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RELATIONSHIP BETWEEN FARMSIZE AND PRODUCTIVITY OF BANANA IN ERODE DISTRICT

Commerce

KEYWORDS: Banana Production, Productivity, Agriculture, Farm size, Banana Cultivation, Problems, and Expectations in Banana Cultivation

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ABSTRACT

This paper is attempted to study the problem and prospects of banana production in Erode district. Banana is the oldest and commonest fruit known to mankind. It is nutritious, palatable and easily digestible fruit, it is reported to be grown in 150 countries in the world with a total production of 100.23 million tones . Banana is the largest produced and maximum consumed amongst the fruits cultivated in India. India ranks first amongst the banana cultivating countries of the world with an annual production share of 27.74 per cent of the total harvest .The findings of this study are based on the analysis of a sample of 420 respondents. The researcher collected from the cultivators having experience in cultivating banana.

1. INTRODUCTION

India is an agrarian country. Majority of its population lives under the shadow of agriculture industry and it is the largest and the most important industry in India. Indian Government encourages cultivation of horticultural crops like banana, mango, flowers, vegetables and more so as to increase the contribution of agriculture to the national income and to augment the farmers own income. India is the largest producer of bananas in the world. Banana is an important fruit crop of many tropical and subtropical regions of India. It is cultivated in India in an area of 830.5 thousand hectares and total production is around 297.8 lakhs tons. Banana is available throughout the year. It is rich in carbohydrates, minerals such as calcium, potassium, magnesium, sodium and phosphorous. Other than fresh fruits, it can be consumed as processed in various forms like chips, powder, flakes, etc. Banana pseudo stem is chopped and used as cattle feed. Also, the leaves are used as plate. The botanical names of banana are Musa Cavendish and Musa paradisiacal, which belongs to the family Musa.

Rich, well drained, fertile, free working soils with plenty of organic matter is best suited for cultivation. Non-availability of pest resistant quality suckers, unawareness of different diseases that affect banana production, pesticides to be used to control the diseases, lack of knowledge about crop insurance scheme and its usefulness, inadequate finance to meet the cost of production are some of the problems faced by the growers during cultivation. According to trade survey, during the months of March to May, supply exceeds demand in market which leads to decline in prices. Because of the excess supply, traders and farmers search for new markets for banana. Likely, natural calamities like wind with high velocity leads to drop in supply of banana during June to September and hence upward trend in price of banana is witnessed.

2. RESEARCH METHODOLOGY

The study is descriptive in nature. The present study required primary data and the data was collected from the farmers through personal interview method. The researcher administered a comprehensive interview schedule for collecting primary data with regard to the production and marketing of banana. The interview schedule was carefully designed and duly pre-tested. Pilot study was also undertaken and necessary changes were incorporated before finalization of the schedule.

Purposive-cum multistage random sampling technique was employed to select areas and sample farmers covered in the study. The researcher met all the 420 sample respondents living in 42 banana cultivating villages in all the 14 blocks of Erode district. Three banana cultivating villages from each block were selected for data collection. All the analysis and inferences were made on the basis of this primary data. In this study, data were analyzed using regression analysis.

RELATIONSHIP BETWEEN FARM SIZE AND PRODUCTIVITY

Farm size is one of the major determinants of agricultural productivity and efficiency. For over three decades, economists have debated on the relationship between farm size and yield. The relative economic efficiency of small farm verses large farm has been a subject of discussion particularly in the context of Indian agriculture. According to Sami[1], the income relationship between farm size and productivity is confirmed phenomena in Indian agriculture. But, the study of Rao[2] has revealed that productivity has remained constant for all sizes of holdings and thus he has indicated that the size of holdings is natural on this issue. Bhattacharya[3] has also supported this finding and thus observed that the income relationship is only due to the aggregative bias of statistics.

In this context, an attempt is made to study the nature of relationship between the size of the operational holding and the yield of the banana cultivation in Erode District. Based on the survey conducted among 420 sample farmer, the relationship between the size of the operational holding and productivity is examined here. Hence, a null hypothesis has been established that there is no relationship between the farm size and yield of banana.

For this purpose, the following form of the regression equation is fitted.

$\text{Log } Y = \log a + \log b\,(\times)$ ..... (1)

Where,

Y = Yield in banana per acre

X = Size of the operational holdings

B = parameter to be estimated

A = constant

For the existence of direct relationship between farm size and yield of banana, the requisite condition is that the coefficient of log b should be greater than unity.

The above equation has been estimated on the basis of the principle of least square and the results are given in Table-1.

TABLE-1

REGRESSION COEFFICIENTS OF THE SIZE-PRODUCTIVITY RELATIONSHIP IN BANANA CULTIVATION

Sample size	Regression Co–efficient		R2
	Log a	Log b	
420	2.416	0.125* (8.929)	0.73

Regression Equation $\log Y = \log a + b \log (x)$

[1]G.R. Sami, "Resource Use Efficiency in Agriculture", Indian Journal of Agricultural Economics, Vol.24, No.1, 1969.

[2]Rao A.P., "Size of Holding and Productivity", Economic and Political

Weekly, November, 1967.
[3]Bhattacharyaa N. and G.R. Saini, "Farm size and productivity – A fresh look", Economic and Political Weekly, June 1972.

Figures in the brackets are t-value

*Indicates that the co-efficient is significant at 1 percent level

From the Table-1, it has been inferred that the coefficient of b is greater than unity and thus indicates the existence of a direct relationship between the size of holding and yield. The t-test also reveals that the coefficient is statistically significant and thus confirm the existence of direct relationship between the size of holding and yield in banana plantation. The reason for the existence of such a relationship may be attributed to the economies of large scale operations. Hence, the null hypothesis is rejected; and there is a relationship between farm size and productivity of banana.

CONCLUSION

Thus, it is concluded from the analysis that the yield of banana increases, wherever the size of plantation increases. The reason for the existence of such a relationship may be attributed to the economies of large scale operations. Due to heavy capital investments large farms can have improved cultivation practices that the small farms cannot afford.

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