human context, a family is a group of people affiliated by consanguinity, affinity, or co-residence. In most societies it is principal institution for socialization.

**Table 2:** Distribution of farmers according to land holding

Land Holding	Frequency	Percent	Mean ± SD
Up to 2.5 acres (Small farmers)	38	31.7	1.4±0.5
2.5 to 5 acres (Marginal farmers)	52	43.3	3.1±0.6
5 acres and above (Large farmers)	30	25.0	6.2±2.0
Total	120	100.0	3.3±2.1

Table 4. The data pertaining reveals that the distribution of the farmers according to the annual maintenance cost per tree, 34.2 Percent of farmers involve annual maintenance cost per tree Rs. 80-90 with the mean maintenance cost per tree 85 and standard deviation 3 followed by 30.0 Percent of farmers involve annual maintenance cost per tree Rs.100 and above with the mean maintenance cost per tree 111 and standard deviation 6 whereas 22.5 Percent of farmers involve Rs. 90-

**Table 4:** Distribution of the farmers according to the annual maintenance cost per tree

Annual maintenance cost per tree (Rs.)	Frequency	Percent	Mean ± SD
70-80	16	13.3	75±3
80-90	41	34.2	85±3
90-100	27	22.5	94±3
100 & above	36	30.0	111±6
Total	120	100.0	94±9

Table 2. Represents the distribution of the farmers according to land holding. 43.3 Percent of the respondent were belong to land holding 2.5 acres (Marginal farmers) with the mean land holding 3.1 and standard deviation 0.6 Followed by 31.7 Percent of respondent were belongs up to 2.5 acres (small farmers) group with the mean land holding 1.4 and standard deviation 0.5 In the research study area. Only 25.0 Percent of banana cultivators were belong to the land holding 5 acres and above (large farmers) with the mean land holding 6.2 and standard deviation 2.0 And over all mean land holding of banana growers were found to be 3.3 and standard deviation 2.1 in the research study area.

**Table 3:** Distribution of the farmers according to adoption technology on marketing

Adoption technology on marketing	Frequency	Percent
Marketing channels use	35	29.2
Growers-retailer-consumer	34	28.3
Growers-consumer	22	18.3
Any other	29	24.2
Total	120	100.0

Table 3. Reveals the distribution of the farmers according to channel of marketing, 29.2 Percent of farmers were used adoption technology on marketing channel use, while 28.3 Percent of farmers use growers - retailer- consumer channel of marketing, and only 24.2 Percent of farmers use any other channel of marketing for banana fruits and 18.3 Percent of farmers use growers-consumer channel of marketing technology in the study area.

This is a support of study conducted by Chandrakar Kushboo Choudhary V. K. and Koshta A.K. (2014) constraints in banana cultivation and supply chain management in Raipur district of Chhattisgarh. Consumption of banana was found very low and farmers prefer to sold-out more than 00.08 Percent of their total produce in mostly through channel-1 involving wholesaler. Charges were having highest share of marketing cost in both the channels of marketing.

100 with the mean maintenance cost per tree 94 and standard deviation 3 and only 13.3 Percent of farmers involve annual maintenance cost per tree Rs.70-80 with the mean maintenance cost per tree 75 and standard deviation 3 and overall mean maintenance cost per tree of the banana growers were found to be 94 and standard deviation 9 in the study area Barabanki.

**Table 5:** Distribution of the farmers according to total income of banana farming (year)

Total Income of banana farming (year)	Frequency	Percent	Mean ± SD (Rs)
Up to 5 Lac	38	31.7	315790±77202
5 to 10 Lac	69	57.5	690580±112030
10 to 15 Lac	11	9.1	1090909±94388
15 Lac and above	2	1.7	1700044±141421
Total	120	100.0	625417±296478

In Table 5. The data pertaining reveals that the distribution of the farmers according to total income of banana farming (year), Maximum 57.5 Percent of farmers involve total income of banana farming 5 to 10 lac with the mean income of banana farming Rs. 690580 and standard deviation Rs. 112030 followed by 31.7 Percent of farmers involve total income of banana farming up to 5 lac with the mean income of banana farming Rs. 315790 and standard deviation Rs.77202 whereas 9.1 Percent of farmers involve total income of banana farming 10 to15 lac with the mean income of banana farming Rs.1090909 and standard deviation 94388 and only 1.7 Percent of farmers involve total income of banana farming 15 lac and above with the mean income of banana farming Rs. 1700044 and standard deviation Rs.141421 and overall mean income of banana farming Rs. 625417 and standard deviation Rs. 296478 in the research study area.

### Conclusion

The present study has revealed that banana marketing is a very important aspect of Indian agro-economics. It is gigantic in magnitude. Yet it has tremendous potential to grow up. India has an ability to emerge as global banana leader in export. In the marketing chain of the banana also some improvements are required. Based upon the present study. The agricultural growth strategy of the past has intensified the interclass inequalities. Be should be considered by the government. Based on the findings of the study the following policy implications were made. The information such as total holding, area under banana, physical and revenue productivity obtained from banana contractors were enquired from the respondents. Data so collected was processed, tabulated, analyzed and interpreted in the previous chapter Rs. Investigate the quantitative and qualitative aspect of various inputs as incurred by the producer to cultivate per unit (acre) of banana in the area. The government can pay attention by providing transport facilities, maintaining good roads and providing subsidies for suckers and fertilizers, so that the small and medium farmers may be benefited. The can government take necessary step to release Cauvery water at appropriate period (during banana cultivation period), which will enable the farmers to get a good yield of banana. By analyzing various research results together, the government may create awareness among the farmers about banana cultivation and may motivate more farmers to cultivate this valuable food, which is very much essential in our day to day diet system.

### Recommendation and suggestions

1. The farmers aware of the crop insurance scheme. May be extend to all the banana cultivators through the voluntary organization, extension needs toward etc. and also try organization a branch of crop insurance cooperation at the block itself.
2. Different type of blemishes and scars on the fruit make it unattractive for marketing and get rejected while grading. Various causes for the occurrence of blemishes scars need to be identified and suitable remedial measures may be taken up to reduce such occurrences.
3. The proper harvesting techniques among the banana fruits to promote the yield of farmers. Therefore, they have to be trained to adopt the proper methods of harvesting.

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