Global Research Review in Business and Economics [GRRBE]
ISSN (Online) 2454-3217, ISSN (Print) 2395-4671
| Open-Access | Volume 8, Issue 05,
Pages 21-25 ||2022||
CrossRef DOI: https://doi.org/10.56805/grrbe

Economic Impact of Oilseed Cultivation in Southern Tamil Nadu

Dr. T. Rajendran
Assistant Professor [Agrl. Economics] TAMIL NADU AGRICULTURAL UNIVERSITY Tapioca and Castor Research Station Yethapur - 636119 Salem

ABSTRACT

The purpose of the study was to know the economic impact of oilseed like castor YRCH 1 cultivation in Tamil Nadu. Two blocks were selected in Salem district. Three villages from each block were selected. From each village 15 castor growers, this will constitute 90 castor growers were selected randomly.

The net income among the selected farmers was Rs. 65,090/- per hectare. Farmers were able to secure a net benefit cost ratio of 1.86. The cent per cent were satisfied with Castor YRCH 1 hybrid cultivation. The total quantity of Castor YRCH 1 hybrid seeds sold from TCRS, Yethapur for the period from August 2019 to August 2020 was 15,141 kg with the monetization value of Rs. 59.43 crores and spread all over in Tamil Nadu. Though four channels are existing in the study area, the predominant one is Producer → Trader → Oil Mill

Major constraints are, cent per cent of the farmers reported that lower price of the produce. About 97.14 per cent of the beneficiaries stated that non-availability of the labour followed by higher seed cost and lack of marketing facilities [64.29 per cent and 57.14 per cent] respectively. Suggestions to improve the cultivation of castor YRCH 1 hybrid, they required to reduce the seed cost followed by facilitate in contract farming, need more training on value addition, more facilitate in marketing and they are expecting timely supply of inputs [92.86 per cent, 77.14 per cent, 65.71 per cent and 50 per cent] respectively.

KEWWORDS: impact study, castor YRCH 1 hybrid, costs and returns, b-c ratio, constraints

1. INTRODUCTION

The important oilseed like castor YRCH 1 hybrid was released during the year 2009. This is one of the first hybrid released from TCRS, Yethapur with an average yield of 1861 kg/ha under rainfed ecosystem and oil content 49 per cent with the duration of 150-160 days. Suitable for rainfed and areas of limited irrigation potential which is most popular among the castor growing farmers in Tamil Nadu. The specific objective of the study was to assess the economic impact of castor YRCH 1 hybrid cultivation in Tamil Nadu.

At the National level, average castor seed productivity for 2019-20 is estimated to be 2052 kg ha-1 compared to 1407 kg ha-1 last year. The average yield findings are based on farmers' responses about their yield expectations on present crop conditions [Business Standard, February 22, 2020]. India is currently the top producer in the world, followed by China and Brazil. Castor seed contains 45-47 per cent non-edible oil, which is used for domestic, medicinal, and industrial purposes [M.M. Desale et al., 2011]. Castor seed production had increased from 11.97 lakh tonnes in 2018-19 to 20.60 lakh tonnes in 2019-20. The output of castor oil in this country varies between 250,000 and 350,000 tonnes per year. Castor crops can be cultivated in various soil types as long as they are deep and well-drained. However, farmers in arid and semi-arid areas of Tamil Nadu decided that castor was no longer a profitable crop [Hema, 2018].

Data and Methodology

Multi-stage random sampling pertains to the selection of the blocks followed by villages. Thalivasal and Macheri block was selected in Salem district. Three villages from Thalivasal block namely Kamakapalayam, Sitheri and Thiyaganur; Three villages from Macheri block namely Vellar, Pukkampatti and Olaipatti was selected purposively. From each village 15 castor growers. This will constitute 90 castor growers were selected randomly.

Analytical Tools and Techniques
Both conventional and functional analyses were employed to analyze the data and to arrive at the valid conclusions.

Cost Concepts
The cost concepts were used to estimate the cost of cultivation and to derive the farm efficiency measures. The cost concepts viz., cost A1, A2, cost B and cost C are used in the present study and are derived as below:
Cost A1: This cost includes value of hired human labour, owned and hired bullock labour, owned and hired machinery services, seeds, FYM, fertilizers, plant protection chemicals, depreciation on farm machinery, land revenue and interest on working capital.
Cost A2: Cost A1+ rent paid for leased in land. In the recent study all farmers are owner cultivators. Hence cost A1 and cost A2 are one and the same.
Cost B: Cost A1/A2 + rental value of owned land + interest on fixed capital
Cost C: Cost B + imputed value of family labour. It gives the total cost of cultivation
Farm Income Measures: These are the returns over different cost concepts. Different income measures are derived using the cost concepts. These measures include gross income, net income and benefit - cost ratio. The following formulae were used.

Net income = Gross income - Cost C
Benefit - Cost ratio = Net income / Cost C

2. RESULTS AND DISCUSSION

Costs and Returns of Castor YRCH 1 Cultivation
The profitability of any enterprise can be determined by costs and returns. In the present study the costs are discussed under two heads *viz*., variable costs and fixed costs. A perusal of Table 1, revealed that the total costs incurred on castor cultivation was around Rs. 34,910/- per hectare of which operational costs accounted to Rs. 28,322/- [81%] and fixed costs were Rs. 6,588/- [19%]. The major expenditure share of variable costs includes human and bullock labour occupying more than 80 per cent of the total.

Accordingly various income measures viz., gross income, net income and benefit cost ratio were worked out and presented in Table 2. Higher the net income, more success is the farm business. The net income among the selected farmers was Rs. 65,090/- per hectare. Farmers were able to secure a net benefit cost ratio of 1.86 i.e., receiving Rs.1.86 additionally for every rupee invested in castor cultivation.

Level of Satisfaction
It could be inferred from the Table 3, the respondents were reported that cent per cent [90 farmers] were satisfied with Castor YRCH 1 hybrid cultivation.

Marketing Channels
It is observed during the survey that cent per cent of the farmers were sell their produce to the trader at Salem which is situated nearly 38 kms away from the study area. Although the majority of the farmers depend on only one channel i.e., farm produce is sold to private organizations, yet the existing marketing channels in the study area are:

Particulars	**Supply Chain**
Channel 1	Producer → Trader → Oil Mill
Channel 2	Producer → Commission Agent → Trader → Oil Mill
Channel 3	Producer → Commission Agent → Oil Mill
Channel 4	Producer → Regulated market yard → Oil Mill

Though four channels are existing in the village, the predominant one is Producer → Trader → Oil Mill

Monetization value for Castor YRCH 1 hybrid
The monetization value has been worked for Castor YRCH 1 hybrid seed supplied from TCRS, Yethapur for the period from August 2019 to August 2020. It could be observed from the table 4, the total quantity of Castor YRCH 1 hybrid seeds sold from TCRS, Yethapur for the period from August 2019 to August 2020 was 15141 kg with the monetization value of Rs. 59.43 crores.

It will obviously evidence from the Table 4, Castor YRCH 1 hybrid seed cultivation spread all over in the Salem, Namakkal, Perambalur, Trichy, Kallakurichy, Dharmapuri, Erode and Cuddalore districts of Tamil Nadu.

Constraints in Castor YRCH 1 hybrid Cultivation

The constraints of Castor YRCH 1 hybrid cultivation were also studied and the findings are presented in the Table 5. It could be inferred from the table, that cent per cent of the farmers reported that lower price of the produce. About 97.14 per cent of them stated that non-availability of the labour followed by higher seed cost and Lack of marketing [64.29 per cent and 57.14 per cent] respectively.

Suggestion for Improvement of Adoption of Castor YRCH 1 hybrid

The suggestions for improvement of adoption of Castor YRCH 1 hybrid were obtained from the Table 6, cent per cent of the respondents were opined that they required to reduce the seed cost followed by facilitate in contract farming, need more training on organic farming and value addition, more facilitate in marketing and they are expecting timely supply of inputs [92.86 per cent, 77.14 per cent, 65.71 per cent and 50 per cent] respectively.

3. CONCLUSIONS

The net income among the selected farmers was Rs. 65,090/- per hectare. Farmers were able to secure a net benefit cost ratio of 1.86 i.e., receiving Rs.1.86 additionally for every rupee invested in castor cultivation. The respondents were reported that cent per cent were satisfied with Castor YRCH 1 hybrid cultivation.

The total quantity of Castor YRCH 1 hybrid seeds sold from TCRS, Yethapur for the period from August 2019 to August 2020 was 15,141 kg with the monetization value of Rs. 59.43 crores and spread all over in Salem, Namakkal, Perambalur, Trichy, Kallakurichy, Dharmapuri, Erode and Cuddalore districts of Tamil Nadu. Though four channels are existing in the study area, the predominant one is Producer to Trader to Oil Mill.

Major constraints in cultivation of Castor YRCH 1 hybrid are, cent per cent of the farmers reported that lower price of the produce. About 97.14 per cent of them stated that non-availability of the labour followed by higher seed cost and lack of marketing facilities [64.29 per cent and 57.14 per cent] respectively. Suggestions to improve the cultivation of Castor YRCH 1 hybrid, they required to reduce the seed cost followed by facilitate in contract farming, need more training on value addition, more facilitate in marketing and they are expecting timely supply of inputs [92.86 per cent, 77.14 per cent, 65.71 per cent and 50 per cent] respectively.

Tables

Table 1. Cost of Cultivation of Castor YRCH 1

S. No	Particulars	Costs	Percentage
	Operational costs	28322	81
1	Human labour	11900	34
2	Bullock labour	2700	8
3	Machine labour	1250	4
4	Seeds	1500	4
5	Farm yard manures	3000	9
6	Fertilizers	2908	8
7	Pesticides	3500	10
8	Interest on working capital	1564	4
	Fixed costs	6588	19
1	Rental value of owned land	5000	14
2	Depreciation	1100	3
3	Interest on fixed capital	488	2
	Total cost [Rs]	34910	100

Table 2. Farm Income measures of Castor YRCH 1 Producers

S. No	Particulars	Costs [Rs/ha]
1	Gross income	100000
2	Total Cost of cultivation	34910
3	Net income	65090
4	Benefit cost ratio	1.86

Table 3. Level of Satisfaction about Castor YRCH 1 hybrid

S. No	Name of the District	Level of Satisfaction			
		0-25%	26-50%	51-75%	76-100%
1	Salem				90

Table 4. Area, Production, Productivity and Monetization value of Castor YRCH 1 Hybrid in Tamil Nadu for the period from August 2019 to August 2020

S. No	Name of the District	Seeds sold [kg]	Area [ha]	Average Productivity [kg/ha]	Production [ton]	Monetization value [Rs. in crore]
1	Salem	6094	1741	2375	4135	22.74
2	Namakkal	3221	1074	2470	2652	14.59
3	Perambalur	1802	601	1975	1186	6.52
4	Trichy	1250	417	2062	859	4.73
5	Kallakuruchi	517	172	2300	396	2.18
6	Dharmapuri	439	146	2125	311	1.71
7	Erode	353	118	2250	264	1.45
8	Cuddalore	196	65	2050	134	0.74
9	Other [minor Dist.]	1270	423	2050	867	4.77
	Total/Ave	**15141**	**4757**	**2184.1**	**10806**	**59.43**

Table 5. Constraints of Castor YRCH 1 hybrid Cultivation reported by the Farmers

S. No	Particulars	Response	Percentage
1	Low price of the produce	90	100
2	Labour scarcity	68	97.14
3	Higher seed cost	45	64.29
4	Lack of marketing facility	40	57.14

Table 6. Suggestion for Improvement of Adoption of Castor YRCH 1 hybrid

S. No	Particulars	Response	Percentage
1	Seed cost might be reduced	90	100
2	Facilitate in contract farming	65	92.86
3	Need more training on organic farming and value addition	54	77.14
4	More facilitate in marketing	46	65.71
5	Timely supply of inputs	35	50

Figures

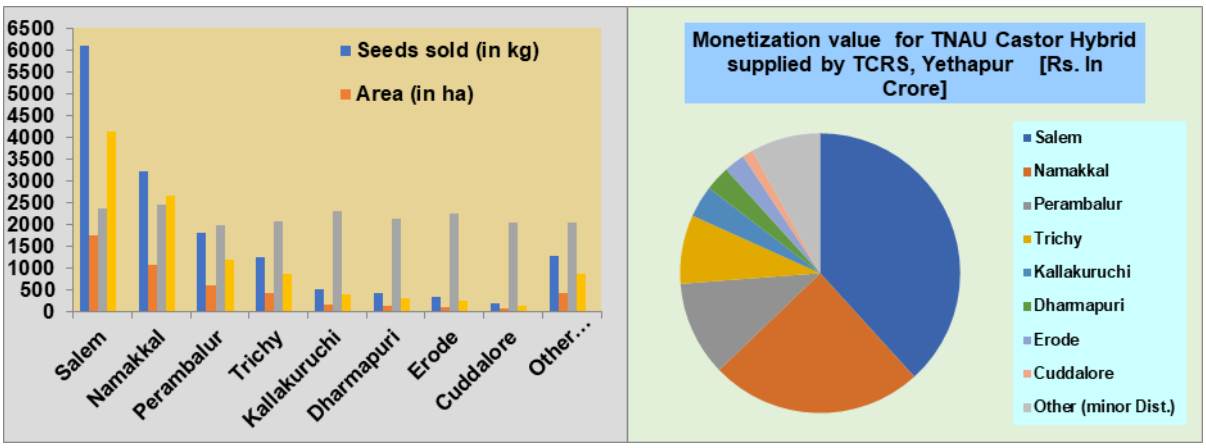

Fig. 1&2. Area, Production, Productivity and Monetization value of oilseed Castor YRCH 1 Hybrid in Tamil Nadu for the period from August 2019 to August 2020

REFERENCES

1. Sales Centre, TCRS, Yethapur period from August 2019 to August 2020
2. Desale, M. M., Badhe, D. K., and R. C. Patel. 2011. Knowledge Level of Hybrid Castor Growers regarding its Production Technology, *Agriculture Update*, 6[2]: 14-16
3. Hema, P. 2018. Adoption of Recommended Castor Hybrid Production Technology among the Castor Growers of Tamil Nadu. EPRA *International Journal* of *Research* & *Development*, 3 [10]