



ECONOMICS OF FCV TOBACCO CULTIVATION ON MODEL AND GENERAL VILLAGE FARMS IN WEST GODAVARI DISTRICT OF ANDHRA PRADESH

M. ROHINDRA KUMAR, G. V. CHALAM, I. BHAVANI DEVI AND B. RAVINDRA REDDY

Institute of Agribusiness Management, S.V Agricultural college Campus, Tirupati 517502

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ABSTRACT

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West Godavari is one of the leading districts of Andhra Pradesh in the production of FCV tobacco. Total human labour was 211.32 and 237.10 man days per hectare on FCV tobacco model village farms and general village farms respectively. On an average the total cost of cultivation per hectare of FCV tobacco was Rs.205906.58 on model village farms and Rs.228749.84 on general village farms. Net income realized was higher on model village farms with Rs.72493.42 as against with Rs.35750.16 on general village farms.

KEY WORDS: Model villages, general villages, FCV tobacco.

INTRODUCTION

Tobacco called as “Golden Leaf” and one of the important commercial crops of India. in Andhra Pradesh. It provides employment directly and indirectly to 45.7 million people and contributed as much as Rs.22,737.07 crore as excise duty and Rs5,975.08 crore in terms of foreign exchange to the National exchequer, during 2016-17. India has a prominent place in the production of tobacco in the world. India stands second in production and export of tobacco in the world. India produces different styles of FCV tobacco, which vary in their physical and chemical characteristics under diverse climatic conditions. Indian tobacco is exported to over 114 countries across the globe. Flue Cured Virginia tobacco which is commercially known as cigarette tobacco, is the most important variety. This variety is mainly cultivated in Andhra Pradesh and Karnataka states.

FCV tobacco, (*Nicotiana tabacum*), which is used in the manufacturing of cigarettes is known as Flue Cured Virginia. It belongs to the family ‘*Solananceae*’ in natural order. It was first introduced to India by Imperial Tobacco Company of India limited during 1910. Since then, India has made tremendous progress in breeding high yielding varieties, improved method of cultivation, economic curing and marketing of virginia tobacco. This variety is mainly produced in southern part of the country. In India,

FCV tobacco is grown under quite different conditions. This is mainly due to the monsoon type climate which prevails in the country. Irrigation is not desirable unless the water used is free from chlorides which are detrimental to burning quality. The soils considered most suitable are heavy black clays known as black cotton soils. However, FCV tobacco grown in the area of black soils of Andhra Pradesh was comparatively immature, used mainly as a neutral filler for blending purposes. The FCV tobacco grown in the light soils of Karnataka was found to be comparable in quality to that of Zimbabwe and even the United States of America, since the red loam soils of Karnataka have a better texture and tobacco grown is more aromatic than that grown on the heavy soils of Andhra Pradesh.

MATERIAL AND METHODS

The present study was conducted in Andhra Pradesh state. Purposive-cum-random sampling technique was employed for the selection of sample in the present study. West Godavari is the one of the leading districts in Andhra Pradesh regarding cultivation of FCV tobacco. Hence, West Godavari district was purposively selected. The top four mandals with maximum area under cultivation of FCV tobacco were identified and two villages (model village and general village) from each mandal based on criterion of highest area under FCV tobacco was purposively selected. All the farmers in selected model villages were listed out and 40 farmers were randomly selected. Another

*Corresponding author, E-mail: iabm.angrau@gmail.com

serve as a control group. The required data for the study were collected from the selected farmers using a pre-tested schedule for the agricultural year 2016-17.

TOOLS AND TECHNIQUES OF ANALYSIS

Simple arithmetic averages and percentages were worked out to arrive at costs, returns and farm efficiency measures.

COST CONCEPTS

Cost A₁: It includes: Value of hired human labour, value of hired and owned animal labour, value of hired and owned machine labour, value of seed (both farm seed and purchased), value of manures (owned and purchased) and fertilizers, depreciation on fixed assets, irrigation charges, land revenue, interest on working capital and miscellaneous expenses.

Cost A₂: Cost A₁ + rent paid for leased in land.

Cost B₁: Cost A₁ + interest of fixed capital (excluding land)

Cost B₂: Cost B₁ + rental value of owned land + rent for leased in land.

Cost C₁: Cost B₁ + imputed value of family labour.

Cost C₂: Cost B₂ + imputed value of family labour.

Cost C₃: Cost C₂ + 10 per cent of cost C₂ as management cost.

Farm efficiency measures

Farm business income = Gross income – Cost A₁

Family labour income = Gross income – Cost B₂

Net income = Gross income – Cost C₃

Farm investment income = Farm business income – imputed value of family labour

(or)

Net income + imputed rental value of owned land + interest on owned fixed capital invested

RESULTS AND DISCUSSIONS

It is observed from Table.1, that the average family size was 5.02 and 4.07 in the case of model and general village farms respectively. The number of family males, females and children was more or less the same in model and general villages. On an average 1.83 male members were available for farm work in model villages, whereas it was 1.69 in general villages. The number of females participating on the farm was 1.96 on model village farms, whereas, it was 1.28 on general village farms. There was no participation of children on the farms.

Total cost of cultivation per hectare of FCV tobacco was Rs.205906.58 on model village farms and Rs.228749.84 on general village farms (Table 2). The break-up of total costs into operational costs and fixed costs indicated that the operational costs were Rs.152500.03 (74.06 per cent) for model village farmers and Rs.174751.63 (76.39 per cent) on general village farms, while the fixed costs were Rs. 53406.58 (25.93 per cent) and Rs.53988.21 (23.60 per cent) for the corresponding farms. Human labour is required to perform various cultural practices *viz.*, land preparation, sowing, application of manures, fertilizers and plant protection chemicals, weeding, harvesting, curing and grading. Of the total costs, human labour was the highest costing input service in the cultivation of FCV tobacco. The expenditure incurred towards this resource service was Rs.52830 (25.65 per cent) for model village farmers and Rs.59275 (25.91 per cent) for general village farmers. Of the total costs the expenditure on machine power input service in the cultivation of FCV tobacco was Rs 15744 (7.64 per cent) on model village farms and Rs 17034 (7.44 per cent) on general village farms. Fuel was the major item of cost in the cultivation of FCV tobacco amounting to Rs.11845 (5.75 per cent) for model village farmers and Rs 17250 (7.54 per cent) for general village farmers. Cost included on fuel for model village farmers was less when compared to general village farmers as the model village farmers used insulators (glass wool) on the top of barns which restricts the loss of heat produced inside the barns and results in less consumption of fuel. This installation of insulators was high on the model village farms compared to general village farms as ITC insisted on these measure in all the model villages. The general village farmers incurred little more expenditure on plant protection chemicals with Rs.1038.41 (0.50 per cent) over model village

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farmers Rs.647.06 (0.28 per cent). Among the fixed costs, rental value of owned land was the major item. It was Rs.50000 accounting for 24.28 per cent in model village and Rs.50000 (21.85 per cent) in general villages. The other items of fixed costs were land revenue, tobacco board license fee, depreciation and interest on fixed capital. The analysis of cost structure of FCV tobacco cultivation revealed that it was more for general village farmers over model village farmers (Teja *et al.*, 2016).

It is clear that from Table 3 there was no leasing in activity among the selected farmers and hence the cost A1 and cost A2 were the same. On an average, the total cost of cultivation (Cost C3) was higher at Rs.226497.24 on general village farms over model village farms (Rs.251624.82) (Dinesh Kumar *et al.*, 2010).

The details of physical output and gross returns per hectare of FCV tobacco crop are presented in Table 4. On an average, the yield of main product per hectare was 24 and 23 quintals, on model and general village farms respectively. The model and general village farms realized a gross income of Rs.278400 and Rs.264500 respectively. The net income was high on model village farms with Rs.72493.42 compared to Rs.35750.16 on general village farms (Mahadewaswamy *et al.*, 2006).

It is clear that from Table 5 that model village farms were able to secure Rs.1.35 per every rupee spent, while general village farms received Rs.1.15. Family labour income was another measure of farm efficiency which represents returns to farmers own labour and family labour. Model village farms derived more family labour income of Rs.72950.89 compared to general village farms Rs.37652.16. It was noticed that the model village farms were efficient in utilization of resources in the cultivation of FCV tobacco. Farm investment income was a measure that indicated returns to fixed capital. It was Rs.124461.26 on model village farms and Rs.88248.68 on general village farms.

CONCLUSIONS

Total human labour was 211.32 and 237.10 man days per hectare on FCV tobacco model and general village farms. On an average the total cost of cultivation per hectare of FCV tobacco was Rs.205906.58 on model village farms and Rs.228749.84 on general village farms. The price per quintal was more on model village farms with Rs.11600 compared to Rs.11500 on general village farms. The gross income realized was more or less the same with Rs.264500 on model village farms and Rs.278400 on general village farms. Net income realized was higher on model village farms with Rs.72493.42 as against with Rs.35750.16 on general village farms.

Table 1. Family composition and family labour contribution on selected farms (in number)

Particulars		Model village (n=40)	General village (n=40)
1. Family composition			
A	Male	1.83 (36.45)	1.69 (41.52)
B	Female	1.96 (39.05)	1.28 (31.45)
C	Children	1.23 (24.50)	1.1 (27.03)
	Total	5.02 (100)	4.07 (100)
2. Farm family workers			
A	Male	1.32 (67.35)	1.45 (61.19)
B	Female	0.64 (32.65)	0.92 (38.81)
	Total	1.96 (100)	2.37 (100)

Note : Figures in parentheses indicate percentages to the total

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Table 2. Cost of cultivation of FCV tobacco component wise on model and general village farms (rupees ha⁻¹)

S. No.	Particulars	Model village	General village
1	Operational costs		
a	Human labour	52830 (25.65)	59275 (25.91)
	Owned	457.5 (0.22)	1875 (0.81)
	Hired	52372.5 (25.43)	57400 (25.09)
b	Tractor power	15744 (7.64)	17034 (7.44)
	Owned	2550 (1.23)	2124 (0.92)
	Hired	13194 (6.40)	14910 (6.51)
c	Bullock labour	1748 (0.84)	1968 (0.86)
	Owned	-	-
	Hired	1748 (0.84)	1968 (0.86)
d	Seed	16839.20 (8.17)	17194.73 (7.51)
e	Manures	11040 (5.36)	15392 (6.72)
f	Fertilizers	33312.50 (16.17)	38081.50 (16.64)
g	Plant protection chemicals	1038.41 (0.50)	647.06 (0.28)
h	Fuel wood	11845 (5.75)	17250 (7.54)
i	Transportation	425.23 (0.20)	465.35 (0.20)
j	Miscellaneous (Sukervot + Ropes)	4687.50 (2.27)	4017.50 (1.75)
k	Interest on working capital	2990.19 (1.40)	3426.49 (1.49)
	Total variable costs	152500.03 (74.06)	174751.63 (76.39)
2	Fixed Costs		
a	Land revenue	500 (0.24)	500 (0.21)
b	Tobacco Board license fee	13.50 (0.006)	13.50 (0.005)
c	Depreciation	925.21 (0.44)	986.19 (0.43)
d	Rental value of owned land	50000 (24.28)	50000 (21.85)
e	Interest on fixed capital	1967.87 (0.95)	2498.52 (1.09)
	Total fixed capital	53406.58 (25.93)	53988.21 (23.60)
3	Total costs	205906.58 (100)	228749.84 (100)

Note: Figures in parentheses indicate percentages to the total.

Table 3. Cost concepts in FCV tobacco on model and general village farms (Rs per ha)

Particulars	ITC model villages tobacco	ITC general villages tobacco
COST A1/A2	153481.24	174376.32
COST B1	155449.11	176874.84
COST B2	205449.11	226874.84
COST C1	155906.61	178749.84
COST C2	205906.58	228749.84
COST C3	226497.24	251624.82

Table 4. Output and returns per hectare of FCV tobacco on model and general village farms (Rs. per ha)

Particulars	Units	ITC MV	ITC GV
Yield in physical units			
Main product	Qtls	24	23
By product		0	0
Yield in monetary units			
Main product	rupees	278400	264500
By product		0	0
Gross returns	rupees	278400	264500
Cost of cultivation	rupees	205906.58	228749.84
Net Returns	rupees	72493.42	35750.16

Table 5. Measures of farm income in FCV tobacco cultivation on model; and general village farms (Rs. per ha)

S. No.	Particulars	Model villages	General village
1	Farm business income	124918.76	90123.68
2	Family labour income	72950.89	37652.16
3	Farm investment income	124461.26	88248.68
4	Returns per rupee of investment	1.35	1.15