



AN ECONOMIC ANALYSIS OF OIL SEEDS CULTIVATION AND PRODUCTION AT MUSIRI TALUK IN TIRUCHIRAPALLI DISTRICT OF TAMIL NADU

UDAYAKUMARA. M

Research Scholar, Department of Economics,
Annamalai University Chidambaram T N

Dr. K. PRAKASAM

Research Guide, Department of Economics,
Arignar Anna Govt. college,
Musiri, Tiruchanapalli, T N.

INTRODUCTION

ABSTRACT

Oilseed crops are the second most important determinant of agricultural economy, next only to cereals within the segment of field crops. The self-sufficiency in oilseeds attained through “Yellow Revolution” during early 1990’s, could not be sustained beyond a short period. Despite being the fifth largest oilseed crop producing country in the world, India is also one of the largest importers of vegetable oils today. There is a spurt in the vegetable oil consumption in recent years in respect of both edible as well as industrial usages. This paper is focus on an economic analysis of oil seeds cultivation and production at Musiri Talk in Tiruchirapalli District of Tamil Nadu

STATEMENT OF THE PROBLEM

India continues to import edible oils such as soybean oil, palm oil, sunflower oil and coconut oil. The country is the world’s third-largest importer of edible oil. Palm oil constitutes all vegetable oil imports. India imports a large quantity of crude palm oil from Indonesia due to quantitative restriction imposed by the Malaysian government. India imports nearly 55 per cent of its annual vegetable oil requirement of 15.7 million tons from Argentina, Indonesia and Malaysia. Edible oil import is expected to touch 9.3 million tons during 2010-11, higher per capita consumption and population growth, with palm oil leading among all other edible oils imported.

OBJECTIVES OF THE STUDY

1. To study about the area, production and productivity of Oil seeds from 2000-2001 to 2017-2018 in Tamil Nadu.
2. To analysis the Cost and Benefits of Oilseed cultivator in the study area.
3. To find out per acre’s net return for Oilseed cultivators in the study area.
4. To highlights the main constraints which faced by Oilseed cultivators in the study area.

HYPOTHESES OF THE STUDY

The following hypotheses have been framed below based on the above Objectives.

1. There is no significant difference between Area and Production of Oilseed in the Growth rate in Tamil Nadu level.
2. There is no significant difference in cost and benefit ratio among Oilseed cultivators.
3. There is no significant difference in per acre's profitability among the Oilseed cultivators.

METHODOLOGY

This Study is based on both primary and Secondary data. The Former which collected from 210 respondents as a sample size in 1906 in universe by using random sampling method which constituted to 11% as per research dictum. The latter which collected from journals namely Economic survey and the Fact for you.

In order to analysis the data, same mathematical and statistical tools have been worked out viz. Simple Percentage, Cost Benefits Analysis, Average, Correlation and Time series ie. Least square Method in addition to, Diagrammatic Representations have been drawn i.e Bar and Pie chat and Trend Line.

LIMITATIONS

This study having few limitations viz with regard to secondary data in Oilseed's area and production in Tamil Nadu in the year of 2018-2019 and 2019-2020 yet to be published in the journals and website. Therefore, not included in that year's however, the Estimated Production and Area have been worked out at for that years.

RESULT AND DISCUSSION

Table No. 1

Sex ratio wise distribution of the Oilseed Cultivators

SI. No	Sex Ratio	Frequency	Percentage
1	Male	129	61.43
2	Female	81	38.57
	Total	210	100

Source: Compiled from primary data

The above table 1 has been shown by the sex wise distribution of Oilseed cultivators in Musiri taluk of Tiruchirapalli Districts. As per the table, 129 respondents out of 210 are male Oilseeds cultivators which constituted to 61.43 percentage and remaining 81 respondents out of 210 are female Oilseeds cultivators which constituted to 38.57 percentage.

Table No. 2

Year of experience of Oilseeds cultivators

SI. no.	No. of years	Frequency	Percentage
1	Below 2 years	24	11.43
2	2 – 5 years	53	25.24
3	5- 10 years	38	18.09
4	Above 10 years	95	45.24
	Total	210	100

Source: Compiled from primary data

The above table 2 has been revealed by oilseed cultivators' years of experience in the study area. According to it, 95 respondents out of 210 samples size, having more than 10 years of experience which constitute to 45.24% and rest of them having less than 10 years of experience which constitute to 54.76%. In which few respondents having less than 2 years of experience in cultivation of oilseed which constitute to 11.43%

Table No. 3

Oilseeds cultivation for different farmers in acres

Si No	Classification of Farmers	NO. of Respondents	Size of Land Holding in Acres	Oil Seeds Cultivation in acres				Total Acres
				Groundnut in Acres	Gingily in Acres	Sun Flower in Acres	Costor in Acres	
1	Marginal farmers (0-1 acres)	115	95	87.4 (92)	1.6 (1.68)	3.3 (3.47)	2.7 (2.85)	95 (100)
2	Small farmers (1-2.5 acres)	56	108	87.75 (81.25)	9.7 (8.98)	4.1 (3.80)	6.45 (5.97)	108 (100)
3	Medium farmers (2.5-5 acres)	28	103	75.78 (73.57)	9.42 (9.15)	13.6 (13.2)	4.2 (4.08)	103 (100)
4	Large farmers (above 5 acres)	11	78	59.08 (75.74)	6.8 (8.72)	5.69 (7.29)	6.43 (8.25)	78 (100)
	Total (Acres)	210	384	310.01 (80.73)	27.52 (7.17)	26.69 (6.95)	19.78 (5.15)	384 (100)

Source: compiled from primary data

Note: Figure in parenthesis the Oil Seeds Cultivation in acres in percentage

The above table 3 has been analyzed by oilseed cultivation for different farmer in acres in the study area. As per the table, 95 acres of land cultivated oilseeds by 115 marginal farmers i.e. 87.4 acres of land on groundnuts, 1.6 acres of land on gingili, 3.3 acres of land on sunflowers and 2.7 acres of land on Castor oil. Which constituted to 92%, 1.68%, 3.47% and 2.85% respectively. Similarly, 108 acres of land cultivated the oilseeds by 56 small farmers. i.e. 87.75 acres of land on groundnuts, 9.7 acres of land on gingilis, 4.1 acres of land on sunflowers and 6.45 acres of land on castor oil which constituted to 81.25%, 8.98%, 3.80% and 5.97% respectively. Likewise 103 acres of land cultivated oilseed by 28 medium farmers. i.e. 75.78 acres of land on groundnuts, 9.42 acres of land on gingilis, 13.6 acres of land on sunflowers and 4.2 acres of land on castor oil which constituted to 73.57%, 9.15%, 13.2% and 4.08% respectively. And ultimately 78 acres of land cultivated oilseed by 11 Large farmers. i.e. 59.08 acres of land on groundnuts, 6.8 acres of land on gingilis, 5.69 acres of land on sunflowers and 6.43 acres of land on castor oil which constituted to 75.74%, 8.72%, 7.29% and 8.25% respectively.

Table No. 4

**Details of cost for Groundnuts Oilseed production for different types
of farmers in study area (Rs/Area)**

Classification of Farmers	Types of farmers	Total Area (Acre)	Details of cost of Oilseed production for Various items										
			Total ploughing operation cost in Rs.	Total farm yard manure cost in Rs.	Seed Plant (per K.g)	Total pland protection chemical cost in Rs.	Total fertilizers application cost in Rs.	Total Labour cost in Rs.	Total irrigation water cost in Rs.	(A) Opration cost in Rs. (4-10)	(B) total fixed cost in Rs.	Total cost in Rs. (A+B)	Average cost in Rs.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Marginal farmers (0-1 acres)	106	87.4	209760 (12.97)	52440 (3.24)	117990 (7.3)	31464 (1.95)	20976 (1.3)	109250 (6.76)	52440 (3.24)	594320 (36.76)	1022580 (63.24)	1616900 (100)	18500
Small farmers (1-2.5 acres)	46	87.75	205335 (12.89)	50456 (3.17)	114952 (7.22)	29835 (1.87)	20620 (1.29)	107055 (28.70)	50895 (28.83)	579148 (36.36)	1013512 (63.64)	1592660 (100)	18150
Medium farmers (2.5-5 acres)	20	75.78	174294 (13.05)	38647 (2.90)	98514 (7.38)	24250 (1.82)	17430 (1.31)	90936 (6.81)	42057 (3.15)	486128 (36.42)	848736 (63.58)	1334864 (100)	17615
Large farmers (above 5 acres)	8	59.8	134550 (13.21)	29900 (2.94)	74750 (7.34)	17940 (1.76)	12558 (1.23)	65780 (6.46)	31096 (3.05)	366574 (36)	651820 (64)	1018394 (100)	17030
Total (Acres)	180	310.01	723939	171443	406206	103489	71584	373021	176488	2026170	3536648	5562818	

Source: Compiled from primary data

The above table 4 very clearly reveals the details of cost for groundnut oilseed production for different types of farmers in the study area. Per acre's average cost differs among various types of farmers for groundnut oilseed production. Compared to various types of farmers, the large farmers have less average cost in Rs for the cultivation of groundnut oilseed for per acre Rs 17030 /-for large farmers against Rs 17615/- for medium farmers, Rs 18150/- for small farmers and 18500/- for marginal farmers. Cost of groundnut production in various items for various types of farmers, the fixed cost which is major costs in total cost percentage for all types of farmers, which constitute 64%, 63.58%, 63.64% and 63.24% for marginal farmers, small farmers, medium farmers and large farmers respectively.

Table No. 5

**The average revenue earned by different farmers
for Groundnut cultivation(Rs/Acre)**

Sl. No	Classification of Farmers Types of Crops	Frequency	Total Area (acre)	Average Oilseed yield in packs	No. of Oilseed harvest in k.g (from per back)	Total Oilseed production (no.of farmers *no. of time Oilseed harcest in k.g	Crop wise Oilseed Average price per k.g in Rs.	Crop Selling in Rs.	Product selling in Rs.	Total income from Oilseed selling in Rs	Average Return in Rs.
1	Marginal farmers (0-1 acres)	106	87.4	1311	38	49818	55	2739990	349600	3089590	35350
2	Small farmers (1-2.5 acres)	46	87.75	1404	38	53352	55	2934360	342225	3276585	37340
3	Medium farmers (2.5-5 acres)	20	75.78	1288	38	48944	55	2691920	287964	2979884	39323
4	Large farmers (above 5 acres)	8	59.8	1047	38	39786	55	2188230	239200	2427430	40592
	Total (Acres)		310.01								

Source: compiled from primary data

The above table 5 has been analyzed by the average revenue earned by different farmer for groundnut cultivation in the study area. According to it the average revenue is differ for different type of farmers in the cultivation of groundnut oilseed i.e. Rs 40592/- is earned by large farmers. Whereas Rs 39323/- is earned by medium farmers and Rs 37340/- is earned by small farmers and Rs 35350 earned by marginal farmers.

Table No. 6

Average Net Return and benefit cost ratio earned by various farmers from various oilseeds cultivations in the study area

Si. No	Types of farmers	Frequency	Name of the oilseeds	Average revenue in Rs	Average cost in Rs	Net revenue in RS	Benefit cost Ratio
1	Marginal farmers (0-1 acres)	106	Groundnut	35350	18500	16850	1.91
		2	Gingili	37500	18620	18880	2.01
		4	Sun flower	27272	16765	10507	1.63
		3	Castor	24265	21430	2835	1.13
	Total	115		-	-	-	-
2	Small farmers (1-2.5 acres)	46	Groundnut	37340	18150	19190	2.06
		5	Gingili	35876	18360	17516	1.95
		2	Sun flower	29634	16645	12989	1.78
		3	Castor	25153	20470	4683	1.23
	Total	56		-	-	-	-
3	Medium farmers (2.5-5 acres)	20	Groundnut	39322	17615	21607	2.23
		3	Gingili	35668	17745	17923	2.01
		4	Sun flower	29448	15590	13858	1.89
		1	Castor	25257	19790	5467	1.28
	Total	28		-	-	-	-
4	Large farmers (above 5 acres)	8	Groundnut	40592	17030	23562	2.38
		1	Gingili	37058	16745	20313	2.21
		1	Sun flower	31634	14946	16688	2.12
		1	Castor	25717	18970	6747	1.36
	Total	11		-	-	-	-

Source: compiled from primary data

The above table 6 shows that the Benefit Cost Ratio and net return which earned by different type of farmers for various oilseeds in the study area. As per the table among the marginal farmers who have earned net return and B/C ratio and is highest in gingili. Next to it groundnut, next to it sun flower and castor oil which constituted to 2:06, 1:95, 1:63 and 1:13 respectively.

Among the small farmers who have earned net return and B/C ratio and is highest in groundnut. Next to it gingili, next to it sun flower and castor oil which constituted to 2:01, 1:91, 1:78 and 1:23 respectively.

Likewise among the medium farmers, who have earned net return and B/C ratio and is highest in groundnut. Next to it gingili, next to it sun flower and castor oil which constituted to 2:23, 2:01, 1:89 and 1:28 respectively.

Similarly, among the Large farmers, who have earned net return and B/C ratio and is highest in groundnut. Next to it gingili, next to it sun flower and castor oil which constituted to 2:38, 2:21, 2:12 and 1:36 respectively.

The net return and B/C ratio which is differ for different farmers for different oilseeds. i.e 1:91 for marginal farmer in groundnut cultivation. Whereas 2:06, 2.23 and 2:38 for small, medium and large farmers.

TEST OF SECOND HYPOTHESES

Statement of second hypotheses

2. There is no significant difference in cost and benefit ratio among Oilseed cultivators.
3. There is no significant difference in per acre's profitability among the Oilseed cultivators.

As per the above table, the net return and B/C ratio which is differ for different farmers for different oilseeds. i.e 1:91 for marginal farmer in groundnut cultivation. Whereas 2:06, 2:23 and 2:38 for small, medium and large farmers. Hence, the second null hypothesis (HO) has been rejected by the variation of Benefit Cost Ratio for different oilseeds which shown in the above table and hence, accepted its alternative hypothesis (HA).

The third null hypothesis also been rejected based on the above table per acre's net return or profitability have differ for different farmers for the cultivation of oilseeds which can be proved by empirically hence, the third null hypothesis has been rejected (HO) and accepted its alternative hypothesis (HA).

Table No. 7

THE MAIN CONSTRAINS OF OILSEED CULTIVATORS IN THE STUDY AREA

Si No.	Variety constraint faced of groundnut cultivators	Frequency	Percentage (%)
I	Lack of irrigation	69	32.86
II	Shortage of man power	28	13.33
III	Prevalence of pest and diseases	73	34.76
Iv	Fluctuation in oilseed price	40	19.05
	Total	210	100

Source: compiled from primary data

The above table 7 depicts that the main constrains of oilseed cultivators at Musiri Taluk of Tiruchirapalli District. According to it, the oilseed cultivators having various grievances such as prevalence of pest diseases, lack of irrigation, fluctuation in oilseed price and shortages of man power which constitute to 34.76%, 32.86%, 19.05% and 13.33 % respectively.

Table No. 8

Area, Production and Productivity of oilseeds (2000-01 to 2016-17)

in Tamil Nadu

S.No.	Years	Area (000 ha.)	Production (000 tonnes)	Yield (Kg/ha)
1	2000-01	22.77	18.44	810
2	2001-02	22.64	20.66	913
3	2002-03	21.49	14.84	691
4	2003-04	23.66	25.19	1064
5	2004-05	27.52	24.35	885
6	2005-06	27.86	27.98	1005
7	2006-07	26.51	24.29	916
8	2007-08	26.69	29.76	1115
9	2008-09	27.56	27.72	1006
10	2009-10	25.96	24.88	959
11	2010-11	27.22	32.48	1193
12	2011-12	26.31	29.80	1133
13	2012-13	26.68	30.94	1168
14	2013-14	28.05	32.75	1168
15	2014-15	25.60	27.51	1075
16	2015-16	26.09	25.25	968
17	2016-17	26.18	31.28	1195

Source: compiled from secondary data

Economic survey.

The above table has been shown by area, production and productivity oilseed in Tamil Nadu. As per the table the production of oilseed is considerable volatility from year of the year which has been shown with help of diagrammatic representation. And also the degree of relationship between area and production has been shown with help of statistical tools viz Correlation and Average Growth Rate (A.G.R).

SI No.	Area (in million hectares) (X)	Production (in million Tones) (Y)	X-x	X ²	Y-y	Y ²	XY	Productivity (k.g/ha)
1	22.77	18.44	-3.04	9.24	-7.92	62.72	24.08	810
2	22.64	20.66	-3.17	9.86	-5.7	32.49	18.07	913
3	21.49	14.84	-4.32	18.66	-11.52	132.71	49.76	691
4	23.66	25.19	-2.15	4.62	-1.17	1.37	2.51	1064
5	27.52	24.35	1.71	2.92	-2.01	4.04	-3.43	885
6	27.86	27.98	2.05	4.20	1.62	2.62	3.32	1005
7	26.51	24.29	0.70	0.49	-2.07	4.28	-1.44	916
8	26.69	29.76	0.88	0.77	3.4	11.56	2.99	1115
9	27.56	27.72	1.75	3.06	1.36	1.85	2.38	1006
10	25.96	24.88	0.15	0.02	-1.48	2.19	-0.22	959
11	27.22	32.48	1.41	1.99	6.12	37.45	8.63	1193
12	26.31	29.80	0.50	0.25	3.44	11.83	1.72	1133
13	26.68	30.94	0.87	0.75	4.58	20.97	3.98	1168
14	28.05	32.75	2.24	5.02	6.39	40.83	14.31	1168

15	25.60	27.51	-0.21	0.04	1.15	1.32	-0.24	1075
16	26.09	25.25	0.28	0.08	-1.11	1.23	-0.31	968
17	26.18	31.28	0.34	0.11	4.92	24.21	1.67	1195
$\sum N = 17$	$\sum X = 438.7$ 9	$\sum Y = 448.12$	$\sum x = 0$	$\sum X^2 = 6$ 2.08	$\sum y = 0$	$\sum Y^2 = 3$ 93.67	$\sum XY =$ 127.7	8

$$N = 17 \quad \sum x^2 = 62.08 \quad \sum x = 438.39 \quad \sum y = 448.12 \quad \sum y^2 = 393.67$$

$$\sum XY = 127.78$$

$$r = \frac{\sum XY}{\sqrt{\sum X^2 * \sum Y^2}}$$

$$= \frac{127.78}{\sqrt{62.08 * 393.67}} = 127.78 / 7.87 \times 19.84$$

$$= 127.78 / 156.14$$

$$r = 0.81$$

Table No.9

The oilseed cultivators from 2000-01 to 2016-17 in Tamil Nadu

S.No.	Years	Production (000 tons)	X-x	X ²	XY	YC
1	2000-01	18.44	-8	64	-147.52	20.60
2	2001-02	20.66	-7	49	-144.62	21.32
3	2002-03	14.84	-6	36	-89.04	22.04
4	2003-04	25.19	-5	25	-125.95	22.76
5	2004-05	24.35	-4	16	-97.40	23.48
6	2005-06	27.98	-3	9	-83.94	24.20
7	2006-07	24.29	-2	4	-48.58	24.92
8	2007-08	29.76	-1	1	-29.29	25.64
9	2008-09	27.72	0	0	0	26.36
10	2009-10	24.88	1	1	24.88	27.08
11	2010-11	32.48	2	4	64.96	27.80
12	2011-12	29.80	3	9	89.40	28.52
13	2012-13	30.94	4	16	123.76	29.24
14	2013-14	32.75	5	25	163.75	29.96
15	2014-15	27.51	6	36	165.06	30.68
16	2015-16	25.25	7	49	176.75	31.40

17	2016-17	31.28	8	64	250.24	32.12
18	2017-18*					32.84
19	2018-19*					33.56
20	2019-20*					34.28
21	2020-21*					35
	$\sum N=17$	$\sum Y=448.12$	$\sum x=0$	$\sum X^2 =408$	$\sum XY = 292.46$	447.50

Source: compiled from secondary data

$$YC = Na + b\sum x$$

$$\sum XY = a\sum x + b\sum x^2$$

$$292.46 = a(0) + b(408)$$

$$a = 448.12/17$$

$$a = 26.36$$

$$292.46 = b(408)$$

$$b = 292.46/408 \quad b = 0.72$$

$$yc = a + bx$$

$$yc = 26.36 + 0.72x$$

$$\text{at } x = 17$$

$$yc = 26.36 + 0.72(17)$$

$$yc = 26.36 + 12.24$$

$$yc = 38.60$$

Yc for the year of 2026 the Oilseed production in India will be $yc = 38.60$

The above table 9 has been shown by the trend of the production of oilseed in Tamil Nadu from 2000-01 to 2016-17 and prediction of oilseed production for year of 2026 has been projected with help of statistical tools namely time series analysis i.e Least square method.



Figure 1

The oilseed cultivators from 2000-01 to 2016-17 in Tamil Nadu

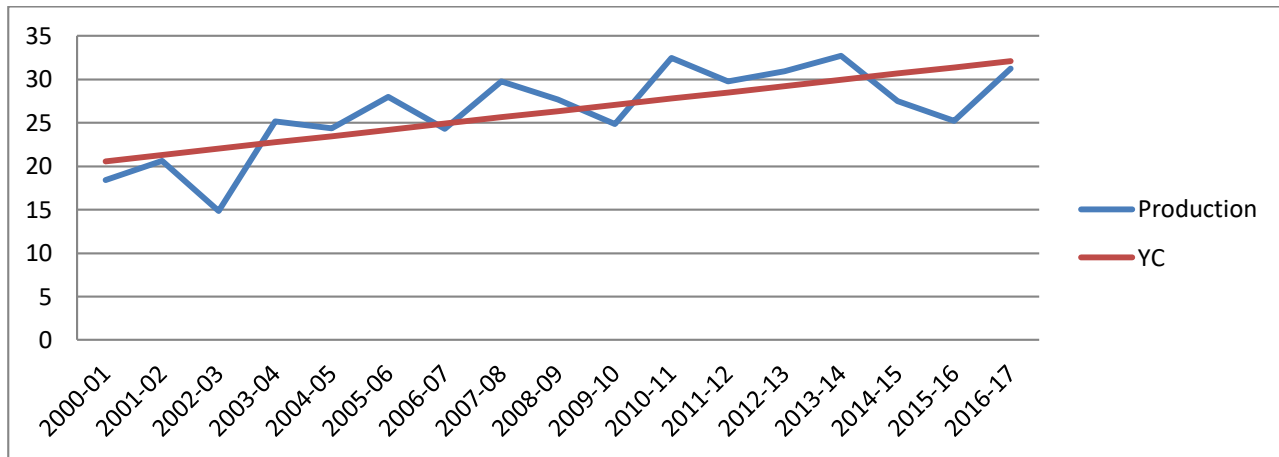


Table No.10

Area volume of Production and Productivity of Oilseed of Tamil Nadu Over The Period from 2000 – 2001 to 2016-2017

S.No.	Years	Area (000 ha.)	AGR (%)	Production (000 tonnes)	AGR (%)	Yield (Kg/ha)	AGR (%)
1	2000-01	22.77	-	18.44	-	810	-
2	2001-02	22.64	-0.57	20.66	12.04	913	12.72
3	2002-03	21.49	-5.08	14.84	-28.17	691	-24.31
4	2003-04	23.66	10.09	25.19	69.74	1064	53.98
5	2004-05	27.52	16.31	24.35	-3.33	885	-16.82
6	2005-06	27.86	1.24	27.98	14.91	1005	13.56
7	2006-07	26.51	-4.85	24.29	-13.19	916	-8.85
8	2007-08	26.69	0.68	29.76	22.52	1115	21.72
9	2008-09	27.56	3.26	27.72	-6.85	1006	-9.77
10	2009-10	25.96	-5.80	24.88	-10.24	959	-4.67
11	2010-11	27.22	4.85	32.48	30.55	1193	24.40
12	2011-12	26.31	-3.34	29.80	-8.25	1133	-5.03
13	2012-13	26.68	1.41	30.94	3.82	1168	3.09
14	2013-14	28.05	5.13	32.75	5.85	1168	0
15	2014-15	25.60	-8.73	27.51	-16	1075	-7.96
16	2015-16	26.09	1.91	25.25	-8.21	968	-9.95
17	2016-17	26.18	0.34	31.28	23.88	1195	23.45
	Average	25.81	1.05	26.36	7.33	1015.53	4.10

Source: compiled from secondary data

AGR = annual growth rate

$$AGR = \frac{\text{current year} - \text{previous year}}{\text{previous year}} \times 100$$

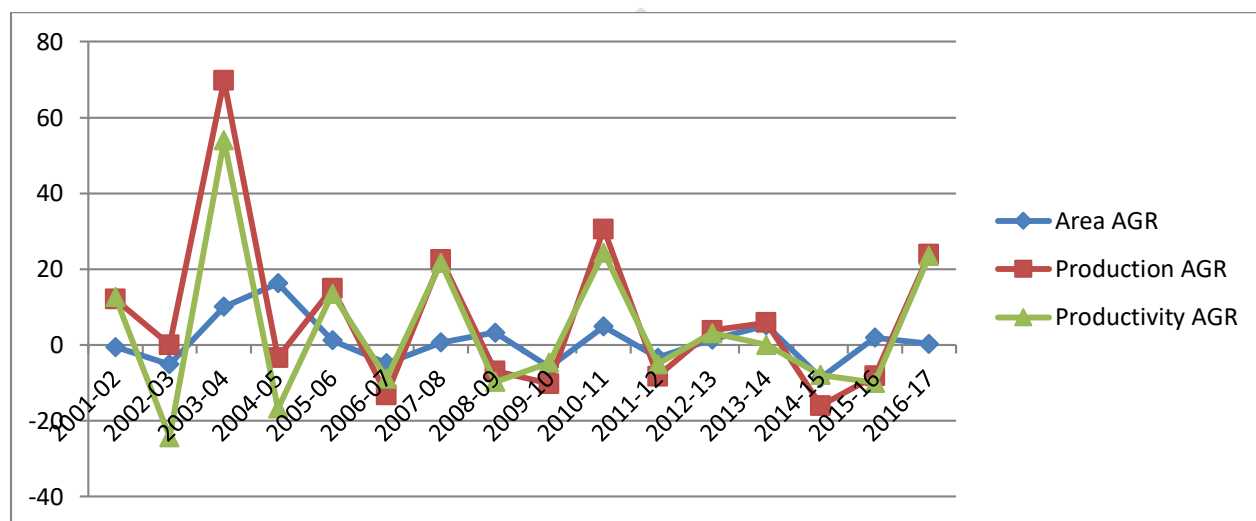
TESTING OF HYPOTHESES

Statement of first hypothesis

As per the above table the growth rate of area and production have significantly volatilized and growth rate having negative trend hence, the first null hypothesis (H₀) have been rejected and its alternative hypothesis have been accepted. It has been shown by Average Growth Rate (AGR) and also drawn the trend line figure.

Figure 2

Area volume of Production and Productivity of Oilseed of Tamil Nadu Over The Period from 2000 – 2001 to 2016-2017



MAJOR FINDINGS

1. There is no significant difference between Area and Production of Oilseed in the Growth rate in Tamil Nadu level
2. As per the table 4.1, 129 respondents out of 210 are male Oilseeds cultivators which constituted to 61.43 percentage.
3. 95 respondents out of 210 samples size, having more than 10 years of experience in cultivation of oilseeds which constitute to 45.24%.
4. Majority of the oil cultivators are marginal farmer who owned 95 acres of land out of 384 total area which constituted to 54.76%.
5. The large farmers have less average cost in Rs for the cultivation of groundnut oilseed for per acre Rs 17030 /- for large farmers against Rs 17615/- for medium farmers, Rs 18150/- for small farmers and 18500/- for marginal farmers. Cost of groundnut production in various items for various types of farmers, the fixed cost which is major costs in total cost percentage for all types of farmers, which constitute 64%, 63.58%, 63.64% and 63.24% for marginal farmers, small farmers, medium farmers and large farmers respectively.
6. The average revenue is differ for different type of farmers in the cultivation of groundnut oilseed i.e Rs 40592/- is earned by large farmers. Whereas Rs 39323/- is earned by medium farmers and Rs 37340/- is earned by small farmers and Rs 35350 earned by marginal farmers.
7. The net return and B/C ratio which is differ for different farmers for different oilseeds. i.e 1:91 for marginal farmer in groundnut cultivation. Whereas 2:06, 2.23 and 2:38 for small, medium and large farmers.

CONSTRAINTS

1. There is a main shortage of labour for cultivation of production of oilseed at Musiri Taluk in Tiruchirapalli District.
2. Sometimes lack of irrigation for cultivation of oilseed as monsoon failure. While other time flooded the land in which oilseed cultivated. As a result cultivators incurring lose.
3. Inadequate finance facilities are encountered in oilseeds cultivation and production.
4. During khariff seasons there is a shortage of irrigation for oilseeds cultivation and production which in turn reduces oilseeds yield.
5. Scarcity of labourers leads to difficulty to execute oilseeds operation like weeding of oilseeds and harvesting of oilseeds both are highly labour intensive.
6. Lack of knowledge is known among oilseeds cultivators about use of scientific method of technology.
7. Hairy caterpillars are the most destructive insect pests on oilseeds, especially during kharif. The menace caused by hairy caterpillars result in almost 100 % loss of production yield.
8. Hairy caterpillars are polyphagous. These ravage oilseeds.
9. There is fluctuation in oilseeds price in quality wise and year wise.
10. There is absence of strict disease control measure.
11. There is a failure to capture internal market due to poor quality.
12. Aphids, the leaf miner, the red hairy caterpillar and the white grub are the most serious pests of the groundnut crop.

MAJOR RECOMMENDATIONS

1. Large number of small size farm ponds are developed on individual holdings and large farm pond on a collective basis to harvest and recycle rain water. Besides small checks dams against water nalas and streams. Desalting of existing tanks must be taken up on participatory basis for the efficient use of available water by minimizing the losses.
2. Quality based pricing should be given and minimum support price-procurement price should be raised on year basis.
3. Boron is one of the important micronutrients needed by the plants for food growth.
4. Use of improved varieties is recommended for a particular soil type.
5. Use of good quality seeds for sowing.
6. Treating seeds with fungicide prior to sowing.
7. Inoculating seeds with a culture of Rhizobium.
8. The government's help to oilseed growers has been in the form of providing minimum support prices through its stocking policy and by imposing customs duties on imports of edible oils and oilseeds.
9. MSP policy does not appear to have worked as well in the case of oilseeds as it has been in the case of wheat and rice.
10. In the future, oilseed consumption as food needs to be boosted.
11. The scientists suggest use of calcium and sulphur to boost the crop yield.
12. Adopt clusters of villages for better marketing condition.
13. Impose anti dumping duty.
14. Modern day oilseed requires a wide range of equipment and machineries for better utilization of resource, timely completion of operations and obtaining higher yield and better quality.
15. There should be needed to control the pest and disease measure.

CONCLUSION

Oilseeds and edible oils are two of the most sensitive essential commodities. India is one of the largest producers of oilseeds in the world and this sector occupies an important position in the Indian agriculture economy. The edible oil economy needs to be strengthened as the country heavily depends on imports. There is a need for boosting yields. India needs to adopt genetically modified seeds sooner or later to meet the ever-rising demand of oilseeds.

REFERENCES

WEBSITE

- ❖ <https://www.solexthermal.com> › resources › articles › oils
- ❖ <https://www.toppr.com> › ask › content › concept › intr.
- ❖ <https://www.yourarticlelibrary.com> › cultivation › oilseeds..

NAME OF THE JOURNALS

- A.K. Yusuf A Review of Methods Used for Seed Oil Extraction, International Journal of Science and Research (IJSR), Volume 7 Issue 12, December 2018.
- Bartholomew Saanu Adeleke, Olubukola Oluranti Babalola, Oilseed crop sunflower (*Helianthus annuus*) as a source of food: Nutritional and health benefits, 31 July 2020 <https://doi.org/10.1002/fsn3.1783>
- Fakeerappa Arabhanvi, Amit M. Pujar and U. K. Hulihalli, Micronutrients and productivity of oilseed crops - A review , 36 (4) 2015 : 345-348.
- Gayatri Vaidya, G. R. Naik Comparative Evaluation of Bioproductivity Studies of Simarouba, Pongamia and Jatropha for Biodiesel Parameters, International Journal of Current Research and Review, Vol 10 Issue 05, March, 2018.

