

A STUDY ON SELECTED VEGETABLE CROPS IN THE RURAL AREAS OF AGASTEESWARAM BLOCK, KANNIYAKUMARI DISTRICT

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Abstract

Vegetables can be eaten either raw or cooked and play an important role in human nutrition. Vegetables have been part of the human diet from time immemorial. Some are staple foods but most are accessory foodstuffs, adding variety to meals with their unique flavors and at the same time, adding nutrients necessary for health. Different varieties of vegetable crops are being cultivated in Agasteeswaram block, having suitable soil for cultivating different vegetable crops, in Kanniyakumari district. Among different three-month vegetable crops, three crops such as ladies finger, cucumber and tomato are cultivated by more than 80 per cent of the farmers in this block. Among the 12 Village Panchayats in this block, these three crops are cultivated in 92 per cent of the total cultivated area in two villages namely Swamythoppu and Karumpattur. Vegetable growers largely depend on the cultivation of different varieties of vegetables for their agricultural income. Harvesting cost is found to be higher and application of pesticide is lower in the two villages. The vegetable crop 'ladies finger' is highly a profitable crop in the study area. The vegetable growers in Karumpattur were more efficient in getting net revenue than the growers in Swamythoppu. The vegetable growers suffer from different anomalies. If these anomalies are overcome either by own effort of the vegetable growers or by the government support, this will pave the way for cultivating different types of vegetables so that the revenue of the growers can be increased on the one hand and there be no shortage in the supply of different types of vegetables, leading to boost up the village economy.

IndexTerms: Vegetable crops, Cost structure, Cost-Benefit, Anomalies

Introduction

Vegetables are parts of plants that are consumed by humans or other animals as food. The original meaning is still commonly used and is applied to plants collectively to refer to all edible plant matter, including the flowers, fruits, stems, leaves, roots, and seeds. The alternate definition of the term *vegetable* is applied somewhat arbitrarily, often by culinary and cultural tradition. It may exclude foods derived from some plants that are fruits, nuts, and cereal grains, but include fruits from others such as tomatoes and courgettes and seeds such as pulses.

Vegetables can be eaten either raw or cooked and play an important role in human nutrition, being mostly low in fat and carbohydrates, but high in vitamins, minerals and dietary fiber. Many nutritionists encourage people to consume plenty of fruit and vegetables, five or more portions a day often being recommended. It is a universally accepted dictum that vegetables are nutritious foods and they are inevitable for human health. The former boxer Mohamed Ali, triumphed over Mike Dison (former world Champion in Boxing) had been a pure vegetarian.

Vegetables have been part of the human diet from time immemorial. Some are staple foods but most are accessory foodstuffs, adding variety to meals with their unique flavors and at the same time, adding nutrients necessary for health. Some vegetables are perennials but most are annuals and biennials, usually harvested within a year of sowing or planting. Whatever system is used for growing crops, cultivation follows a similar pattern; preparation of the soil by loosening it, removing or burying weeds, and adding organic manures or fertilizers; sowing seeds or planting young plants; tending the crop while it grows to reduce weed competition, control pests, and provide sufficient water; harvesting the crop when it is ready; sorting, storing, and marketing the crop or eating it fresh from the ground.

Different soil types suit different crops, but in general in temperate climates, sandy soils dry out fast but warm up quickly in the spring and are suitable for early crops, while heavy clays retain moisture better and are more suitable for late season

crops. In hotter regions, the production of vegetables is constrained by the climate, especially the pattern of rainfall, while in temperate zones, it is constrained by the temperature and day length.

Different varieties of vegetable crops are being cultivated in Agasteeswaram block, having suitable soil for cultivating different vegetable crops, in Kanniyakumari district. Among different three-month vegetable crops, three crops such as ladies finger, cucumber and tomato are cultivated by more than 80 per cent of the farmers in this block. Among the 12 Village Panchayats in this block, these three crops are cultivated in 92 per cent of the total cultivated area in two villages namely Swamythoppu and Karumpattur. Vegetable growers largely depend on the cultivation of different varieties of vegetables for their agricultural income.

Problem Focus

Vegetable cultivation yields revenue to the farmers. Vegetable crops are vulnerable to diseases, affecting the yield from the vegetable, leading to reduction in the net revenue of the vegetable growers. Sometimes, the growers suffer from scarcity of water for irrigation. The prices of different varieties of vegetables fluctuate, either fall in price or rise in price. During the time of fall in price, the growers suffer from reduction in the net revenue and during rise in price, the supply of vegetable falls short of the demand. If these conditions prolong, continuity in the cultivation of vegetable crops would become a question mark and as a result scarcity in the availability of vegetables would take place, price for the vegetables would be in hike with which the consumers would suffer. If the vegetable crops are protected from diseases, enough water is provided for the crops and assurance for stable price for the vegetables; the growers continue to cultivate vegetable crops in the study area.

Objectives

The objectives of the present study are:

- i. to assess the cost structure in the cultivation of the three varieties of vegetable crops and
- ii. to analyse the cost-benefit among the three varieties.

Methodology

Methodology is considered as the heart of any research study. As majority of the growers (92 per cent) cultivate different varieties of vegetable crops and depend these crops for their agricultural revenue including few natural problems which affects the yield of the crops, the researcher was much interested to make a study under the title "A Study on Selected Vegetable Crops in the Rural Areas of Agasteeswaram Block, Kanniyakumari District". Swamythoppu possessed 151 vegetable growers and Karumpattur 148 growers. Simple random sampling technique was used to select 90 (45 samples from Swamythoppu and 45 samples from Karumpattur) sample respondents by 30 per cent of the total growers. Relevant primary data and information were collected from the sample respondents by employing a well-defined 'Interview Schedule'. Conventional tools such as simple average, percentage and ratio were applied wherever required.

Results and Discussion

1. Cost structure in the three varieties of vegetable crops

As the three varieties of vegetable crops are three-month crops, the cost structure can easily be ascertained. Only the variable cost is taken into account. Table 1 conveys the cost incurred by the sample growers in the three varieties.

Table 1 Average variable cost structure per 0.5 acre among the three varieties of the vegetable crops in for three months

Cost items	Swamythoppu				Karumpattur				Grand Total
	Ladies Finger	Cucumber	Tomato	Total	Ladies Finger	Cucumber	Tomato	Total	
Planting seed	1200	800	1200	3200 (18.60)	1400	1000	1300	3700 (19.58)	6900 (19.11)
Irrigation	1400	1000	2400	4800 (27.91)	1600	1200	2500	5300 (28.04)	10100 (27.98)
Weeding	1600	400	1200	3200 (18.60)	1700	500	1300	3500 (18.52)	6700 (18.56)
Application of Pesticide	400	200	300	900 (05.24)	500	250	300	1050 (05.56)	1950 (05.40)
Harvesting	2000	1200	1900	5100 (29.65)	2300	1250	1800	5350 (28.31)	10450 (28.95)
Total	6600	3600	7000	17200 (100.00)	7500	4200	7200	18900 (100.00)	36100 (100.00)

Source: Primary data

Note: Figures in parentheses are percentages

Table 1 shows that, at the aggregate level, harvesting cost of ` 10,450 (28.95 per cent) is higher than the remaining variable costs, so also in the case of Swamythoppu and Karumpattur. Among the variable costs in Swamythoppu, harvesting cost of ` 5,100 (29.65 per cent), followed by irrigation cost of ` 4,800 (27.91 per cent), planting and weeding each of ` 3,200 (18.60 per cent) and application of pesticide with ` 900 (5.24 per cent). In Karumpattur, the harvesting cost was ` 5,350 (28.31 per cent), irrigation cost ` 5,300 (28.04 per cent), planting seed ` 3,700 (19.58 per cent), weeding cost ` 3,500 (18.52 per cent) and application of pesticide was ` 1,050 (5.56 per cent). It is worth noting that there is no vast difference in the variable cost between the two villages. It is inferred that harvesting cost is found to be higher and application of pesticide is lower in the two villages.

2. Cost-Benefit in the cultivation of vegetable crops

2.1 Cost-benefit among the cultivation of vegetable crops

The researcher felt it essential to assess the cost-benefit among the cultivation of vegetable crops. For this, the variable costs of cultivation of vegetable crops and the corresponding revenue accrued thereon are essential. The crop-wise cost-benefit is given in the following Table.

Table 2 Variety-wise average revenue per 0.5 acre in ` for three months at the aggregate level

Vegetable crops	Variable cost	Revenue	Net Revenue	C-B
Ladies Finger	14100 (39.06)	63450 (46.90)	49350 (49.75)	1: 3.50
Cucumber	7800 (21.61)	29250 (21.62)	21450 (21.62)	1: 2.75
Tomato	14200 (39.33)	42600 (31.48)	28400 (28.63)	1: 2.00
Total	36100 (100.00)	135300 (100.00)	99200 (100.00)	1: 2.75

Source: Primary data

Note: Figures in parentheses are percentages

Table 2 conveys that, among the three selected crops in the study area with respect to revenue, ladies finger yields higher amount of revenue of ` 63,450 (46.90 per cent), followed by tomato having yielded ` 42,600 (31.48 per cent) and cucumber only ` 29,250 (21.62 per cent). On the average at the aggregate level, the cost-benefit works out as 1:2.75, meaning that a one Rupee cost yields 2.75 times the revenue. Regarding the crops, 'ladies finger' yields higher net revenue with the cost-benefit ratio as 1: 3.50, meaning that the cost of one Rupee incurred in the cultivation of this crop yields 3.50 times the net revenue. The cost-benefit ratio for cucumber is 1:2.75, indicating that this crop yields 2.75 times the net revenue for one Rupee as cost. The cost-benefit ratio for tomato works out as 1: 2.00, conveying that a one Rupee cost made in this crop yields only two times the net revenue. It is inferred that the vegetable crop 'ladies finger' is highly profitable crop in the study area.

2.2 Cost-Benefit between the two villages

The researcher had also assessed the cost-benefit among the two villages in the cultivation of the selected vegetable crops. For this, the variable costs of cultivation of vegetable crops and the corresponding revenue accrued thereon are essential. The village-wise cost-benefit is given in the following Table.

Table 3 Village-wise average revenue per 0.5 acre in ` for three months at the aggregate level

Villages	Variable cost	Revenue	Net Revenue	C-B
Swamythoppu	17200 (47.65)	62600 (46.27)	45400 (45.77)	1: 2.63
Karumpattur	18900 (52.35)	72700 (53.73)	53800 (54.23)	1: 2.84
Total	36100 (100.00)	135300 (100.00)	99200 (100.00)	1: 2.75

Source: Primary data

Note: Figures in parentheses are percentages

Table mirrors that the cost-benefit ratio for Karumpattur is 1: 2.84 which means that the vegetable growers in this village have got net revenue as 2.84 times for a variable cost one Rupee, followed by the growers in Swamythoppu having obtained net revenue as 2.63 times for spending one Rupee as variable cost. It is evident that the vegetable growers in Karumpattur were more efficient in getting net revenue than the growers in Swamythoppu.

Conclusion

Though earning considerable amount of net revenue from the cultivation of vegetable crops, the growers suffer with respect to the anomalies like plant diseases, shortage of irrigation water and price fluctuation. If these anomalies are overcome either by own effort of the vegetable growers or by the government support, this will pave the way for cultivating different types of vegetables so that the revenue of the growers can be increased on the one hand and there be no shortage in the supply of different types of vegetables, leading to boost up the village economy.

Reference

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