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### A STUDY ON BANANA CULTIVATION OF ERAL AREA IN THOOTHUKUDI DISTRICT

**J. Immanuel Nallathambi\***,

*Department of Commerce, Nazareth Margoschis College, Pillaiyanmanai, Nazareth - 628 117, Thoothukudi District, Tamil Nadu, India*

#### Abstract

In India, Banana ranks next only to mango in area and production, occupying 83 lakhs hectares with an annual production of 46.26 lakh tones. The important banana growing states in India are Tamil Nadu, Maharastra, Andra Pradesh, Kerala, Karnataka, West Bengal, Bigar and Gujarat. India exports small quantities of bananas mostly to Bahrain, Germany, Nepal, Qater, Saudi Arabia and USA. Agricultural economy has witnessed a successful transition from subsistence, self-sufficient to barter system commercial, production oriented surplus economy. For economic development of a country, an increase in production must be accompanied by increase in marketable surplus. The rate at which agricultural production expands is an index of the pace of economic development – bazaar. The mobilization of surplus resources from agriculture has come to be recognized as a mechanism of central importance for the development of agrarian economies. Banana is the most nutritious fruit among all fruits. Owing to its greater socio-economic significance and multifaceted uses, it is referred as ‘Kalpatharu’. Banana fruit is a wonder berry, which forms the staple food of millions of people across the globe, providing more balanced food than any other fruit or vegetables. It contains eleven vitamins and the important ones are A, B and C. Although, fat and protein contents are very low, the fruit is rich in minerals.

**Key words:** Agriculture, Banana, Eral area and Thoothukudi district.

#### 1. Introduction

India is an agricultural country. The majority of its population depends upon agriculture. It is the largest and most important industry in India. It contributes 34.2 percent of the National income.

Government encourages cultivation of horticultural crops like banana, mango, flowers, vegetables etc., so as to increase the contribution of agriculture to the National Income and to augment the farmers’ own income.

**\*Corresponding author: Dr. J. Immanuel Nallathambi**

**E.mail:** imman939@gmail.com

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India is the first largest producer of bananas in the world, second Brazil. In India, Banana ranks next only to mango in area and production, occupying 83 lakhs hectares with an annual production of 46.26 lakh tones. The important banana growing states in India are Tamil Nadu, Maharastra, Andhra Pradesh, Kerala, Karnataka, West Bengal, Bigar and Gujarat. India exports small quantities of bananas mostly to Bahrain, Germany, Nepal, Qater, Saudi Arabia, and USA.



Developing economies need to understand the supply phenomena in order to implement policies for raising the output to a level which can provide for adequate human nutrition for the increasing population and also for promoting general economic development. Even in developed countries understanding of the supply phenomena is of crucial importance for controlling surplus, for raising farm income and productivity of resources. The study of supply responses in agriculture and their determinants on the context of planning for economic development and the concomitant agricultural transformation and modernization involved. In India banana has been cultivated from time immemorial. There are atleast fifty varieties being commercially cultivated in more than 7,09,000 hectares throughout. India ranks first in the production of banana in the world and accounts for about 28 percent of the total world Banana production.

### **2. Banana Cultivation in Thoothukudi District**

The main food crop in this district is paddy and banana. Out of the total area of 4,59,054 hectares, 1,71,815 hectares are brought under the cultivation of different crops which is nearly 37 percent of total area of the district. The important food crops in the district are paddy, banana, cholam, cumbu, ragi, varagu, samai and commercial crops like cotton, chilly, sugarcane and groundnut.

### **3. Banana Cultivation in Eral Area**

In Eral Area are three regions perungulam, agriculture is the main occupation on which 70 percent of the people depend. The important food crops in this area are paddy and banana. In this area the important varieties of banana such as robusta, poovan, res banana, rasthali, karpurvalliand karthalientc are cultivated. Bananas are marketed mostly in Thoothukudi, Nagercoil, erode, Chennai and Coimbatore . Moreover, transportation by road to the markets of neighbouring states like kerala, Madhya Pradesh, Andhra Pradesh, karnataka and rajasthan is also quite sizeable and also export to foreign countries

through brokers like U.S.A., Saudi Arabia, Oman, Bahrain, Qatar , Kuwait, Nepal and Sri Lanka.

### **4. Statement of the problem**

Non availability of pest resistant quality suckers of the different disease that affect banana plant and of the pesticides to be used to control the disease, 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. Unless adequate steps are taken to minimize these problems, the production of banana may be severely affected.

According to trade sources, 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. Kerala is the nearest market, compared to Maharashtra. This action led to higher price in 2017 - 18 compared to the previous year prices. Similarly natural calamities like wind with high velocity' lead to drop in supply of banana during June to September and hence upward trend in price of price of banana is witnessed.

The problems of growers in marketing the product is very high. They have to cultivate, harvest, transport and market. The intermediaries have to make payments before or after harvest, transport and market the products. There may be many problems in theses different stages. The problems may rules to production or transportation, preservation, price ,area, transportation and other related aspects.

The present study covering the problems of both production and marketing provides a purposeful area for useful analysis. The natural calamities like flood, cyclone, etc., may affect the production of banana. With all these limitations, the growers have to cultivate and earn profit. Moreover financial constraints and lack of adequate infrastructure for marketing of banana are the problem areas, which are to be studies at length.



**5. Methodology**

The study require both primary and secondary data. Secondary data were collect from publication of agricultural departments, websites, libraries education institutions, agent manuals etc. Primary data were collected from growers and intermediaries with the help of a well structured questionnaire.

**6. Sampling Design**

This study concentrates on marketing of banana and the role of intermediaries in marketing aspect. The area of study selected for this research is Eral Area . Banana is grown only in all areas of Eral area. A sample of 50 growers are considered from the sample area Multistage Stratified random sampling method is followed for this study.

**7. Tools of Analysis**

Percentages, tables, pie-diagrams, bar-diagrams and Chi – Square Test are used to the banana cultivating and marketing, to identify the available and negotiable marketing, infrastructure facilities and the problems of banana marketing in the study area.

**8. Age of producers**

Age analysis is one of the factors to follow or identify the marketing aspect for any product or service. The sample intermediaries may be Below 30 years, 30-40 years ;40-50 years.

| Age            | No. of respondents | Percentage |
|----------------|--------------------|------------|
| Below 30 years | 11                 | 22%        |
| 30 - 40 years  | 15                 | 30%        |
| 40 - 50 years  | 12                 | 24%        |
| Above 50 years | 12                 | 24%        |
| TOTAL          | 50                 | 100%       |

Tableage is one of factors which determines their productivity. Number of farmers is classified on the basis of their age. There are four classifications. The first is age group below 30 years, second age group 30-40 years , third age group 40-50 years , and last age group above 50 years . In the sample area 22 percent of the

agricultural farmers the age group of below 30 years, 30 percent of the agricultural farmers the age group of 30-40 years, 24 percent of the agricultural farmers the age group 40-50 years and 24 percent of the agricultural farmers the age group above 50 years.

**9. Education Qualification**

An impotent socio – economic factors that considered by the researchers for analysis is educational qualification. Educational qualification is the main factors to decide the type of cultivation and the method of cultivation as well as marketing of product. It is presumed that educational qualification helps to identify problems and the methods to minimize the distress of the cultivators.

| Educational Qualification | No. of respondents | Percent |
|---------------------------|--------------------|---------|
| Illiterate                | 16                 | 32%     |
| SSLC                      | 13                 | 26%     |
| Hr .Sec                   | 11                 | 22%     |
| Degree & above            | 10                 | 20%     |
| TOTAL                     | 50                 | 100%    |

The Table 4.3 shows the details of educational qualification of sample grower respondent. 32 percent have studied below SSLC; 26 percent have studied to Hr. Sec another 22 percent have to Higher Secondary and 20 percent have studied degree and above.

**10. Experience in Banana cultivation**

The growers may have been engaged in banana cultivation for certain period. Some may have less than 5 years of experience and some may have more than 15 years of experience shows the details of experience of the growers in banana cultivation. It is found that among the sample area growers, 16 percent have up to 5 years of experience in banana cultivation; 34 percent have between 5 and 10 years of experience;26 percent have between 10 and 15 years of experience and 24 percent have an experience of more than 15 years in banana cultivation.



| Experience in banana cultivation | No. of respondents | Percentage   |
|----------------------------------|--------------------|--------------|
| Up to 5 years                    | 8                  | 16 %         |
| 5-10 years                       | 17                 | 34 %         |
| 10-15 years                      | 13                 | 26 %         |
| Above 15 years                   | 12                 | 24 %         |
| <b>Total</b>                     | <b>50</b>          | <b>100 %</b> |

### 11. Area Banana Cultivation

The respondent growers may have been growing banana in some specific area. The area may be less than 5 acres or may be even sometimes more than 15 acres. The area of cultivation may differ among the river area growers and other area growers.

| Area of Banana Cultivation | No. of Respondents | Percentage   |
|----------------------------|--------------------|--------------|
| Up to 5 acres              | 20                 | 40 %         |
| 5-10 acres                 | 17                 | 34 %         |
| 10-15 acres                | 9                  | 18 %         |
| Above 15 acres             | 4                  | 8 %          |
| <b>Total</b>               | <b>50</b>          | <b>100 %</b> |

The above Table shows the details of area of cultivation of banana by sample growers. Analysis shows that among an area growers, 40 percent are cultivating banana in an area of up to 5 acres; 34 percent have between 5 and 10 acres; 18 percent have between 10 and 15 acres and 8 percent have a cultivating area of more than 15 acres.

### 12. Buying/Acquiring Scribers

| Buying/Acquiring Scribers | No. of Respondents | Percentage   |
|---------------------------|--------------------|--------------|
| Always                    | 10                 | 20 %         |
| Usually                   | 7                  | 14 %         |
| Normally                  | 23                 | 46 %         |
| Occasionally              | 5                  | 10 %         |
| Never                     | 5                  | 10 %         |
| <b>Total</b>              | <b>50</b>          | <b>100 %</b> |

The sample growers are asked to state the method of acquiring scribers. The growers can buy or use the stem again for growing.

The above Table shows the mode of acquiring scribers by the growers. Analysis reveals that among growers in an area, 20 percent “always” buy scribers; 14 percent “usually” buy scriber; 46 percent “normally” buy scriber; 10 per “occasionally” buy scriber and 10 percent “never” buy scribers.

### 13. Method of Selling Banana

The sample respondent are asked to state the method of selling banana. They may sell the products directly in the market or may sell them through pre-agents or post agents are may sell through retailers or other.

| Method of selling banana | No. of respondents | Percentage   |
|--------------------------|--------------------|--------------|
| Direct market            | 18                 | 38 %         |
| Pre agents               | 16                 | 32 %         |
| Post agents              | 9                  | 18 %         |
| Retailers                | 5                  | 10 %         |
| others                   | 1                  | 2 %          |
| <b>Total</b>             | <b>50</b>          | <b>100 %</b> |

The above Table shows the mode of selling the banana by sample respondents. Analysis reveals that among growers in an area, 38 percent sell in direct markets; 32 percent sell through pre agents; 18 percent sell through post agents; 10 percent sell through retailers.

### 14. Factors determining the price of Banana

The sample respondents are asked to state their opinion on factors determining the price of banana. The factors may be the quantum of harvest, size, demand season or others.

| Factors determining the price of banana | No. of respondent | Percent      |
|---|-------------------|--------------|
| Harvest                                 | 6                 | 12 %         |
| Size                                    | 11                | 22 %         |
| Demand                                  | 15                | 30 %         |
| Season                                  | 12                | 24 %         |
| Other                                   | 6                 | 12 %         |
| <b>Total</b>                            | <b>50</b>         | <b>100 %</b> |



The opinion of sample respondents about the factors determining the price of banana. Analysis reveals that among growers in an area, 12 percent a price in harvest; 22 percent a price in size; 30 percent a price in demand; 24 percent a price in season and 12 percent a price in other.

**15. Types of Banana**

The Sample respondents are asked to state their opinion on various types. The opinion on existence of problem is shown.

| Types of banana | No. of respondents | Percentage   |
|-----------------|--------------------|--------------|
| Nadu            | 19                 | 38 %         |
| Kasali          | 18                 | 36 %         |
| Kolikuttu       | 3                  | 6 %          |
| Karpuravalli    | 10                 | 20 %         |
| <b>Total</b>    | <b>50</b>          | <b>100 %</b> |

The details of total type of banana growers analysis shows that among the banana growers 38 percent Nadu, 36 percent Kaasali, 6 percent Kolikuttu, 20 percent Karpuravalli in percent of banana.

**16. Opinion about Financial aspects**

The sample respondents are asked to express their opinion about financial aspects in relation to banana cultivation.

| Expenses      | Very high | High | Normal | Low | Very low | Total |
|---------------|-----------|------|--------|-----|----------|-------|
| Loan problems | 7         | 24   | 13     | 3   | 3        | 50    |
| Rent Etc      | 11        | 13   | 16     | 5   | 5        | 50    |

The opinion about the financial aspects perceived by sample respondents. It is found that in loan problem very high 7, high 24, normal 13, low 3 and very low 3 at 50 respondents; Rent very high 11, high 13, normal 16, low 5 and very low 5 at 50 respondents.

**17. Chi - Square Test**

**Difference between price of banana and problem with transport facility**

To know the difference between the price of banana and problem with transport facility

analysis has been made with the following hypothesis.

**Hypothesis**

There is no significant association between the price of banana and problem with transport facility. To test this hypothesis Pearson chi-square test is applied and the result is presented in the following table.

**18. Findings, Suggestions and Conclusion**

Banana is an important energy producing food as well as good source of mineral salts and vitamins it contains as much as 20 percent starch, which is converted in to sugar during ripening an increase in the consumption of fruits like banana will also help to get more calories a hectare of banana can yield up to 30 million calories of energy compared to 2.5 million calories from one hectare of wheat.

- It is found that among the growers of the details of irrigation method of sample grower respondents 52 % reverted 18 % bond 18 percentage of the 12 % drip of the growers used in river fed cultivation.
- Analysis shows that among growers of the area in the sample area 22 percent of the agricultural farmers the age group of below 30 years 30 percent of the agricultural farmer the age group of 30 - 40 years 24 percent of the agricultural farmers the age group of 40-50 years and 24 percent of the agricultural farmers the age group above 50 years.
- Considering all sample growers of the area 16 percent have studied.
- Illiterate 26 percent have studied up to SSLC another 22 percent have studied up to higher secondary and 20 percent have studied degree and above.
- Among the sample growers of the area 16 percent have up to 5 of experiences in banana cultivation 34 percent have been 5 and 10 years of experience 26 percent have between 10 and 15 years of experiences





and 24 percent have an experiences of more than 15 year in banana cultivation.

- Analysis show that among growers of the area 40percent are cultivate banana in an area of up to 5 acres 34 percent have between 5 and 10 acres 18 percent have between 10 and 15 acers and 8 percent have a cultivating are of more than 15 acres.
- It is inferred the opinion about the problems as perceived as perceived by sample respondents regarding cost of materials. It is found that in Suckers very high 10, high 22, normal 12, low 2 and very low 4 pesticides very high 7, high 20, normal 18, low 3 and very low 2. Fertilizers very high 4, high 15, normal 21, low 7 and very low 3.
- If analysis the opinion about the Cost of labour as perceived by sample respondents regarding Preparatory Expenses. It is found that in ploughing very high 13, high 23, normal 8, low 3 and very low 3. Apply pesticides very high 5, high 21, normal 15, low5 very low 3. Apply Fertilizers very high 6, high 21 normal 17, low 4 and very low 2 and cutting very high 13, normal 20, low 9 and very low 5.
- It analysis the opinion about the financial aspects perceived by sample respondents. It is found that in Loan problems very high 7, high 24, normal 13, low 3 very low 3. Rent very high 11, high 13, normal 16, low 5 and very low.

## 19. Suggestion

- India has very fertile lends and growing banana can be a profitable cultivation to the growers if other aspects exist. the government can thing in terms of promoting separate organizations such as banana cultivation research centre in many areas and develop banana cultivation.
- Agricultural related education qualification may cultivate be provided to suitable grower to increase the production and improve the quality of banana.

- Many young people have entered into of banana the government may come forward to buy the fruits in bulk and supply in boon meal centers so that the risk of cultivators is minimized and the health of children is improved at a lesser cost.
- The growers – sellers may be advised suitably to go in for inter croup cultivation so that their income will be improved substantially.
- The grower – seller may be taught the impact of chemical fertilizers and their influence on the health of user and consumers this may improve the quality and standards of the fruits to a higher extent.
- The government can provide concessional transport storage and packing products so the cost is reduced in the hands or hands or consumer and the grower – seller and agents do not suffer due to higher transportation and storage cost.
- There seems to be shortage of labor and availability of labour at a specific cost seems to be a real problem in rural and semi – urban. The grower – seller and agents may be trained to use modern technical machines and equipment to minimize their distress.
- Most important sector of our economy is agriculture. Success in our economic policies mainly depends on performance of agriculture. Hence, concessions to agriculture sector may provide benefits ton majority of people in India.
- The processes of motorization and diversification of Indian agricultural has to be speeded up. The productivity of most agricultural crops remains lower at 30 % than what is achieved by developed economies. Scientific cultivation practices supported by conducive policies of the government will improve productivity and standard of living of the farmers.



## 20. Conclusion

Fruits have become the part and parcel of human food items. The taste, vitamins, minerals, carbohydrates and ingredients are highly needed for human beings. The efficient cultivate of banana improves the health and welfare of the people, growers, agents and related people and hence the growth in this field is highly required. Studies also reveal that the use of fruits in our day to day food will be highest in the near future and hence the marketers have to come forward to cultivate fruit products to the entire satisfaction to the consumers through different methods of cultivating. Consumers may be educated with the use of fruits to enrich their food habits. This cultivating field provides tremendous employment facilities and has generated employment in direct and indirect areas. The cultivators have to utilize this opportunity to provide better quality fruits to the consumers so that there is consistent and increasing demand for this fruit product in future years.

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