



E-ISSN: 2278-4136

P-ISSN: 2349-8234

JPP 2018; 7(3): 2887-2890

Received: 13-03-2018

Accepted: 18-04-2018

Deepthi Patluri

Student M.Sc. Agricultural Economics, Department of Agricultural Economics Sam Higginbottom University of Agriculture, Technology and Sciences, Allahabad, Uttar Pradesh, India

Dr. Nahar Singh

Professor and Head Department of Agricultural Economics, Department of Agricultural Economics Sam Higginbottom University of Agriculture, Technology and Sciences, Allahabad, Uttar Pradesh, India

Praveen Kumar Paladugu

Student M.Sc. Agricultural Economics, Department of Agricultural Economics Sam Higginbottom University of Agriculture, Technology and Sciences, Allahabad, Uttar Pradesh, India

Correspondence**Deepthi Patluri**

Student M.Sc. Agricultural Economics, Department of Agricultural Economics Sam Higginbottom University of Agriculture, Technology and Sciences, Allahabad, Uttar Pradesh, India

An economic analysis of production and marketing of dry Chilli in Guntur district of Andhra Pradesh

Deepthi Patluri, Dr. Nahar Singh and Praveen Kumar Paladugu

Abstract

The present study entitled 'An Economic Analysis of Production and Marketing of Dry Chilli in Guntur District of Andhra Pradesh, was conducted in year 2017 - 2018 with a sample of 120 respondents. The results indicated that the number of respondents who had large and middle school education were more in large farms followed by small and medium. And it was also observed that the number of illiterates were more in medium size farms followed by small and large size of farms. The average area per hectare holdings in small, medium and large of farms 5.23/ha, 6.35/ha and 7.84/ha. The cost incurred by small, medium and large size farms (Rs. 151378.30/ha), (Rs. 150603.80/ha) and (Rs. 148114.50/ha) respectively. The gross Returns obtained per hectare by small, medium and large was (Rs. 517500/ha and Rs. 487800/ha and Rs.459000/ha) respectively. And net returns per hectare small, medium and large farms (Rs. 366121.70/ha and Rs. 337196.20/ha and Rs. 310885.50/ha) respectively. Input- output ratio per hectare was small (1:2.41), medium (1:2.23) and large (1:2.09) respectively.

Keywords: production, marketing

Introduction

Chilli is one of the most valuable crops of India. It is grown almost throughout the country. Different varieties are grown for vegetables, spices, condiments, sauces and pickles. Chilli is also known as 'hot pepper' and capsicum as 'bell pepper.' The Portuguese brought capsicum from Brazil to India during the year 1584. Chilli is a fruit of the plants 'capsicum annum' and 'capsicum frutescens' that come from the genus 'capsicum', belonging to the family of 'Solanaceae', which also includes tomato and potato. These fruits are small in size and known for their sharp acidic flavour and colour. Currently, chillies are used throughout the world as a spice and also in the making of beverages and medicines. In some varieties of chillies are famous for red color because of the pigment 'capsanthin,' others are known for biting pungency attributed to 'capsaicin.' India is the only country which is rich in many varieties with different quality factors. Chillies are said to have originated in the Latin American regions of the New Mexico and Guatemala as a wild crop around 7500BC. The people native to these places domesticated this crop in 5000BC, as per the remains of the pre-historic Peru. Chilli is said to be the first ever domesticated crop in America. At that time, chillies were cultivated by the farmers together with a primary crop to protect the primary crop from any damage that the birds could do. Chillies gained popularity in the American continent for flavouring and have been largely cultivated since then. When America was discovered, and the Spaniards and the Portuguese explored the South American continent, this pungent-flavoured fruit gained much more recognition. Christopher Columbus, the founder of America, was one of the first Europeans who encountered and consumed chilli, and called it pepper due to the similarity in taste. Crushing the dried pods gave chilli powder, which was later identified as a substitute of 'peppercorn'. The chilli crop came to the Asian continent as late as the 16th century with the identification of new sea routes by the Portuguese and the Spanish explorers. It became popular in the whole of Asia rapidly and native Asians started cultivating this crop as well. The south Asian climate suited this vegetable crop, and since then a large percentage of chilli production has shifted to Asia. Today, the most sharp and valued varieties of chillies are grown in Asia only.

Chillies is grown in almost all the districts in Andhra Pradesh. Among all spices crops grown in the state, chillies occupies comparatively higher area than any other spices crop. On an average, about 30.87 per cent of the area under spices cultivation was occupied by chillies. During the period of 2011-12, chillies was cultivated to the extent of 2, 48,264 hectare with the production of 8,04,204 tonnes. The average productivity of chillies during the period was 3239 kg/ha. The average area under cultivation from the period 2003-04 to 2011-12 in Andhra

Pradesh was around 2,16,599 hectares and average production was 7,41,591 tonnes. The average productivity during the period was 3430 kg/ha. In Andhra Pradesh, chillies is cultivated mainly in irrigated conditions. Guntur, Khammam, and Prakasam are some major chillies producing districts in Andhra Pradesh. During the period 2011-12, the area under chillies is cultivated in Guntur district was 76,124 hectares and in khammam district, it was 32,778 hectares, which was 30.66 % and 13.20 % of area under chillies cultivation in the state respectively. These two districts jointly account for 44.20 % of total area under chillies in the state. During the same period, the production level in Guntur district was 3,26,833 tonnes and in khammam district, it was 1,13,186 tonnes and these two districts had contributed 54.71 % of total chillies production of the state.

Objective of the study

To find out the measure of cost returns and farm profitability per hectare in different size and farm house hold.

Research Methodology

Guntur district is the major Dry Chilli growing district in Andhra Pradesh, Guntur district alone contributes an area of

63218 hectares of dry chilli with production of 408521 million tonnes and yield of 6462 kg per ha (2016-2017). District is specialized in the cultivation of dry chilli on commercial scale and it is a major dry chilli growing district. Thus, Guntur district was selected purposively for the study. A list of Dry Chilli growers and villages in Guntur district was obtained from joint director's office of agricultural and district statistical office Guntur. A cluster of 10 villages were selected in major of dry chilli growers from Prathipadu block selected deliberately, because more number of villages represent higher area under Dry Chilli production, among them the 7 villages were selected randomly. The data related to prices and arrivals of dry chilli was collected from Agricultural Market Committee (AMC) market yard, AMC Guntur, were selected purposively for present study. A sample of 10 per cent of all the market functionaries involved in the marketing process was randomly selected for the present study. All the marketing channels, which are prevalent for the selected crop, would be followed to evaluate the price spread and producer's share in consumer's rupee in different marketing channels.

Results and Discussion

Table 4.1: Resource use and Cost of Cultivation of Dry chilli crop per hectare in different Size of Farms Group
Number of Respondents = 120S M L= 48+52+ 20 =120 (Value in Rupees)

Sl. No	Particulars of Farm Operations	Size of Farms Groups			Sample Average
		Small	Medium	Large	
1	Hired Human Labour Charges	9600(6.34)	15000(9.55)	15200(10.26)	12873.33(8.55)
2	Bullock Labour Charges	14500(9.57)	12000(7.96)	9500(6.41)	12583.33(8.36)
3	Machinery Labour Charges	12100(7.99)	15400(10.22)	22000(14.85)	15180(10.08)
4	Cost of Seed	8200(5.41)	7600(5.04)	7000(4.72)	7740(5.14)
5	Cost of Farm yard manure	8800(5.81)	5500(3.65)	4500(3.03)	6653.33(4.42)
6	Cost of Chemical Fertilizers	17600(11.62)	13100(8.69)	10200(6.88)	14416.66(9.57)
7	Cost of Irrigation charges	5500(3.63)	5000(3.31)	4500(3.03)	5116.66(3.39)
8	Cost of Plant Protection charges	19000(12.55)	15800(10.49)	15000(10.12)	16946.66(11.26)
9	Miscellaneous charges	1200(0.79)	1200(0.79)	1200(0.81)	1200(0.79)
10	Interest on Working Capital @ 12%	11580(7.64)	10872(7.21)	10692(7.21)	11125.20(7.39)
11	Deprecation on Fixed Resources	6303(4.16)	5788(3.84)	4325(2.92)	5750.16(3.82)
12	Land Revenue Paid to Government	150(0.09)	150(0.07)	150(0.10)	150(0.09)
13	Rent Paid for Leased in Land	12000(7.92)	12000(7.96)	12000(8.10)	12000(7.97)
14	Interest on Fixed Capital @ 10%	1845.30(1.21)	1793.80(1.19)	1647.50(1.11)	1790.01(1.18)
15	Rental Value of Own Land	12000(7.92)	12000(7.96)	12000(8.10)	12000(7.97)
16	Family Labour Charges	11000(7.26)	17400(11.55)	18200(12.28)	14973.33(9.94)
17	Total Cost of Cultivation	151378.30(100.00)	150603.80(100.00)	148114.50(100.00)	150498.71(100.00)

The Table 4.1 revealed that among different size of farms, total cost incurred by the small size farms were high (Rs. 151378.30/ha) as compared to medium and large size farms (Rs. 150603.80/ha and Rs.148114.50/ha). Sample average for total cost was Rs.150498.71/ha in different size of farms group.

The cost of human labour, fertilizers, seeds and bullock labour were the items of cost with major share in the variable costs, because most of the operations like harvesting, and weeding were human labour intensive operations and the other operations like land preparation and interculture were bullock labour intensive. The distribution of pattern of operational cost under various inputs revealed that cost of human labour was the highest in the large size farms (Rs.15200/ha), compared to medium size farms (Rs.15000/ha) and lowest on small size farms (Rs. 9600/ha). Whereas, bullock labour cost was the highest in case of small size farms (Rs. 14500/ha) as compared to medium (Rs. 12000/ha) and large farms (Rs. 9500/ha).

Machinery labour cost was Rs. 22000/ha for large size farms and for medium size farm was Rs. 15400/ha and small size farm was Rs. 12100/ha in different size of farms group. The cost of seed was the highest on small size farms (Rs. 8200/ha) and lowest in large size farms (Rs.7000/ha) respectively. As dry chilli would respond well with chemical fertilizer so the cost of farm yard manure used was ranged from Rs. 4500 (large size farms) to 8800 (small size farms). Whereas, the expenditure on fertilizers was the highest (Rs.17600/ha) for small size farms as compared to medium size farms (Rs. 13100/ha) and large size farms (Rs. 10200/ha) respectively. It was also noticed that the highest expenditure on pesticide was seen on small size farms (Rs. 19000/ha) as compared to medium and large size farms respectively. Sample average for depreciation on fixed resources was Rs.5750.16, interest on working capital Rs.11125.20, interest on fixed capital was Rs. 1790.01. Land revenue paid to government was Rs. 150 in different size of farms group.

The cost of rental value of own land was Rs.12000/ha in small, medium and large size of farms group. Rent paid for

leased in land was Rs.12000/ha in small, medium and large size of farms group respectively. Sample average for rental value of own land was Rs 12000/ha and sample average for

rent paid for leased in land was Rs. 12000/ha in different size of farms groups.

Table 4.2: Cost and Returns in Dry chilli crop per hectare in different Size of Farms Group Number of Respondents = 120 S M L= 48+52+ 20 =120 (Value in Rupees)

Sl. No	Particulars	Size of Farms Group			Sample Average
		Small	Medium	Large	
1	Total Cost of cultivation	151378.30	150603.80	148114.50	150498.71
2	Yield in quintals per hectare	57.5	54.2	51	54.98
3	Gross Returns per hectare	517500.00	487800.00	459000.00	494880.00
4	Net Returns per hectare	366121.70	337196.20	310885.50	344381.28
5	Cost of Production per Quintal	2632.66	2778.66	2904.20	328942.00
6	Input – Output Ratio	1 : 2.41	1 : 2.23	1 : 2.09	1 : 2.27
7	Price Per Quintal	9000	9000	9000	9000

Table 4.2 reveals that cost and returns in Dry Chilli 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. 151378.3/ha) as compared to medium (Rs. 150603.80/ha) and large farms (Rs.148114.50/ha). Sample average for total cost of cultivation was Rs.150498.71/ha in different size of farms group. The gross returns obtained per hectare by small size farms were small (Rs. 517500/ha) as compare to medium and large size farms (Rs. 487800/ha and Rs.459000/ha) respectively. The net returns per hectare obtained by small size farms were high

(Rs. 366121.70/ha) as compared to medium and large size farms (Rs. 337196.20/ha and Rs. 310885.50/ha) respectively. The average yield of Dry Chilli in different size of farms group was Rs. 54.98/ha. The yield was highest in case of small size farms 57.5qtl/ha as compared to medium (54.2qtl/ha) and large size farms (51qtl/ha) respectively. Average cost of production per quintal was Rs. 328942/qtl. Gross returns per quintal was Rs. 494880. Input – output ratio was highest in small size farms (1: 2.41) followed by medium size farms (1: 2.23) and lowest in large size farms group (1: 2.09). This makes the sample average for input-output ratio was 1: 2.27 in different size of farms.

Table 4.3: Cost concepts in dry chilli crop per hectare in different size of farms group number of respondents = 120 S M L= 48+52+ 20 =120 (Value in Rupees)

Sl. No	Cost Concepts	Size of Farms Group			Sample Average
		Small	Medium	Large	
1	Cost A ₁	116378.30	109203.80	105914.50	111525.38
2	Cost A ₂	128378.30	121203.80	117914.50	123525.38
3	Cost B	140378.30	133203.80	129914.50	135525.38
4	Cost C	151378.30	150603.80	148114.50	150498.71

Table 4.3 reveals that cost concepts on different size of farms group per hectare. Cost A₁ was highest in small size farms (Rs. 116378.30/ha) followed by medium size farms (Rs. 109203.80/ha) and lowest in large size farms (Rs. 105914.50/ha) respectively. Cost A₂ in small, medium and large size of farms groups was Rs. 128378.30/ha, Rs. 121203.80/ha and Rs. 117914.50/ha respectively. Cost B was highest in small size farms (Rs. 140378.30/ha) as compared to

medium size farms (Rs. 133203.80/ha) and lowest in large size of farms (Rs. 129914.50/ha) respectively. Cost C was highest in small size farms (Rs. 151378.30/ha) and lowest in large size farms (Rs. 148114.50/ha). Sample average for Cost A₂, Cost B and Cost C was Rs. 123525.38/ha, Rs. 135525.38/ha and Rs. 150498.71/ha in different size of farms group.

Table 4.4: Measures of farm profitability in dry Chilli crop per hectare in different size of farms group number of respondents = 120 S M L= 48+52+ 20 =120 (Value in Rupees)

Sl. No	Particulars	Size of Farms group			Sample Average
		Small	Medium	Large	
1	Gross Returns	517500.00	487800.00	459000.00	494880.00
2	Farm Business Income	389121.70	366596.20	341085.50	371354.61
3	Farm Investment Income	379967.00	350990.00	324533.00	358171..30
4	Net Returns	366121.70	337196.20	310885.50	344381.28
5	Family labour income	377121.70	354596.20	329086.50	359354.61
6	Input – Output Ratio	1 : 2.41	1 : 2.23	1 : 2.09	1 : 2.27

Table 4.4 reveals that the gross returns obtained per hectare by small size farms were high (Rs. 517500/ha) as compare to medium size farms (Rs. 487800/ha) and small size farms (Rs. 459000/ha) respectively. This makes the sample average for gross returns was 494880/ha in different size of farms group. Farm business income in small, medium and large size of farms group was Rs. 389121.70/ha, Rs. 366596.20/ha and Rs.

341085.50/ha respectively. Sample average for farm business income was 371354.61/ha in different size of farms group. Farm investment income was highest in small size farms (Rs. 379967/ha) as compared to medium size farms (Rs. 350990/ha) and lowest in large size farms (Rs. 324533/ha) respectively. This makes the sample average for Farm investment income was Rs. 358171..30/ha in different size of

farms group. The net returns per hectare obtained by small size farms were high (Rs. 366121.70/ha) as compared to medium and large size farms (Rs. 337196.20/ha and Rs. 310885.50/ha respectively). Sample average of net returns was 344381.28/ha in different size of farms group. Sample average of Family labour income was Rs. 359354.61/ha in different size of farms group. Input – output ratio was highest in small size farms (1: 2.41) as compared to medium size farms (1: 2.23) and lowest in large size farms group (1: 2.09). This makes the sample average for input-output ratio was 1: 2.27 in different size of farms.

Conclusion

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

References

1. Parthasarathi G, Senthilnathan S, Suresh L. Marketing of chillies in Thoothukudi district of Tamil Nadu, The International Journal of Science & Technoledge. 2014; 2(12):101-107.
2. Sandeep kumar Banchhor, Dinesh kumar DR. An Economic Analysis of Production and Marketing of Chilli in Durg District of Chhattisgarh, Journal of Pharmacognosy and Phytochemistry. 2107; 6(5):291-1293.
3. Srikala M, Bhavani Devi I, Subramanyam V, Ananda T. Cost of Cultivation and Price Spread of Chillies in Guntur District of Andhra Pradesh", International Journal of Agriculture, Environmental and Biotechnology. 2016; 9(2):299-303.