



An Economic Analysis of Mango Cultivation in Dindigul District, Tamil Nadu, India.

¹N.Saravanakumar, ²I. Ambeth

¹Assistant Professor of Economics, School of Continuing Education, Tamil Nadu Open University, Chennai-15, Tamil Nadu, India.

²Assistant Professor of Vocational Education, School of Continuing Education, Tamil Nadu Open University, Chennai-15, Tamil Nadu, India.

*Note: * Indicates corresponding author*

ARTICLE DETAILS

Article History:

Received Date: 15/01/2019

Revised Date: 25/01/2019

Accepted Date: 26/01/2019

Published Online: 10/02/2019

Keywords

Indian economy
agricultural sector,
Mango
India

*Corresponding Author

Email: nskeco@gmail.com

(N.Saravanakumar)

ABSTRACT

Agriculture is the backbone of the Indian economy. It provides employment to around 65 per cent of the total work force in the country. It has also been the main source for the supply of the raw materials to the industries. There are a number of sub sectors in the agricultural sector such as sericulture, floriculture and horticulture. Among those fields' horticulture has played a dominant role in the total agricultural output throughout India. India is the second largest producer of fruits in the World. India is the fore runner in respect of many fruits with a considerable share in World total production. Mango (*Mangifera indica*) has occupied a prominent place among the various fruits grown in India. It has been acknowledged that mango is the king among the various fruits grown India has been ranked as the first among the World mango producing countries. India share in the World production of mango has been estimated to be about 54 per cent.

1. Introduction

In India a very large number of agriculturists have been cultivating the mango trees for their very livelihood. Mango cultivation is a seasonal agricultural activity and therefore during the off-seasons, the growers have to go in search of alternative employment. Based on the findings, of a number of studies one could easily understand the background of the mango growers and also could take an appropriate decision for the benefit of the growers. The growers have been facing a number of problems during their cultivation, operational and their marketing practices. The more serious problems faced by the cultivators, among the various other problems faced by them are their financial indebtedness to others, and the fluctuations in the mango yield due to changes in the rainfall and other weather conditions. But the main reason for the lower production in the yields of mango is the frequent climatic changes in the areas of their cultivation.

2. Statement of the Problem

Production is at one end of the food problem in India, and at the other end the problem is related to distribution. Agricultural marketing systems have an important role to play in the predominantly agrarian economy. Inadequate market infrastructure and unproductive prices accelerated agricultural development in India. Markets for farm products have been found to be proverbially imperfect with a few well-organized traders and a large number of unorganized producers dumping their produce under the seasonal patterns of production and harvesting. While market imperfection and the consequent known marketing efficiency are the common problems in respect of all the farm products, they are found to have been more pronounced in the markets for perishable products. Mango has a pride of place not only for its diverse uses but also for its special preference by the consumers, rich and the poor, alike while it is also subjected to the production and the marketing problems referred to in this section. Therefore, an analysis of mango cultivation in the study area of Dindigul District and Tamil Nadu has deserved a special attention not only to understand the problems in respect of production but also to identify the specific strategies that could be adopted to improve the performance of the market for mango.

3. Objectives of the Study

1. To study the socio-economic conditions of the mango growers in the study area.
2. To analyse the costs and returns of mango cultivation in the study area.
3. To examine the resource – use efficiency in mango cultivation among the different categories of the farmers.
4. To understand the marketing problems of the mango growers in the study area.

4. Method of Analysis

Designing a suitable methodology and the selection of the appropriate analytical tools is very important for a meaningful analysis of any research problem that has been undertaken. This section has been devoted to a description of the methodology which has included the choice of the study area, the sampling procedure, adopted the collection of data, the period of study, the methods of analysis, the tools of analysis and the measurement of the variables.

4.1 Resource – Use Efficiency

In order to examine the resource-use efficiency of the factor inputs, the marginal value products of the inputs have been calculated by using the following formula.

$$MVP_{Xi} = \beta_i \frac{\bar{Y}}{\bar{X}} \dots\dots\dots (1.4)$$

Where,

- β_i = Estimated value of the co-efficient of the 1th input,
- Y = Geometric mean level of gross income and
- X = Geometric mean level of the ith input factor.

4.2 Size-Productivity Relationship

In order to examine the farm size and the productivity relationship, the following form of the regression model has been fitted

$$\text{Log } Q = \text{Log } C + B \text{ log } A$$

Where,

- Q = Gross value of inputs in rupees,
- A = Size of the operational holding in acres, and
- C and B are the parameters to be estimated.

4.3 Measurements of Returns on Investment

Net Present Value (NPV)

$$NPV = \sum_{t=1}^n \frac{B_t - C_t}{(1 + i)^t}$$

Where,

- NPV = Net present value,
- B_t = Benefits in the tth year,
- C_t = Costs in the tth year,
- t = Number of years, and
- i = Interest (discount) rate.

4.4 Benefit – Cost Ratio (B-CR)

$$\sum_{t=1}^n \frac{B_t}{C_t}$$

$$B-C = \frac{\sum_{t=1}^{50} \frac{C_t}{(1+i)^t}}{(1+i)^t}$$

4.5 Internal Rate of Return (IRR)

$$IRR = \sum_{t=1}^{50} \frac{B_t - C_t}{(1+i)^t}$$

5. Payback Period

The Payback Period is the length of time required to pay itself out. The Payback Period is calculated by the process of taking into account the cumulative cash flows till the time when the cumulative cash flows become equal to the original investment outlay.

6. Findings and Suggestions

It is found that more than (78 per cent) has been in the age group of 26 to 55 years. The age group of 46 to 55 years has been found to be relatively higher in the case of the small farmers (42 per cent), as compared to the large farmers (34 per cent).

It is clear from the study that in the total annual operation and maintenance cost per acre is `13025.78. Among the various costs, the costs of labour has constituted the highest share 20.69 per cent followed by the cost of manures 17.15 per cent. The average cost of labour is `2,694.93 per acre, which has contributed to 20.69 per cent of the annual operational and maintenance costs per acre.

It could be observed that the total cost of production of mango per acre has worked out to `29,718.01. The total variable costs per acre have worked out to `13,025.78 and its share is 43.83 per cent of the total costs of production. It is found that the total fixed costs have worked out to `16,692.23 per acre, constituting 56.17 per cent of the total costs of production. The second important component of the total fixed cost is the annual share of net establishment costs. On an average, the annual share of the net establishment costs has worked out to `1475.30 per acre accounting for 4.96 per cent of the total costs of production. The amount of the other fixed costs worked out to `10,466.93 per acre and its contribution to the total costs of production are 35.23 per cent.

6.1 Suggestions

At every stage of raising the plant, the orchardist must be given proper instructions to increase the productivity. Cold storage facility must be established in the production centers, so that the growers can stock their produce to sell it's at attractive price at the appropriate time. Mango is a perennial crop and the gestation period is long, mango cultivators must be encouraged by the grant of subsidies by the Government.

Mango cultivation could increase if recommended package of practices of mango based on scientific data are readily available to the farmers Role of agricultural extension department should be strengthened to boost up mango cultivation and production in the study area.

7. Conclusion

Mango has remained the topmost fruit in India ever since ancient days. It is highly tasty and luscious table fruit for Indians. To meet the ever-growing demand of the mango, a portion of land of should be used for mango cultivation. The mango cultivation provides employment opportunities to many people and also helps the mango growers for improving their economic status. In this context, the present study is highly unique in nature and the findings of the study.

References

1. Mathew, E. **Manorama year book 2011**, Malayal Manorama Press, Kottayam, Kerala
2. Rao, A.P. "Size of Holding and Productivity", ***Economic and Political Weekly***, June, 1972
3. Roy R.S. "Cultivation of Banana in Bihar", ***Indian Farming*** Vol. 2, (5), 1950
4. www.nhp.gov.in
5. www.indiastat.com