



Rainfed Farming – An Economic Analysis

M Shireesha, T V Neelakanta Sastry, I Bhavani Devi and G Mohan Naidu

Department of Agricultural Economics, S V Agricultural College, Tirupati 517 502, Andhra Pradesh

ABSTRACT

The study was conducted in Anantapur district of Andhra Pradesh. The cost of cultivation was highest in the case of groundnut (Rs.28,041.06) followed by sunflower (Rs.21,556.62) and redgram (Rs.20,603.31). Among the three rainfed crops, sunflower (Re.0.49) yielded a highest net income per rupee of expenditure followed by redgram (Re.0.40) and groundnut (Re.0.36).

Key words : Cost of cultivarities, Gross income, Returns per rupee

Performance of agriculture plays a major role in the progress of the economy in achieving the developmental goals of eradication of poverty, faster and sustainable growth and modernization of society. Agriculture sector is the backbone of the country's development and lifeline for 65 per cent of the population in rural areas and approximately more than 58 per cent of the population is still dependent on agriculture for their livelihood. The performance of Indian agriculture has gone through three phases of growth-area based growth up to the late sixties; yield based growth up to the early eighties. It is the third phase which provides interesting clues to a farmer's behavior in dry land agriculture, the strength of support which he derives from the policy regime and the capabilities of the policy to provide the thrust needed for the development of dry land agriculture.

MATERIAL AND METHODS

The study was carried out in Anantapur district of Andhra Pradesh. The main rainfed crops identified in the district were groundnut, redgram and sunflower. Kalyanadurgam, Garladinne and Putlur mandals with maximum acreage under groundnut, redgram and sunflower respectively were selected. Two villages from each mandal with highest area of the respective crops were selected. From each of the selected village, 15 farmers were selected at random. Thus, 30 farmers in each mandal constituted the sample of the study for the selected rainfed crops. The total number of respondents selected for the purpose of the study was 90. The

primary data were collected by the survey method through well designed schedule for the agricultural year 2010-2011. The study was conducted to examine costs and returns in the cultivation of rainfed crops.

RESULTS AND DISCUSSION

On an average, the cost of cultivation of groundnut, redgram and sunflower was estimated at Rs.28,041.06, Rs.20,603.31 and Rs.21,556.62 per hectare respectively. Thus the cost of cultivation was highest in the case of groundnut followed by sunflower and redgram (Table 1).

Among the various operational costs, human labour accounted for larger proportion of the total costs in the cultivation of selected rainfed crops. The share of human labour varied from 24.95 per cent in sunflower to 27.61 per cent in redgram cultivation. The same was 25.20 per cent in the cultivation of groundnut crop. The cost of seed was the major item of total costs in the cultivation of groundnut and sunflower accounting for 14.10 and 11.98 per cent respectively. Bullock labour accounted for 13.25, 16.22 and 15.78 per cent of the total costs in the cultivation of groundnut, redgram and sunflower respectively. Manures and fertilizers was the another important cost component and accounted for 14.59 per cent, 12.60 per cent and 12.13 per cent of the total costs in the production of groundnut, redgram and sunflower respectively. Rental value of owned land was the major cost component under fixed costs. It accounted for 13.37, 18.20 and 17.39 per cent of

Table 1. Cost of cultivation of groundnut, redgram and sunflower according to farm size and component wise.

		(in Rs ha ⁻¹)		
S. No.	Particulars(Mandal)	Groundnut (Kalyanadurgam)	Redgram (Garladinne)	Sunflower (Putlur)
1.	Operational costs			
a.	Human Labour	7068.00 (25.20)	5689.00 (27.61)	5380.00 (24.95)
	Owned	2246.00 (8.01)	1623.00 (7.88)	1475.00 (6.84)
	Hired	4822.00 (17.19)	4066.00 (19.73)	3905.00 (18.11)
b.	Bullock labour	3717.00 (13.25)	3342.50 (16.22)	3402.00 (15.78)
	Owned	1652.00 (5.89)	1361.50 (6.61)	1498.00 (6.95)
	Hired	2065.00 (7.36)	1981.00 (9.61)	1904.00 (8.83)
c.	Tractor	1532.00 (5.46)	1568.00 (7.61)	988.00 (4.58)
	Owned	528.00 (1.88)	632.00 (3.07)	416.00 (1.93)
	Hired	1004.00 (3.58)	936.00 (4.54)	572.00 (2.65)
d.	Seed	3952.50 (14.10)	235.05 (1.14)	2580.00 (11.98)
e.	Manures and fertilizers	4092.76 (14.59)	2595.00 (12.60)	2616.40 (12.13)
	i. Manures	1717.76 (6.13)	1220.00 (5.93)	1366.40 (6.34)
	ii. Fertilizers	2375.00 (8.47)	1375.00 (6.67)	1250.00 (5.79)
f.	Plant protection chemicals	468.74 (1.68)	387.50 (1.88)	497.49 (2.31)
g.	Interest on working capital	1249.86 (4.45)	1243.51 (6.04)	927.26 (4.30)
	Total Operational Costs	22080.86 (78.74)	15060.56 (73.10)	16391.12 (76.03)
2.	Fixed costs			
a.	Land revenue	20.00 (0.07)	20.00 (0.09)	20.00 (0.09)
b.	Rental value of owned land	3750.00 (13.37)	3750.00 (18.20)	3750.00 (17.39)
c.	Depreciation	1050.20 (3.75)	902.75 (4.39)	804.50 (3.74)
d.	Interest on fixed capital	1140.00 (4.07)	870.00 (4.22)	591.00 (2.75)
	Total fixed costs	5960.20 (21.26)	5542.75 (26.90)	5165.5 (23.97)
	Total costs	28041.06 (100)	20603.31 (100)	21556.62 (100)

Note: Figures in parentheses indicates percentages to the total

Table 2. Output and returns per hectare of groundnut, redgram and sunflower.

S. No.	Particulars	Units	Groundnut	Redgram	Sunflower
1.	Yield in physical units				
a.	Main product	Quintals	13.50	10.89	11.25
b.	Byproduct	Cartloads	2.75	-	-
2.	Yield in monetary terms				
a.	Main product	Rs.	34425	28858.50	32062.50
b.	Byproduct	Rs.	3987.50	-	-
3.	Gross returns	Rs.	38412.50	28858.50	32062.50
4.	Cost of cultivation	Rs.	28041.06	20603.31	21556.62
5.	Net returns	Rs.	10371.44	8255.19	10505.88
6.	Returns per rupee of expenditure	Rs.	0.36	0.40	0.49

the total costs in the cultivation of groundnut, redgram and sunflower respectively.

From Table 2 it was evident that on an average, the selected farmers produced 13.5 quintals of groundnut, 10.89 quintals of redgram and 11.25 quintals of sunflower.

The gross and net returns per hectare of groundnut, redgram and sunflower were Rs.38,412.50 and Rs.10,371.44, Rs.28,858.50 and Rs.8,255.19 and Rs.32,062.50 and Rs.10,505.88 respectively. It is interesting to note that the net income per rupee of expenditure was highest in the cultivation of sunflower (Re.0.49) followed by redgram (Re.0.40) and groundnut (Re.0.36). These findings are in agreement with the results of Chandrasekhar (1988), Reddy (1988) and Malliswari (1995).

SUMMARY AND CONCLUSIONS

The cost of cultivation was highest in the case of groundnut followed by sunflower and redgram.

All the measures of farm income viz., gross income, farm business income, family labour income

and farm investment income were higher in the production of groundnut compared to redgram and sunflower.

Among the three rainfed crops, sunflower yielded the highest net income per rupee of expenditure followed by redgram and groundnut.

LITERATURE CITED

- Chandrasekhar K 1988** Comparative study of economics of sunflower with groundnut in Hiriyur Taluk, Chitradurga district. *M.Sc. (Ag.) Thesis* submitted to the University of Agricultural Sciences, Bangalore.
- Malliswari 1995** Comparative economic analysis of sunflower and groundnut in Cuddapah district of Andhra Pradesh. *M.Sc. (Ag) Thesis* submitted to Acharya N.G. Ranga Agricultural University, Hyderabad.
- Reddy N P K 1988** A study on production and marketing of rainfed groundnut (*Arachis hypogae* L.) in Vayalpad taluk of Chittoor district, Andhra Pradesh. *M.Sc. (Ag) Thesis* submitted to the University of Agricultural Sciences, Bangalore.

(Received on 18.06.2012 and revised on 29.10.2012)