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Economic Feasibility of Farmers Cultivating Vegetables in Pullimankombai Revenue Viilage in Andipatti Taluk of Theni District, Tamil Nadu

M. Pandiyammal

*M.Phil Scholar, PG and Research Department of Economics
Government Arts College for Women, Nilakottai, Tamil Nadu, India*

 <https://orcid.org/0000-0003-3525-6658>

G. Lakshmi

*Assistant Professor of Economics
PG and Research Department of Economics
Governemnt Arts College for Women, Nilakottai, Tamil Nadu, India*

Abstract

Vegetables are an important article of the daily human diet and are recognized all over the world. India produces 14 % (146.55 million tonnes) of the world's vegetables on 15 % (8.5 million hectares) of the world's area under vegetables. The main vegetables cultivated in Tamil Nadu are Tapioca, Onion, Tomato, Brinjal & Ladies finger. These account for over 70% of the total area as well as the production of vegetables. The cost of different inputs used in the production and sale prices of vegetables plays an important role in the profit earned from vegetable cultivation. Vegetable cultivation is the fastest-growing sector of Indian agriculture. The present research aims to analyse the economic feasibility of vegetable cultivation in the selected study locale. To fulfil the research need. The present study was carried out in Pullimankobai village in Audipatti taluk of Theni District Tamil Nadu. The selected village consists of eight hamlets. From each hamlet, ten sample respondents are to be selected who are involved in vegetable cultivation over the years. The sample size will be 80. Results show that the total variable cost accounted for Rs.93805. The cost includes all the variable costs such as labour charges, particularly on batch preparation, transplanting, weeding, applying fertilizer and pest, applying manure, plugging and packing, and transport cost. The gross yield from vegetable cultivation in the study village is Rs. 156700 and net income was Rs. 62895 per acre.

Keywords: Vegetables, Cost, Cultivation, Human, Labour, Income.

Introduction

Vegetables are an important article of the daily human diet and are recognized all over the world. Vegetables are important sources of food and nutritional security. Significant achievements have been obtained in terms of production, which has increased to 184 million tons during 2017-18 from 169 million tons during 2015-16. Agriculture occupies an important position in Himachal Pradesh. It provides direct employment to 62 per cent of the working population and contributes about 22 per cent to the gross state domestic product. The land holding size has decreased over a period of time due to the family hair system. About 88 per cent of land holdings are marginal and small and growing food grain crops is not profitable.

Vegetable Cultivation in India

India produces 14 % (146.55 million tonnes) of the world's vegetables on 15 % (8.5 million hectares) of the world's area under vegetables. The productivity of vegetables in India (17.3t/ha) is less than the world's average productivity (18.8t/ha). Potato (28.9%), tomato (11.3%), onion (10.3%) and Brinjal (8.1%) are the 4 major vegetables contributing 58.6% of total vegetable production in our country. Other important vegetables are cabbage (5.4%), cauliflower (4.6%), okra (3.9%) and peas (2.4%). India ranks first in the production of okra in the world (73% of world production).

Vegetables are grown in Tamil Nadu. The main vegetables are cultivated in Tamil Nadu consist of Tapioca, Onion, Tomato, Brinjal & Ladies finger. These account for over 70% of the total area as well as the production of vegetables. The cost of different inputs used in the production and sale prices of vegetables plays an important role in the profit earned from vegetable cultivation

Review of Literature

The findings of the study revealed that overall farmers in the study area are getting good profits from vegetable production (Rashmi, 2020). The benefit-cost ratio of the crop was highest with Chinese spinach (3.08) and the lowest with tropical amaranth (1.70). The growth of Ailanthus was influenced due to inter-cropping with palak. The tree height and DBH of Ailanthus were observed highest when inter-cropped with palak (20.24 % and 20.48 % increase over the tree alone and the lowest was observed with Chinese spinach (5.95 % and 5.85 % increase over the tree alone (Rajalingam1, 2017).

This paper measures the technical efficiency of Fruit and vegetable production and its determinants based on the Cobb-Douglas stochastic frontier production function. The study surveyed a sample of 240 households who mostly cultivate Fruits and vegetables in Salem, Trichy, and Theni districts, Tamil Nadu. The mean technical efficiency level was estimated to be 0.60. While the test for equality showed that technical efficiency did not vary significantly across farm sizes, the larger landholdings had higher technical efficiency than smaller landholdings (Srinivasulu, 2014). The

profitability of growing vegetables of individual farmers was measured in terms of gross return, gross margin and value addition. The study also shows that per hectare yield, gross returns, gross margin, net return and benefit-cost ratio of cabbage were higher than those of country bean and brinjal (Chowdhuri, 2014).

Statement of Problem

Vegetables are considered one of the most indispensable components of the human diet. It contains highly important food ingredients which can be productively utilized to build up and revamp the body. Vegetables are valued for their high carbohydrate, vitamin, mineral and fibre contents.

Vegetables make up a significant proportion of the diet of most people and the production of vegetables is a significant factor in ensuring that people have an adequate intake of many essential vitamins, minerals and carbohydrates to meet every day. There has been a perceptible change in the consumption pattern characterized by a declining share of food grains and an increasing share of non-food grain items in the consumption baskets particularly fruits and vegetables. Consequently, Vegetable cultivation is set to assume a greater role and importance within the agriculture sector and eventually in the national economy.

Vegetables are significant constituents of Indian agriculture and nutritional safety due to their short duration, high yield, nutritional richness, economic viability and ability to generate on-farm and off-farm employment. Vegetable cultivation is the fastest-growing sector of Indian agriculture. In a rapidly changing climate, farm resources, cropping patterns, irrigation water availability, value chain management, consumers' preferences, supply and demand and in Tamil Nadu, each farmer's need for awareness/knowledge, technology, information, innovation, advisory service and others differs significantly. By taking into consideration these aspects, the present study objective at analysing the economic feasibility of vegetable cultivation in Pullimankobai village in Audipatti taluk of Theni District Tamil Nadu.

Methodology

The present study aims to analyse the economic feasibility and cost-benefit of vegetable cultivation. The researcher purposely selected Pullimankombai revenue village in Audipatti Taluk of Theni District, Tamil Nadu. The selected village consists of eight hamlets. From each hamlet, ten sample respondents are to be selected who are involved in vegetable cultivation over the years. The sample size will be 80. A pre-tested interview schedule will be administered for collecting primary data. Besides secondary data were also collected regarding the cost of cultivation, crops raised, cropping pattern, soil structure, irrigation facility, climate condition, etc. Simple statistical tools like average, correlation, regression, tables, charts and diagrams, and chi-square tests are used to analyse the study objectives. Study locale Pulimancombai is a revenue village located in Andipatti Taluk of Theni district, Tamil Nadu with total 951 families residing. The Pulimancombai village has a population of 3607 of

which 1826 are males while 1781 are females as per Population Census 2011. As per constitution of India and Panchyati Raaj Act, Pulimancombai village is a village Head for eight hamlets.

Economic Feasibility of Vegetable Production

The cost of cultivation of each intercropped vegetable crop was calculated separately by adding the value of each input, labour charges, irrigation charges and intercultural operations practised during the crop seasons.

Fixed costs do not vary with the acre planted or the yield of the crop. They include such items as depreciation, interest, repairs, maintenance, land etc. rental and insurance of machinery and equipment are a considerable portion of fixed cost.

Variable costs vary with the production of the crop. This includes seed, fertiliser, labour, various chemicals used for the crop and other costs.

Total cost refers to gross receipts of fixed and variable costs.

Table 1 Cost of cultivation of a crop for cultivating vegetable per acre

S.No.	Activities	Sub activity	Unit	Amount
1.	Basal expenses/ Land preparation	Ploughing and batch wor	Lump sum	10380
2.	Sapling and planting	Seed/ saplings	Lump sum	8360
3.	Manure/ Fertiliser and pesticides	500 kg fertilizer, 5 load organic manure	-	8350
4.	Processing and Storage cost	Packing box/ jute bag	Lump sum	3800
5.	Irrigation / water cost (Cost of labour + imputed cost)	At least 15 watering per crop season	Lump sum	24740
6.	Plaguing and packing	75 labours	Lump sum	7500
7.	Transport cost	100 per day*20	Lump sum	2000
8.	Plant protection / supervising/ fencing	Share price	Per year	325
9.	Labour cost per year	Basal works		5500
		Seeding /transplanting		1400
		Weeding		9100
		Apply fertiliser/pest/manure		4100
		Harvesting		8250
Total cost	93805			
10	Yield per crop season		156700	

Source: Primary data

The cost and benefits associated were assessed in cropping calendars of different vegetable cultivation seasons. The annual estimates of the expenditures with different sub activities on vegetable cultivation and the benefits were summarized in the following table.

The yield of each vegetable produced was converted into gross income based on the prevalent market price of each product. The net income was calculated for each intercrop by deducting the cost of cultivation from the gross income obtained in each

vegetable crop. The benefit: cost ratio of different intercrops was calculated by dividing the total net income by the respective cost of cultivation of different intercrops.

It was obtained from the table-1, the cost and return analysis of vegetable production per acre in the study village was summarized in the above table. Results show that the total variable cost accounted for Rs.93805. The cost includes all the variable costs such as labour charges, particularly on batch preparation, transplanting, weeding, applying fertilizer and pest, applying manure, plugging and packing, and transport cost. The gross yield from vegetable cultivation in the study village is Rs. 156700. Though net income was Rs. 62895 per acre.

Conclusion

This study examined the socio economic characteristics of vegetable farmers and factors affecting the productivity and profitability of vegetable production. By providing knowledge about scientific methods of cultivation in order to reduce the cost and better management of credit, ensure quality and create a linkage with reliable market intelligence system. All these will increase the production and productivity of vegetables – paving way for the around prosperity of the nation.

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Author Details

M. Pandiyammal, M.Phil Scholar, PG and Research Department of Economics, Government Arts College for Women, Nilakottai, Tamil Nadu, India, **Email Id:** Pandiyammalp56@gmail.com

G. Lakshmi, Assistant Professor of Economics, PG and Research Department of Economics, Givernemnt Arts College for Women, Nilakottai, Tamil Nadu, India, Email Id: rampriya1996@gmail.com