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An economic analysis of production and marketing of sunflower in Raigarh district of Chhattisgarh

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Abstract

This study seeks to examine (i) the growth rate in area, production and productivity of Sunflower in Raigarh district and Chhattisgarh State, (ii) costs and returns of Sunflower, (iii) disposal pattern of Sunflower in the study area and (iv) the major constraints in production and marketing of spices and suggest suitable measures to overcome them. The study was conducted in Raigarh district of Chhattisgarh state. Total 120 farmers were considered for the study, which comprised of small (58), medium (42) and large (30). The Primary data were collected from the sample farmers through personal interview method. The data were pertaining for agricultural. The study envisaged that family size of sample farmers was 5.8 members. The average farm size was found to be 2.21 hectares. Overall cropping intensity was observed to be 184 percent. The average cost of cultivation of Sunflower was Rs/ha. 211855.51 And estimated gross return was Rs/ha 47600.00 the cost per quintal production of Sunflower was noticed to be Rs 2800 the average yield of Sunflower was q 17.00 q/ha. The benefit cost ratio of Sunflower was registered to 1:3.01. There were two marketing channels for marketing of spices, viz., Channel-I: Producer – Consumer Channel-II: Producer – Village Merchant /Retailer – Consumer. Channel-III: Producer – Commission Agents/Wholesaler – Retailer – Consumer Among the sample Sunflower growers more than ninety five percent marketable surpluses were observed in Sunflower.

Keywords: Cost and returns, profitability of sunflower

Introduction

India is one of the largest producers of oilseeds in the world and occupies an important position in the Indian agricultural economy. It is estimated that nine oilseeds namely groundnut, rapeseed-mustard, soybean, sunflower, safflower, sesamum, niger, castor and linseed, accounted for an area of 23.44 million hectares with the production of 25.14 million tonnes. (B. madhusudhana 2008) [2] India is amongst the largest producer and consumer of vegetable oils in the world. Oilseeds have been the backbone of agricultural economy of India since long. Indian vegetable oil economy is the fourth largest in the world next to USA, China and Brazil. Oilseed crops play the second important role in the Indian agricultural economy next to food grains in terms of area and production. The Indian climate is suitable for the cultivation of oilseed crops; therefore, large varieties of oilseeds are cultivated here. The major oilseeds cultivated in our country are groundnut, rapeseed and mustard, castor seed, sesamum, nigerseed, linseed, safflower, sunflower and soybean. However, groundnut, rapeseed/mustard, soybean and sunflower account for a major chunk of the output. At present, more than 27 million hectares of land is under oilseeds cultivation.

Objectives of the Study

To find out cost of production of sunflower and profitability per hectare in different farm size group.

Materials and Methods

Raigarh district was the Sunflower growing district in Raigarh, district alone contributes an, area of (27.224/MH) of Sunflower with the production of 33.500 (MT) (2011-12). District was specialized in the cultivation of Sunflower of commercial scale and it was a Sunflower growing Raigarh district was selected purposively for the study.

For the first stage Raigarh district contains 9 blocks were selected viz namely Raigarh, Sarangarh, Dharmjaygarh, Gharghora, Lailunga, Kharsia, Baramkela, pusour and Tamnar. Among all these blocks, pusour tehsil (716 ha) for sunflower selected due to highest in area and production under Sunflower crop cultivation.

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A complete list of all villages was obtained from pusour block office, Therefore; the villages was arranged in ascending order, according to area under Sunflower cultivation. pusaur.

Block consists of 141 villages. Altogether 7 villages were selected randomly for the present study.

Results and Discussion

Table 1: Resource use and Cost of Cultivation of Sunflower crop per hectare in different Size of Farms Group, Number of Respondents = 120 S M L= 58+ 42+ 20 =120 (Value in Rupees)

S. No	Particulars of Farm Operations	Size of Farms Groups			Sample Average
		Small	Medium	Large	
1	Hired Human Labour Charges	8200.00 (3.86)	8560.00 (4.20)	8920.00 (4.51)	8560.00 (4.08)
2	Bullock Labour Charges	3950.00 (1.84)	3600.00 (1.74)	3250.00 (1.61)	3600.83 (1.77)
3	Machinery Labour Charges	3800.00 (1.72)	4300.00 (2.80)	4200.00 (2.15)	4100.00 (1.91)
4	Cost of Seedlings	88500.00 (41.71)	86000.00 (42.17)	83000.00 (41.93)	85833.33 (41.90)
5	Cost of Farm Yard Manure	17000.00 (7.15)	15500.00 (7.19)	14800.00 (7.16)	15766.33 (7.17)
6	Cost of chemical Fertilizers	15000.00 (6.61)	14100.00 (6.50)	13650.00 (6.47)	14250.00 (6.58)
7	Cost of Irrigation charges	21000.00 (9.53)	19000.00 (8.92)	18000.00 (9.20)	19333.67 (9.27)
8	Cost of Plant Protection charges	9000.00 (3.81)	7800.00 (3.82)	7700.00 (3.83)	8166.67 (3.82)
9	Miscellaneous charges	2600.00 (1.19)	2300.00 (1.09)	2100.00 (1.07)	2333.33 (1.14)
10	Interest on Working Capital @ 8%	13524.00 (6.20)	12892.8 (6.22)	12449.60 (6.23)	12955.01 (6.21)
11	Deprecation on Fixed Resources	6000.00 (2.38)	4900.00 (2.38)	4700.00 (2.30)	5200.67 (2.37)
12	Land Revenue Paid to Government	200.00 (0.10)	200.00 (0.10)	200.00 (0.10)	200.00 (0.10)
13	Interest on Fixed Capital @ 10%	1720.00 (0.82)	1700.00 (0.84)	1670.00 (0.85)	1696.67 (0.83)
14	Rental Value of Own Land	15000.00 (5.72)	15000.00 (5.95)	15000.00 (6.14)	15000.00 (5.87)
15	Imputed value of Family Labour charges	16300.00 (7.29)	14680.00 (6.79)	13600.00 (6.44)	14860.00 (6.98)
16	Total Cost of Cultivation	221794.00 (100.00)	210532.80 (100.00)	203239.00 (100.00)	211855.51 (100.00)

The Table 1. revealed that among different size of farms, total cost incurred by the small size farms were high (Rs.221794.00/ha) as compared to medium and large size farms (Rs.210832.80/ha and Rs.203239.00/ha). Sample average for total cost was Rs.204538.51/ha in different size of farms group.

Machinery labour cost was Rs. 4100/ha in different size of farms group. The cost of seedlings was the highest on small size farms (Rs. 88500./ha) and lowest in large size farms (Rs. 83000/ha) respectively. As sunflower would respond well with chemical fertilizer so the cost of farm yard manure used was ranged from Rs. 17000 (small size farms) to 15500 (large size farms).Whereas, the expenditure on fertilizers was the

highest (Rs. 15000/ha) for small size farms as compared to medium size farms (Rs.14100/ha) and large size farms (Rs.13650/ha) respectively. It was also noticed that the highest expenditure on pesticide was seen on small size farms (Rs.9000/ha) as compared to medium and large size farms respectively. Sample average for depreciation on fixed resources was Rs.5200.67, interest on working capital Rs. 12955.01, interest on fixed capital was Rs. 1696.67. Land revenue paid to government was Rs.200 in different size of farms group.

The cost of rental value of own land was Rs.15000/ha in different size of farms group. Sample average for rental value of own land was Rs 15000/ha.

Table 2: Costs and Returns in Sunflower crop per hectare in different Size of Farms Group Number of Respondents = 120 S M L=58+ 42+ 20 =120 (Value in Rupees / qtl)

S. No	Particulars	Size of Farms Group			Sample Average
		Small	Medium	Large	
1	Total Cost of cultivation	221794	210832	210832	214486
2	Yield in Quintal per hectare	18	17	16	17
3	Gross Returns per hectare in rupees	50400	47600	44800	47600
4	Net Returns per hectare	171394	162932	158439	164255
5	Cost of Production per quintal	12321.88	12401.88	12702.43	12475.4
6	Price Per quintal	2800.00	2800.00	2800.00	2800.00
7	Input-Output ratio	1:2.90	1:3.06	1:3.21	1:3.01

Table 2. reveals that Costs and Returns in sunflower cultivation in different size of farms group. Among different size of farms groups, the total cost of cultivation incurred by the small farms were high (Rs. 221794/ha) as compared to medium (Rs. 210832/ha) and large farms (Rs. 210832/ha). Sample average for total cost of cultivation was Rs. 210832/ha in different size of farms group. The gross returns obtained per hectare by large size farms were high (Rs. 633600/ha) as compare to medium and small size farms (Rs.617600/ha and Rs.608000/ha) respectively. The net

returns per hectare obtained by large size farms were high (Rs.436036/ha) as compared to medium and small size farms (Rs.416027/ha and Rs.398226/ha) respectively.

The average yield of sunflower in different size of farms group was Rs.1.938/ha. The yield was highest in case of large size farms 1.98 qtl/ha as compared to medium (1.93 qtl/ha) and small size farms (1.90 qtl/ha) respectively. Average cost of production per qtl was Rs. 1065/ql. Gross Price per quintal was Rs.3200/ql.

Table 3: Cost Concepts in Sunflower crop per hectare in different Size of Farms Group Number of Respondents = 120 S M L=58+ 42+ 20 =120 (Value in Rupees)

S. No	Cost Concepts	Size of Farms Group			Sample Average
		Small	Medium	Large	
1	Cost A ₁	188774	179152	172969	180298.3
2	Cost A ₂	188774	179152	172969	180298.3
3	Cost B	205494	182352	189639	192495
4	Cost C	221794	210532	203239	211855

Table 3. reveals that Cost Concepts on different size of farms group per hectare. Cost A₁ was highest in small size farms (Rs.180754/ha) followed by medium size farms (Rs.174192/ha) and lowest in large size farms (Rs.169313/ha) respectively. Cost A₂ in small, medium and large size of farms groups was Rs.180754/ha, Rs.174192/ha and Rs.169313/ha respectively. Cost B was highest in small size

farms (Rs.194474/ha) as compared to medium size farms (Rs.187892/ha) and lowest in large size of farms (Rs.182983/ha) respectively. Cost C was highest in small size farms (Rs.209774/ha) and lowest in large size farms (Rs.195583/ha). Sample average for Cost A₂, Cost B and Cost C was Rs.176550/ha, Rs.190255/ha and Rs.204538/ha in different size of farms group.

Table 4: Measures of Farm Profitability in Sunflower crop per hectare in different Size of Farms Group Number of Respondents = 120 S M L=58+ 42+ 20 =120 (Value in Rupees)

S. No	Particulars	Size of Farms group			Sample Average
		Small	Medium	Large	
1	Gross Returns	50400	47600	44800	47600
2	Farm Business Income	138374	131552	128169	132698.3
3	Farm Investment Income	188114	179632	175135	180960.3
4	Net Returns	171394	162932	158439	164255
5	Family Labour Income	155094	134752	144839	144895

Table 4. reveals that Measures of Profitability in Sunflower cultivation in different size of farms group. The gross returns obtained per hectare by large size farms were high (Rs. 633600/ha) as compare to medium and small size farms (Rs.617600/ha and Rs.608000 /ha) respectively. This makes the sample average for gross returns was 615626/ha in different size of farms group. Farm business income in small, medium and large size of farms group was Rs.427246/ha, Rs.443407.20/ha and Rs.464286.00/ha respectively. Sample average for farm business income was 439075.82/ha in different size of farms group. Farm investment income was highest in large size farms (Rs.449706/ha) as compared to medium size farms (Rs.429727/ha) and lowest in small size farms (Rs.411946/ha) respectively. This makes the sample average for Farm investment income was Rs.424462.75/ha in different size of farms group. The net returns per hectare obtained by large size farms were high (Rs.438016/ha) as compared to medium and small size farms (Rs.416027.20/ha and Rs.398226/ha) respectively. Sample average of net returns was 411088.15/ha in different size of farms group. Sample average of Family labour income was Rs. 425371.15/ha in different size of farms group.

Conclusions

The study shows that the production and marketing of Sunflower in Raigarh district. The main objective of the study is to analyze, socio economic characteristic of sample respondents, economics of Sunflower production, price spread and constraints in production and marketing of Sunflower. The results revealing that the socio economic status of the respondents found to be moderate with primary education, well economic back ground and greater access to all the assets. Economics of Sunflower production is more profitable in large farms as compared to medium size farms and small size farms.

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