

Performance Appraisal of Guava Orchards in Vellampalli Village

B.Swapna

Department of Botany, VikramaSimhapuri University P.G.Centre, Kavali,
SPSR Nellore District, Andhra Pradesh, India.

Received: September 03, 2018

Accepted: October 29, 2018

ABSTRACT

Guava fruit is a good source of vitamin C, pectin, calcium and phosphorus. The fruit is used for the preparation of processed products. Guava cultivators are randomly selected in Vellampalli village in Prakasam district of Andhra Pradesh, India. Data and information are collected with the help of a structured questionnaire. The collected data and information are analyzed using averages, percentages, tables, ratios. Performance appraisal is made using the tools Return on Investment (RoI) and Benefit- Cost ratio (B/C). The specific objectives of the study are: a) To find out the socio-economic characteristics of guava cultivators and b) To measure the performance of guava orchards. The Guava orchards are generating self and wage employments. RoI and B/C indicates that guava orchards are in profit zone. The profitability of guava orchards may be further increased through incentives in the form of subsidies.

Keywords: Guava, Benefit- Cost ratio, Performance

I. INTRODUCTION

Guava fruit is a good source of vitamin C, pectin, calcium and phosphorus. The fruit is used for the preparation of processed products like jams, jellies and nectar. Fruits can be preserved by canning. Leaves of guava are used for curing diarrhea and also for dyeing and tanning¹. Guava fruits are consumed either fresh or processed. Antioxidant activity in guava is 496mg/100g. In recent times natural antioxidants have attracted considerable attention among nutritionists, food manufacturerists and consumers because of their accepted safety and potential therapeutic value².

Today, large numbers of people suffer from chronic malnutrition and micronutrient deficiencies. Adequate consumption of fruits and vegetables help in reducing malnutrition. Worldwide per capita consumption of fruits and vegetables is estimated to be 20-50 percent short of the minimum FAO and WHO recommended intake³. Fruits and vegetables contain dietary fibres and bioactive components which contribute significantly to human nutrition, food security, health and for generation of employment for small holders and family farmers. Fruits and vegetables and their availability at affordable price are to be increased. Small farmers should play a key role in the alleviation of hunger and poverty, food and nutritional security improvement of the livelihoods and management of natural resources⁴.

Farmers need the information of economic analysis of the crop to know whether the crop is economically viable option or not. There are few studies on guava in different regions of India⁵⁻⁹. Hence, an attempt is made to study the performance of guava orchards in Vellampalli village.

II.METHODOLOGY ADOPTED

Vellampalli village is purposively selected because of its familiarity to me. This village is in Prakasam district of Andhra Pradesh, India. It is 10km north of Ongole. Ongole is the head quarter of Prakasam district. It is by the side of Chennai- Kolkata railway line and national highway. It is known for fruit orchards. It is basically an agricultural village.

In this village there are 18 guava orchards. Fifteen percent of the guava farmers i.e. 9 farmers are selected randomly for the study. Data is collected with the help of structured questionnaire. The data on the socio-economic characteristics and financial performance are collected. The collected data is converted into information and knowledge with the help of averages, percentages, ratios, tables and statistical tools such as Return on Investment and Benefit-cost ratio. The following formulae are used

$$\text{Return on Investment (ROI)} = \frac{\text{Net profit}}{\frac{\text{initial investment}}{\text{Direct economic income}}} \times 100$$

$$\text{Benefit-Cost ratio (B/C ratio)} = \frac{\text{Direct economic income}}{\text{Direct economic cost}}$$

Primary data and secondary information are employed in the study. The period of study is one year i.e 2018. The land area is measured in acres. One hectare is equal to 2.47 acres. The study is made with the following objectives:

- a) To find out the socio-economic characteristics of guava cultivators
- b) To measure the performance of guava orchards

III.Results and Discussion

3.1Socio-economic characteristics of guava cultivation

Socio-economic characteristics of guava farmers in Vellampalli village are presented in Table-1.

S.No.	Characteristics	Values
1.	Average age of the farmer	43 years
2.	Average size of the family	4 persons
3.	Main occupation of the farmers	agriculture
4.	Sex of the farmers	Male-100%
5.	Religion of the farmers	Hindu-7, Muslim-2
6.	Average size of operational holdings	4 acres
7.	Average lease per acre per year	Rs.20000/-
8.	Average age of guava orchards	7.5 years
9.	Average employment per acre per year	600 man days
10.	Average life period of guava orchards	15 years
11.	Ration card	White(all)

Source: Field data

The characteristics are self-explanatory. The guava orchards are generating self and wage employment. It is one of the solutions to job-less growth in India. Some farmers are taking land on lease basis. The rent on leased land is Rs. 20,000 per acre per year. The size of the operational holding is 4 acres.

3.2 Performance Appraisal of the Guava orchards in Vellampalli village

Table-2:Performance Appraisal of the Guava orchards in Vellampalli village

S.No.	Particulars	Amount in Rs.
1.	Average initial investment (land development, saplings , irrigation etc.)	2,50,000.00
2.	Average cost of production per acre per year	2,55,000.00
3.	Average income per acre per year	3,70,000.00
4.	Average profit per acre per year	1,15,000.00
5.	Number of crops per year	3 crops
6.	Return on investment (ROI)	46%
7.	Benefit-cost ratio (B/C)	1.45/1
8.	Main market areas	Ongole and Chennai
9.	Sale through middlemen	100%
10.	Affecting natural calamities	cyclones

Source: Field data

Table-2 is also self-explanatory. ROI and B/C ratio are in support of the Guava cultivation. ROI indicates high profitability of Guava orchards. Since, $B/C > 1$, it indicates that the Guava orchards are in profit zone. The number of crops per year is three. Since, Ongole is 10kms away from Vellampalli village, the role of middlemen may be reduced to the extent possible in order to get more profit.

3.3 The need for subsidies to Guava orchards

The challenge to world poverty lies in the development of farm sector in the Third world¹⁰. Most of the incentives to farm sector are in the nature of subsidies. Subsidy is the difference between the price at which it can be obtained in the market and the price at which it will be made available. Some of the farm subsidies are fertilizer subsidy, credit subsidy, irrigation subsidy, electricity subsidy, seed subsidy, livestock subsidy, crop insurance subsidy, price supports and subsidy for IRDP(Integrated Rural Development Programme)¹¹. Urban bias in development should be removed. The success in the eradication of poverty in India mainly depends upon rural development. The rural poverty is more acute compared to urban poverty. There is a strong linkage between farm sector and industrial sector in India.

Recently i.e. in 2018-19, subsidy scheme for guava orchards is introduced in Vellampalli village in Prakasam district under Area Expansion Programme(AEP) of MIDH.Mission for Integrated Development of Horticulture (MIDH) is being implemented during XII pan under KrishiUnnatiYojana, a centrally sponsored scheme w.e.f. 2014-15 for the holistic growth of horticulture sector. The details are presented in Table-3. The

subsidy is given to 5 orchards of guava, for the purchase of saplings. The subsidy scheme may be extended to other purposes such as credit subsidy, fertilizer and pesticide subsidy etc.

Table-3: Subsidy scheme for guava orchards in Vellampalli village in Prakasam district during 2018-19

S.No.	Farmer Name	Category	Extent in hectares	Subsidy in Rs.
1.	Nayanala Ranga Rao	OC	1.0	17,599.00
2.	Nayanala Ramadevi	OC	0.8	13,099.00
3.	U. Harinadha Raju	OC	1.0	17599.00
4.	Shaik Arshadbi	BC	1.0	17599.00
5.	Shaik Khasim	BC	1.6	28158.00

Source: Records of Horticulture Department, Prakasam district, A.P, India.

CONCLUSION

The Guava orchards are able to generate self and wage employments. It may be one of the solutions to jobless growth in India. The rate of employment growth is less than the rate of economic growth in India. The return on investment (ROI) and benefit-cost ratio (B/C ratio) indicate that Guava orchards are in profit zone. There is a need, to further improve the profitability through incentives in the form of subsidies. In Prakasam district, recently i.e. in 2018-19, subsidy for the purchase of guava saplings is introduced. It is to be extended to other purposes especially credit subsidy, fertilizer subsidy etc.

REFERENCES

1. Guava - National Horticulture Board [nhb.gov.in / model-Project-Reports/ Horticulture %20 crops/Guava/Guava1.htm](http://nhb.gov.in/model-Project-Reports/Horticulture%20crops/Guava/Guava1.htm) accessed on 10/12/2018.
2. Vijay Kumar Reddy, C., Sreeramulu, D. and Raghunath, M. 2010. Antioxidant activity of fresh and dry fruits commonly consumed in India. *Food Research International*. 43:285-288.
3. World Health Organization, 2003. Diet, nutrition and the prevention of chronic diseases. Report of a joint FAO/WHO Expert Consultation. Geneva. Technical Report Series No.916.
4. COAG 26 www.fao.org/coag accessed on 10/12/2018
5. Kumbhar, J.S., Pawar, P. P., Patole, S. D., Gavali, A. S. 2014. Economics of production and marketing of guava in Maharashtra. *International Journal of Agricultural Sciences* 10(2): 592-599.
6. Sani Alhaji LAWAL. 2015. Economic analysis of guava production among small holder farmers in selected local government areas of Kaduna state, Nigeria. Thesis. M.Sc. Agricultural Economics. School of Post graduate studies, AHMADU BELLO UNIVERSITY, ZARIA.
7. Naphade, S. A. and Tingre, A. S. 2008. Economics of production and marketing of guava in Buldhana district of Maharashtra. *International Journal of Agricultural Marketing*. 22(2):32-41.
8. Veer Sain, Luhach, V.P., Mohinder Singh, M. and Jyohi, V. 2013. Economic analysis of guava production in Haryana. *IOSR Journal of Agriculture and Veterinary Science*. 5(5): 07-11.
9. Bhatt, B. P. and Misra, L. K. 2003. Production potential and cost benefit analysis of agrihorticulture agroforestry systems in Northeast India. 22(2). <https://doi.org/10.1300/J064v22n02-07>
10. World Bank 1975. Assault on world poverty. The John Hopkins University Press, London.
The First World - Advanced capitalist countries
The Second World - Socialist countries
The Third World - developing countries
11. Margot Ballamy and Bruce Greenshields. 1987. Agriculture and Economic instability. Grower publishing company, England.