

## ECONOMIC ANALYSIS OF FCV-TOBACCO IN SOUTHERN LIGHT SOIL REGION OF ANDHRA PRADESH

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**The cost of cultivation studies is gaining significance for policy formation, and planning price support measures in commercial crops. FCV tobacco, a regulated commercial crop, significantly contributes to high returns, farmers' income, livelihoods, and export revenue (₹9740 crore in 2022-23) to the national economy. Despite its reputation for high profitability, escalating cultivation costs and agriculture labour issues necessitate an analysis of its economic viability. Accordingly, this study examines the cost of cultivation and profitability of FCV tobacco in the SLS region of Andhra Pradesh, using 2022-23 field survey data and a multistage random sampling method, with a sample size of 200 farmers from 6 auction platforms. The study found that with a productivity of 607kg/acre, and an average price of Rs 216/kg of FCV tobacco in the SLS region, the gross income was Rs 1,31,112/acre, the cost of cultivation recorded was Rs 1,06,597/acre, arriving at a net income of Rs 24,515/acre. The cost of production was Rs 176/kg and profitability was Rs 40/kg during the year 2022-23. Further, in the SLS region, the breakdown of total cost into major cost components revealed that the share of curing cost was 40%, the share of labour cost was 37% whereas the remaining 23% was incurred on material cost. Therefore, the policy implications advocate that to maintain the profitability of FCV tobacco farming, there is a need for fuel-saving and labour-saving technologies to decrease the cost of cultivation. In addition, the cost of cultivation needs to be factored into price determination to ensure remunerative prices and augment farmers' income.**

### INTRODUCTION

FCV tobacco, a regulated commercial crop, plays a significant role in contributing to farm income, livelihoods, and export revenue, generating 9,740 crore in 2022-23 for the national economy.

Understanding the cost structure of FCV tobacco is crucial for providing appropriate incentives to growers and accurately assessing production costs across different agro-ecological regions. Cultivation of FCV tobacco in Andhra Pradesh is unique, with three distinct production domains: Northern Light Soil (NLS), Southern Light Soil (SLS), and Southern Black Soil (SBS) in Andhra Pradesh and Karnataka Light Soils (KLS) in Karnataka. Each production domain has varying climatic conditions, resource availability, crop varieties, land holdings, and socioeconomic factors, leading to significant differences in cultivation costs per unit area. Therefore, adequate knowledge of the cost structure of FCV tobacco crop has become vital for providing suitable incentives to the tobacco growers, and assessment of the cost of cultivation of FCV tobacco is fundamental to knowing the real cost incurred by the farmer in FCV tobacco production across the different production domains. In this context, the study attempted to assess the cost of cultivation in FCV tobacco particularly in the SLS region of Andhra Pradesh. From the analysis of region-specific costs of cultivation, and consideration of factors such as soil type, climate, and farm size, will help them track expenses related to labour, fertilizers, irrigation, and machinery.

### DATA AND METHODOLOGY

#### Sample size and selection of farmers in a soil region

For the computation of the cost of production of FCV tobacco for the different soil regions of Andhra Pradesh, a sample list of FCV tobacco farmers for the cost of production survey was taken based on the number of barns, categorized into

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four classes within the region. Further, in each auction platform of the region, a sample of 240 farmers was selected in the SLS region.

### Methodology for Estimation of Cost of Cultivation

The farm costs concepts classified by the Commission for Agricultural Costs and Prices (CACAP), Ministry of Agriculture and Farmers' Welfare, Govt. of India, will be employed to estimate the cost of cultivation of FCV tobacco in different soil regions of Andhra Pradesh.

#### Cost Concepts:

**Cost A<sub>1</sub>** = All the actual expenses in cash and kind incurred in production by the farmer

**Cost A<sub>2</sub>** = Cost-A<sub>1</sub>+ rent paid for leased-in land  
**Cost B<sub>1</sub>** = Cost A<sub>1</sub> + interest on the value of owned fixed capital (excluding land)

**Cost B<sub>2</sub>** = Cost B<sub>1</sub> + rental value of owned land

**Cost C<sub>1</sub>** = Cost B<sub>1</sub> + imputed value of family labour

**Cost C<sub>2</sub>** = Cost B<sub>2</sub> + imputed value of family labour

In addition to the details of costs, the following analytical indicators will be investigated in the project.

#### Farm Income Measures

Net income over Cost C<sub>1</sub> = Gross income – Cost C<sub>1</sub>

Net income over Cost C<sub>2</sub> = Gross income – Cost C<sub>2</sub>

### RESULTS AND DISCUSSION

Unlike other commercial crops, the FCV tobacco production system is very unique in India. FCV tobacco is cultivated in the distinctive production domains (NLS, SLS, and SBS) in Andhra Pradesh. The climatic conditions, resource availability, varieties cultivated, size of land holding, and socio-economic conditions vary across

each production domain. As a result of variation in these factors, the cost of cultivation per unit area significantly differs in each production domain. Keeping this aspect in view, the present study is proposed to assess the cost of cultivation in FCV tobacco with special reference to Southern Light Soil (SLS) of Andhra Pradesh.

The cost of cultivation in the SLS region in Andhra Pradesh, influenced by various factors of production, plays a pivotal role in enterprise selection. These measures were systematically analyzed for the FCV tobacco crop to ensure the results were presented in an organized manner.

This section is divided into three parts.

1. Material input cost
2. Labour cost
3. Curing cost

#### Material Input Usage in FCV Tobacco Cultivation in the SLS Region

In the SLS region also, the quantity of fertilizers used is moderate in all auction platforms. The Confidor and Proclaim are the major plant protection chemicals used in all auction platforms in the region. In the Southern Light Soil (SLS) region, reasonable fertilizer usage is observed across all auction platforms. Material input costs per acre range from 16,616/acre to 21,810/acre.

#### Labour and machine cost in FCV Tobacco cultivation in SLS regions

FCV tobacco is a labor-intensive crop, and more labours are needed in the cultivation, harvesting, and post-harvest operations. The total field labour is classified into human labour, bullock labour, and machine labour, and calculated the costs are based on local market wages. The Southern Light Soil (SLS) region relies more on bullocks and human labour. Labor costs per acre were estimated in the Southern Light Soil (SLS) region, which range from 34,400/acre to 36,820/acre.

Soil Region	Area (ha)	No. of Registered growers	Sample farmers/ APF	No/ of AFPs	Total sample farmers
SLS	26661	15966	40	6	240

### Curing cost in FCV Tobacco cultivation (SLS Regions)

Curing is another major cost component involved in FCV tobacco farming. The average curing costs across different auction platforms in the SLS region range from ₹ 36,675 per acre to ₹ 399,66/acre, with fuel and labour as the primary contributors.

### Productivity and Average Prices of FCV Tobacco in the SLS Region during 2022-23

Particulars	SLS Region
Productivity (kg/ acre)	607
Price (Rs/kg)	216
Gross income (Rs/ acre)	1,31,112
Net income (Rs/acre)	24,515
Profitability (Rs/kg)	40
Cost of cultivation (Rs/acre)	1,06,597

### Individual input/operation-wise cost of cultivation for material input, labour input, and curing cost in FCV tobacco cultivation in the SLS region during 2022-23 (Rs. /acre)

The material cost breakdown for the given components is as follows: The value of seedlings amounts to ₹ 5,925, while the cost for fertilizers is ₹ 11,091. The value of insecticides and pesticides stands at ₹ 4,794. Adding these together, the subtotal for the material cost comes to ₹ 21,810.

S.No	Sub-Components ofCOC (Material Cost)	Cost (Rs)/ acre
1.	Value of seedlings	5925
2.	Value of fertilizers	11091
3.	Value of insecticides and pesticides	4794
	Total (R.S)	21810

The labour cost breakdown includes several components: the value of hired human labour amounts to ₹ 17,500, while bullock labour costs ₹ 5,700. The value of machine power is ₹ 8,200, and irrigation charges total ₹ 2,400. Additionally, miscellaneous expenses come to ₹ 1,500. Summing

up all these costs, the subtotal for the labour cost is ₹ 35,299.

### Conclusions and Implications

The study highlights the importance of analyzing the cost of cultivation and its components—material input, labour, and curing costs for FCV tobacco across SLS regions in Andhra Pradesh. The findings reveal distinct cost structures in the SLS regions due to varying climatic conditions, resource availability, and socioeconomic factors. Among these, curing and labour costs form a significant proportion of total costs, with curing accounting for 40-43% and labour for 31-37%, underscoring the labour- and resource-intensive nature of FCV tobacco farming. These insights are critical for policymakers aiming to sustain FCV tobacco farming and enhance farmers' livelihoods. The study suggests implementing fuel- and labour-saving technologies to reduce costs and improve profitability. Furthermore, incorporating the cost of cultivation into price determination is essential for ensuring remunerative prices, fostering farmer income growth, and supporting the rural economy. The analysis underscores the need for region-specific interventions and supportive policies to address cost disparities and sustain the profitability of FCV tobacco farming, thereby contributing to the broader goals of agricultural development and rural prosperity.

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