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## AN ECONOMIC ANALYSIS OF CHILLIES CULTIVATION IN GUNTUR DISTRICT OF ANDHRA PRADESH

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### ABSTRACT :

*An attempt has been made to analyze the economic analysis of chillies cultivation in Guntur district of Andhra Pradesh. The study was based on primary data, 200 sample respondents are selected through random sampling method who belong to 4 villages of Guntur district, Andhra Pradesh. The results revealed that cost of seed, manure and fertilizer and price of chilli were significantly affecting profit. The gross income from chillies is found to be high in medium and large farmers which is Rs.1,02,000/- whereas the lowest of Rs.81,600/- in marginal farmers. The intra size category analysis also shows that the gross income is increasing with the increase of farm size in chillies cultivation. The farm business income is obtained by adding the imputed costs of owned capital and land to family labour. The farm business income is increased with a decrease in farm size with respect to chillies cultivation in the study area. In case of Chillies cultivation, it is found to be high in medium and large farmers which is Rs.11,718/-, where as lowest in marginal farmers with Rs.2,888/-. The family labour income of chillies cultivation, all the farmers getting negative family labour income except 1 medium and large farmers with Rs.918/-. The important finding from the analysis is that the net income per acre of commercial crops like chillies is negative in all farm size groups*



**KEYWORDS :** *Chillies, Guntur district, Andhra Pradesh.*

### INTRODUCTION:

Chillies are one of the most valuable crops grown all over India. It is also known as 'hot pepper' which is used as vegetable, spice, condiment, sauce and pickle. The Portuguese brought capsicum from Brazil to India during the year 1584. Chillies is a fruit of the plants *Capsicum annum* and *Capsicum frutescens* that has come from the genus 'Capsicum', belonging to the family 'Solanaceae'. These fruits are small in size and known for their sharp acidic flavour and colour. Currently, Chillies is used throughout the world as a spice and also in the making of beverages and medicines. Some varieties of Chillies are famous for red color because of the pigment 'capsanthin,' others are known for biting pungency attributed to 'capsian.' India is the only country which is rich in many varieties with different quality factors. Chillies is said to have originated in the Latin American regions of the New Mexico and Guatemala as a wild crop around 7500 BC. The people of these places domesticated this crop in 5000 BC, as per the remains of the pre-historic peru. Chillies is said to be the first ever domesticated crop in America. At that time, Chillies was 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 & the Portuguese explored the South American continent, this pungent-flavoured fruit gained much more recognition.

### SCENARIO IN ANDHRA PRADESH

Chillies is grown in almost all the districts in Andhra Pradesh. Among all spice crops grown in the state, chillies occupies comparatively higher area than any other spice crop. On an average, about 30.87 per cent of the area under spices cultivation was occupied by chillies. During the period 2022-23, chillies was cultivated to the extent of 158000 hectares with the production of 501000 tonnes. The average productivity of chillies during the period was 3165 Kg/ha. In Andhra Pradesh, chillies are cultivated mainly in irrigated conditions. Guntur, Krishna and Prakasam are some major chillies producing districts in Andhra Pradesh. During the period 2022-23, the area under chillies cultivation in Guntur district was 82,124 hectares and in prakasam (30000 hectares) and Krishna district, it was 14000 hectares, which was 54 per cent, 19.73 and 9.2 per cent of area under chillies cultivation in the state respectively. These three districts jointly account for 83 per cent of total area under chillies in the state. During the same period, the production level in Guntur district was 263000 tonnes, 77000 tonnes in Prakasam and in Khammam district, it was 77000 tonnes and these three districts had contributed 82.83 per cent of total chillies production of the state. Considering the productivity levels, Guntur district had an average productivity of 3225 Kg/ha in the period between 2022-23, it was 5402 Kg/ha in Krishna district. The state's average productivity level was 3165 Kg/ha. It could be observed that the productivity of chillies in Guntur district was 1.27 per cent higher than the state's average. Krishna district where, the productivity was 0.22 per cent, that was higher than the state's average. During 2018-19, the productivity in Guntur district was 4293 Kg/ha and in Krishna district, it was 3453 Kg/ha. The average productivity of Andhra Pradesh during that period was 3239 Kg/ha, which was less than both the districts. Out of 57 mandals in the district, Tadikonda, Sattenapalle, Veldurthi, Medikonduru and Machavaram were major chillies producers. During 2013-14, area under chillies cultivation was in 4053 hectares in Sattenapalle, followed by 3940 hectares in Veldurthi, 3361 hectares in Medikonduru and 3049 hectares in Machavaram, and the total area under chillies cultivation in that period was about 60,879 hectares. The areas under chillies cultivation in these mandal were 6.65 per cent, 6.47 per cent, 5.52 per cent and 5.00 per cent respectively. Problem Focus of the control and management on production aspects using that in available resources may sometimes be more feasible for the farmers compared to the next stage, i.e., marketing. The market for chillies is affected by seasonal price fluctuations, overall production in the country, world demand, and stocks available in storages and hedging among the various varieties of chillies. The production level of chillies and factors influencing like available resources, vary within the state. Studying about the production aspects and available resources with the following objectives is the focus of the study. An appropriate research design in terms of selection of study area, sampling methodology and choice of analytical tools is essential to obtain findings and to draw meaningful conclusions from a research study. The present study was based on objectives, the economics of chillies cultivation in the Guntur district of Andhra Pradesh.

### METHODS AND MATERIALS

The study based on the primary data, The primary data collected from the farmers in the study area through questionnaire. Chillies crop is grown almost in all the districts of Andhra Pradesh. Among the 13 districts of Andhra Pradesh, Guntur and Kurnool districts are two major chilly producers. The area, production and productivity of chillies in Guntur district during the period 2019-20, average area under chillies cultivation in Guntur district was 82000 hectares and in Prakasam district was 30,000 hectares. Statistical records showed that, Guntur districts occupied about 52 per cent of the total area under Chillies in Andhra Pradesh and only 48 per cent of the total area was occupied by the remaining districts. The average productivity in Guntur district was 3225 Kg/ha, and it was higher than the average productivity of the state, i.e. 3165 Kg/ha. The average productivity in Krishna district was 5402 Kg/ha. The average production of chillies in Guntur district was 2, 63,000 tonnes and it was

77000tonnes in Prakasam and 75000 tonnes in Krishna district. Considering area, production and productivity indicators, Guntur district was purposely selected for the study.

### SAMPLING DESIGN

There are 57 mandals in Guntur district, Out of 57 Mandals 40 mandals having area among chillies cultivation. During 2022-23, Tadikonda had maximum area of 4035 hectare in chillies cultivation. Considering the above Tadikonda mandal were selected for study. Four villages from Tadikonda mandal namely Kanteru, Ponnekallu, Ravela and Mandepudi were randomly selected.

Fifty farmers from each village were selected at random and totally 200 farmers were selected from four villages. The farmers were contacted individually for collection of details on production of chillies with the help of well-structured and pre-tested interview schedule. The primary data were collected from the sample respondents during the months of February-March, 2019 and the data collected were relating to the agriculture year of 2022-23.

### EMPIRICAL ANALYSIS

Per acre cost of cultivation for chilli crop is presented in the table-1. Chilli is highly capital intensive crop. Per acre expenditure on fertilizers and pesticides is found to be high in marginal farmers with Rs.18,893/- and Rs.14,650/- whereas it is lowest in small farmers (Rs.13,060/-) and Rs.11,500 in semi-medium farmers. Per acre use of hired labour in chillies cultivation is high found to be high in large farmer with Rs.18,260/- whereas lowest in marginal farmers with Rs.16,450/-. Per acre owned labour is found to be high in marginal and small farmers with Rs.12,688/- and Rs.12,783/-. Per acre rental value of owned and leased in is found to be high in small farmers by owned land and in case leased in land by semi-medium farmers in cillies cultivation . Per acre expenditure spent on modern and HYV inputs like seeds, machined labour and bullock labour for inter cultivation is high in medium and large farm households in chillies cultivation marginal farmers in Costal Andhra and Telangana regions.

**Table -1. Per Acre expenditure Chillies Cultivation in the study area**

<b>Inputs</b>	<b>Marginal</b>	<b>Small</b>	<b>Medium</b>	<b>Large</b>	<b>Total</b>
Machined labour	2600	2900	4250	4800	3638
Bullock labour	3250	2333	4898	5602	4021
Seeds	2164	2917	3102	3250	2858
Fertilisers	18893	13069	15800	16200	15991
Manure	2000	2000	408	1500	1477
Pesticides	14650	12107	11500	12624	12720
Hired labour	16450	18780	17500	18260	17748
Irrigation	1608	1472	2041	2800	1980
Transport cost	1733	1271	1800	2000	1701
Interest on working capital	6418	5737	7865	6704	6681
Depreciation	1400	1418	2362	2442	1906
Marketing charges	1958	1917	1800	2500	2044
Miscellaneous	1364	2923	1020	1600	1727
Cost A	74488	68844	76383	80282	74999
Leased in land	10000	11600	10000	10000	10400
Cost A1	84488	80444	86383	90282	85399
Rental value of owned land	10071	9722	10800	9550	10036
Interest on fixed capital	1007	972	732	1250	990
Cost B	95566	91138	97914	101082	96425
Owned labour	12688	12783	7102	6235	9702
Cost C	108254	103921	105016	107317	106127

Source: Primary data

### Gross income from Chillies crops

Income from chilli crop in the study area is depicted in the table-2. Chillies is one of the major commercial crop in Andhra Pradesh. The gross income from chillies is found to be high in medium and large farmers which is Rs.1,02,000/- whereas the lowest of Rs.81,600/- in marginal farmers. The intra size category analysis also shows that the gross income is increasing with the increase of farm size in chillies cultivation

**Table-2 Returns from the Chillies Cultivation**

Farming Category	Gross Income	Farm Business Income	Family labour Income	Input output ratio
Marginal	81600	-2888	-13966	0.75
Small	87040	6596	-4098	0.84
Semi-Medium	88400	2017	-9514	0.84
Medium and Large	102000	11718	918	0.95
Total	89760	4361	-6665	0.85

### Farm Business Income

The returns to farm business i.e., returns to land, family labour, returns to fixed capital and management reveal the economics of crop production. The farm business income is obtained by adding the inputted costs of owned capital and land to family labour. The farm business income is increased with a decrease in farm size with respect to chillies cultivation in the study area. In case of Chillies cultivation, it is found to be high in medium and large farmers which is Rs.11,718/-, where as lowest in marginal farmers with Rs.2,888/-

### Family labour income

The family labour income of chillies cultivation, all the farmers getting negative family labour income except medium and large farmers with Rs.918/-.

### Net Income

The net income is measured as the difference between gross value of output and total cost C. Crop wise per acre net returns from the cultivation of selected crops are shown in the table-. The important finding from the analysis is that the net income per acre of commercial crops like cotton and chillies is be negative in all farm size groups

### CONCLUSION

The article concluded that the gross income from chillies is found to be high in medium and large farmers which is Rs.1,02,000/- whereas the lowest of Rs.81,600/- in marginal farmers. The intra size category analysis also shows that the gross income is increasing with the increase of farm size in chillies cultivation. The farm business income is obtained by adding the inputted costs of owned capital and land to family labour. The farm business income is increased with a decrease in farm size with respect to chillies cultivation in the study area. In case of Chillies cultivation, it is found to be high in medium and large farmers which is Rs.11,718/-, whereas lowest in marginal farmers with Rs.2,888/-.

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